



**PAGE** PARTNERSHIP FOR ACTION  
ON GREEN ECONOMY

# PAGE 2022 ANNUAL PROGRESS REPORT

PART I: Summary Report



International  
Labour  
Organization



United Nations Institute for Training and Research

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Part II - Comprehensive Summary of Country Progress and Global Work (Separate Document)

Part III - Consolidated Financial Report (Separate Document)

Part IV - Monitoring Framework (Separate Document)



## NOTE FOR THE READER

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This report summarizes the progress made against the four PAGE outcomes since the beginning of the programme with an emphasis on the developments and progress made in 2022. It is presented in four parts:

**PART I** is a summary report including the following sections:

- Section 1 provides an executive summary of the progress the PAGE programme has made in 2022.
- Section 2 outlines the context, vision and objectives of PAGE.
- Section 3 provides an aggregated progress statement for each of the outcomes together with an overview of the status of the indicators at the end of 2022. The details behind the aggregate reporting on the indicators are provided in the PAGE monitoring framework (in a separate document).
- Section 4 outlines PAGE's contribution to achieving the Sustainable Development Goals (SDGs), Paris Agreement, biodiversity objectives, gender equality and circular economy, highlighting examples from 2022.
- Section 5 summarizes challenges and lessons learned from the programme in 2022.

**PART II** presents the comprehensive reporting for the 22 partner countries and the work at the global level, including the following sections:

- Section 1 provides a summary of 2022 progress in the 22 PAGE countries with links to additional information in the online annual report for 2022.
- Sections 2 to 3 summarize 2022 progress in global capacity development and knowledge sharing activities.
- Sections 4 to 6 provide an overview of the activities of the PAGE Secretariat and governance bodies, collaboration with other initiatives and South-South cooperation.

**PART III** presents the consolidated financial report focused on the funding administered by the Multi-Partner Trust Fund Office under the PAGE Multi-Partner Trust Fund (MPTF).

- Certified financial reporting is provided in addition to this report.

**PART IV** presents the comprehensive monitoring framework with aggregate results and progress made in 2022.

The detailed progress report is complemented by an [online report](#).

# 1. EXECUTIVE SUMMARY

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Throughout 2022, the Partnership for Action on Green Economy (PAGE) continued to strengthen global cooperation parallel to the evolving socio-economic context, to reflect on the challenges and inform economic thinking, foster collaboration for capacity building and to promote and disseminate Inclusive Green Economy (IGE) knowledge and ideas.

At the country level, PAGE deepened existing cooperation and expanded collaboration with several organizations and initiatives. These collaborations are country-driven, dependent on the opportunities offered by the local context and needs. Accordingly, PAGE offers a flexible mechanism for engaging with many global, regional and local organizations and initiatives.

PAGE welcomed Rwanda and Cambodia as new partner countries and celebrated the successes of others including Burkina Faso, Mauritius, Senegal, South Africa and Uruguay after several years of joint action on green economic transformation. As national economies were tested in 2022 through renewed shocks to supply chains and food and energy systems, PAGE enhanced collective reflection and action across its multiple global and national networks, informing global debates, catalysing change through UN Resident Coordinator Offices (UN RCOs) and improving analytical tools.

Drawing on the specialized expertise of the United Nations Environment Programme (UNEP), the International Labour Organization (ILO), the United Nations Development Programme (UNDP), the United Nations Industrial Development Organization (UNIDO) and the United Nations Institute for Training and Research (UNITAR), PAGE has promoted green economic transition, through interventions and activities in countries around the globe, bringing together inclusive green recovery, job creation and sustainability agendas in a virtuous cycle reinforced by the principles of circular and low carbon economy, resource efficiency and sustainable finance.

PAGE worked with partner countries to create lasting change embedded in national policies and institutions. Integrated and holistic support enabled countries to strengthen livelihoods and environmental stewardship while sustaining economic growth. PAGE has deepened its support towards advancing a just and inclusive green economic recovery in developing countries, given the most recent challenges just after overcoming COVID-19 slowdown.

PAGE has supported over 100 policies by the end of 2022 in its 22 partner countries, covering almost all aspects of the green economic transformation, ranging from finance to energy transition, to employment, industrial policies and small and medium-sized enterprises (SMEs).

Through integrated technical advice, analysis and capacity-building, PAGE helps governments design and implement policies that promote green economic activities. Under the partnership, partner countries embark on a whole-economy and whole-society transition to an IGE. In 2022, PAGE supported the greening of national policies including finance and fiscal policies, biodiversity and natural resources, industrial policies and sustainable public procurement. It has helped to highlight exemplary policy solutions to catalyse a green transformation, identify lost opportunities, and direct governments towards more impactful, green and inclusive investments through, for example, the Global Recovery Observatory.

PAGE continued to support countries with sectoral and thematic diagnostics, assessments, strategies, planning and policy analysis, prioritization of IGE sectors, as well as mobilization and engagement of public, private and civil society stakeholders in areas such as tourism, energy, infrastructure, textiles and agriculture. PAGE provided assistance to governments in embedding circular economy principles into national strategies and helps to incorporate green growth objectives while concurrently promoting the creation of green jobs.

PAGE, inter alia, facilitates peer to peer learning between countries on common challenges, best practices and transformative policy reforms. With 22 partner countries engaged at different stages of a green economy transformation, South-South and Triangular Cooperation (SSTC), the partnership continued to offer an opportunity for countries to exchange knowledge, to explore synergies and employ evidence-based solutions that work within, and informed by, local context. PAGE continued to drive global conversation to accelerate change towards building inclusive green economies.

PAGE provided an open space for partner countries to share their concerns in the context of multiple crises, countries' responses, and strategies to align PAGE support with the new realities. It facilitated the exchange among partner countries and UN agencies on emerging challenges as well as opportunities for further leveraging development partners and UN country teams (UNCT) as well as influencing global debates. In this context, PAGE developed a "New Frontiers" series of participatory dialogues in collaboration with partners including UN Development Cooperation Office (UN DCO) and global research institutes, with the aim to reflect on emerging issues to advancing a fair and green economic transformation and identify policy levers that can link the need for urgency and long-term sustainable development.

PAGE has been supporting partner countries by way of designing and implementing nationally tailored training packages and programmes on specific priority areas with the overall objective of capacity-building and awareness creation on IGE. Through the different capacity-building programme and tailored trainings at the global and national levels, over 31,000 people (7,000 additional in 2022) have been trained to date.

The partnership with UNRCOs and the UN DCO catalyses systemic change, allowing PAGE to embed its offer within countries' broader reform agendas and strengthen the focus on IGE in UN joint support. The advisory services of the Green Transformation Economic Advisory Mechanism (Green TEAM) leverage economic expertise of PAGE agencies, UNRCOs, Regional Commissions, local research institutions and international think tanks to guide countries in their green economic transformation. A 2022 highlight was the mobilization of economic expertise in support of Indonesia's ambition for its G20 presidency to place blue and green economy at the centre of the Development Working Group, leading to a reflection of the concepts in the G20 Bali Leaders Declaration. At the country level, the Green TEAM services were expanded to five additional PAGE countries to a total of 10.

PAGE serves as an important model for achieving Sustainable Development Goal (SDG) 17 (partnerships for the goals), while contributing to country efforts to achieve SDGs 8 (decent work and economic growth), 12 (responsible consumption and production) and 13 (climate action). By aligning support with national IGE priorities, PAGE is also contributing in diverse partner countries to achieving SDG 1 (no poverty), 2 (zero hunger), 4 (quality education), 5 (gender equality), 7 (affordable and clean energy), 9 (industry, innovation and infrastructure), 10 (reduced inequalities), 11 (sustainable cities and communities) and 15 (life on land). In line with the above SDGs, PAGE continued to make significant contributions to climate, biodiversity, circular economy and gender outcomes.

PAGE is supported by the generous contributions of its partners. Their support, financial and in-kind contributions are integral to enabling countries to transform their economies into drivers of sustainability. Since its inception in 2013, contributions and pledges total USD 94.6 million. In addition, 56 initiatives are providing co-financing to PAGE countries to support activities that advance IGE at the national level.

In the context of the changing global landscape, PAGE remains committed to help its partner countries to rise to the challenge of going beyond recovery and into sustained and sustainable growth and prosperity that is built on resilience, investments in jobs and nature, and innovation to build and transition key provisioning systems and sectors of the economy. A unique strength of PAGE has been its ability to continuously learn from realities on the ground and review, revise, and realign its thematic priorities, delivery model, and operational procedures that are best suited to catalyse a green economic transformation that helps to achieve global sustainability targets by putting sustainability at the heart of economic policymaking in all of its partner countries and facilitating IGE policymaking globally.

## PROGRESS IN PAGE COUNTRIES

A summary of the main progress by country in 2022 is provided below.

### Graduating countries

**Mongolia** reached the end of its five-year support in 2018, but the country remains closely tied to PAGE as an alumni country, sharing lessons learned and best practices to help replicate its achievements on a global scale. PAGE continues to be engaged through providing green recovery support that is focused on informing energy subsidy reform and promoting economic diversification through a new eco-tourism scheme, in line with priorities of the Government Action Plan for 2020-2024.

Building on the work initiated by PAGE, partner initiatives continued within the framework of Mongolia's sustainability plan, strengthening policy reform processes and capacity development in 2022. It included a study, conducted in collaboration with the Mongolian Energy Economic Institute and the UN RCO, on opportunities to expand solar and wind energy development with a focus on green jobs and emission reduction potential in the agribusiness sector.

PAGE supported the further development of the "Ger and Nature" (GaN) scheme promoting community-based eco-tourism, in which rural herding communities are the main beneficiaries. In 2022, support was provided to the roll-out of a comprehensive onsite training-of-trainers programme for the GaN scheme, as well as to a green jobs assessment to identify opportunities for and barriers to the promotion of green jobs and decent work in the nature-based tourism sector. PAGE also produced a video for advocacy on green jobs and just transition in nature-based tourism in Mongolia.

PAGE completed its gradual phase-out of support from **Peru** in 2020, with a sustainability plan developed and implemented in close collaboration with GIZ's Green Economic Transformation (GET) project that ensures continuation of green economy activities and to strengthen synergies with other relevant programmes in the country in line with Peru's sustainability plan. In 2022, PAGE focused on a set of targeted activities promoting inclusive green jobs, green entrepreneurship, green industry, green finance and capacity building for public servants, under the broader objective of green growth and as a response to the COVID-19 pandemic.

PAGE outputs included a study to identify and prioritize manufacturing products that have the potential to contribute to the diversification and sustainability of the Peruvian industry. Through the Biodiversity Finance Initiative (BIOFIN), PAGE supported the General Office of Economics and Environmental Financing of the Ministry of Environment to implement a roadmap for the mobilization of investments in natural infrastructure.

To further support the implementation of sectoral and thematic IGE policies, PAGE leveraged two professional training of trainer methodologies to promote the development of green entrepreneurship, as well as the development of a study on identifying opportunities to generate green jobs for refugees, migrants and nationals in Peru.

In addition, as part advisory services of the Green TEAM and of an ongoing collaboration between the UN RCO, the Universidad del Pacífico and PAGE, experts mobilized by the Green TEAM shaped the design of a modelling study on the social and economic benefits of environmental sustainability policies.

**Senegal** celebrated eight years of partnership with PAGE in October 2022. During the transition ceremony, a sustainability strategy was presented that reinforces the government's commitment to continuing working on IGE and exchange on challenges and opportunities in the run-up to UNFCCC COP27. Senegal drives economic recovery through the Economic and Social Resilience Programme, and after COVID-19 set new priorities for 2021-2023 with the programme d'action prioritaire ajusté et accéléré. This economic and social revival of the country provided a new opportunity for PAGE to continue supporting the country in the promotion of IGE across all sectors after the partnership completed its five-year programme.

In 2022, the focus was on mitigating the main socio-economic challenges of the pandemic while promoting sustainable and inclusive growth through the support in green recovery policymaking and the integration of gender dimensions into national plans. In addition, PAGE supported the integration of sustainable practices in public procurement processes and plastic recycling, while also building national capacity in processing bio-organic products.

The outputs to ensure sustainability of PAGE achievements include the development of a strategic orientation document that identifies the sectors most likely affected by the implementation of climate change measures, analyses the impact of COVID-19 on those sectors, and proposes policy measures to mitigate negative employment impacts and maximize prospects for green job creation in line with NDC targets. PAGE also supported the Ministry of Industrial Development and small and medium-sized industries in integrating environmental and gender dimensions into Senegal's Industrialization Policy and Strategy 2021-2035.



In accordance with the draft National Action Plan for Sustainable Public Procurement, PAGE drafted a report advising the government on how to integrate sustainability criteria into the different stages of the public procurement process.

To further support the implementation of sectoral and thematic IGE policies, PAGE also organized a workshop to validate the Operational Directory of Green Jobs that includes a list of 100 green jobs in Senegal, as well as a workshop on strengthening the Senegalese plastic recycling industry, which included a presentation of the “Dakar Vision on Circular Economy, Green Industries and Employment in West Africa”.

PAGE conducted a series of training sessions for women groups involved in processing of agricultural and beekeeping products from the classified forest of Mbao to help increase their income generated from the conservation of the forest and processing of bio-organic products.

To consolidate and disseminate the achievements of Senegal towards a green economy, PAGE organized two training sessions for journalists on IGE to encourage greater media coverage and communication efforts of related topics in close partnership with the Centre d’Études des Sciences et Techniques de l’Information.

PAGE began a gradual phase-out of its support in **Ghana** in 2019 and completed the development of a sustainability plan to safeguard PAGE results and maintain the green economy agenda. PAGE extended its engagement with the Ministry of Environment, Science, Technology and Innovation to support a green economic recovery through the COVID-19 Alleviation and Revitalization of Enterprises Support (CARES) programme, which was introduced in 2022 to serve as a strategic and catalytic framework of interventions that will foster a quicker recovery and boost the country’s post-pandemic economic transformation, through the promotion of green finance, green sub-national recovery plans and capacity development for green enterprises.

In line with the objectives of the CARES Programme, PAGE has been providing support to green recovery through analysing and strengthening green financing opportunities, while supporting local governments, micro, small and medium enterprises (MSMEs) and the informal sector in their recovery. In 2022, PAGE helped leverage green fiscal policy instruments and initiated a workstream to assess green jobs potential across key economic sectors.

PAGE finalized a report on fiscal policies to support Ghana in a post-COVID green economic recovery and worked with national partners to develop tools for aligning medium-term development plans and annual budgets with SDG targets, to green their recovery plans, and to build related the capacities of district statisticians and budget officers. PAGE is also supporting the development of a Green Jobs Assessment Model that will provide a baseline for green jobs and green enterprises and determine green jobs potential across key economic sectors.

**Mauritius** held its transition ceremony in 2022 to celebrate eight years of partnership in the country where PAGE presented the sustainability plan for future action. It resulted in stakeholders jointly developing key priorities and next steps for further transitioning Mauritius towards an IGE.

In line with the government's green recovery priorities, PAGE continued its support in 2022 by strengthening the enabling environment for promoting sustainable agri-food systems and green finance, contributing to waste management reform, building national capacity for public servants and integrating green economy into schools' curricula.

The outputs that the partnership completed in line with the sustainability plan include a study on integrating sustainability in business operations of small and medium-sized enterprises (SMEs) in Mauritius that identifies key barriers to green financing and proposes recommendations as well as potential solutions to scale up green finance opportunities for SMEs in Mauritius.

To support a green economic recovery, PAGE produced a technical study that analysed the challenges and opportunities for financing nature-based solutions (NbS) and climate smart agriculture (CSA) in Mauritius, with a related toolkit on scaling up finance for NbS and CSA. In response to the government's priority on food security and promoting circularity, PAGE conducted a study to support the promotion of sustainable urban food systems in the country.

PAGE also finalized a report on "Employment and Skills Impacts of a Green and Low Carbon Strategy in Mauritius", applying ILO's Green Jobs Assessment Model (GJAM) methodology to identify the future skills needs in emerging green sectors that was followed by training on GJAM and consultations to contribute to the development of a national action plan addressing skills gaps defined in Mauritius's Nationally Determined Contributions (NDCs).

In addition, PAGE published a cost structure review of industrial waste management to improve industrial solid waste management and to facilitate the development of circular economy while enhancing enterprises' competitiveness in Mauritius. The partnership also provided technical support to the Civil Service College Mauritius to upgrade its e-learning system platform and expand its portfolio of IGE courses.

**Burkina Faso** celebrated eight years of achievements under PAGE in 2022 and the start of a new chapter to make the country's economy low carbon, job rich and socially inclusive. The transition ceremony discussed perspectives as the country graduates from PAGE's core engagement. With additional resources made available to promote a green recovery from the impacts of the COVID-19 pandemic, PAGE has been able to engage in the economic recovery of the tourism sector, despite challenging national circumstances, including terrorism and two coup d'état in January and September 2022.

PAGE launched a study that focused on a stronger role of public and private finance in greening Burkina Faso's tourism sector to support the National Strategy for the Promotion of Sustainable Tourism developed by the Ministries of Environment and Tourism. The study highlights opportunities for developing private finance instruments and offers recommendations for mobilising public finance for the promotion of sustainability in the sector.

In partnership with the Norwegian Foundation for Industrial and Technical Research, PAGE initiated a study on the impact of public policies and incentive measures on green recovery and decent job creation in Burkina Faso's tourism sector. The data collection, analysis and model building for the sector will contribute to the development of a national GJAM, which will in turn ensure employment and just transition policies are integrated in the national policy making process in the tourism sector.

PAGE **South Africa** and national partners held a transition ceremony to celebrate seven years of partnership and showcase progress made towards IGE and a green recovery. The

event provided a platform to strategize on how to continue the promotion of IGE in South Africa as a continuation of PAGE support. This transitional event acknowledged new challenges and opportunities as PAGE South Africa looks at sustainability planning and partnerships to sustain PAGE's work over the longer term. In 2022, PAGE remained actively engaged through the Department of Forestry, Fisheries and the Environment (DFFE) and focused on just transition, implementing the sustainability plan and engagement with partners to ensure continuation of IGE work in the country.

The outputs that PAGE completed include a report on "Modelling the Water-biodiversity Nexus in four South African Provinces: Northern Cape, Eastern Cape, Western Cape and Limpopo". Using a system dynamics model, the report analyses the interactions between water and biodiversity in the four provinces to provide a new knowledge base for high-level policy and decision-makers in governments.

PAGE South Africa worked with national partners to offer business mentorship and coaching for green business development and economic recovery to youth entrepreneurs, as well as to develop a youth barometer on just transition to surface views and perceptions of diverse youth groups regarding climate change, the green economy and a just transition.

To further support implementation of sectoral and thematic IGE policies, PAGE provided support to the revision of the "Guideline for the Development of Integrated Waste Management Plans" and associated model by-laws that included two reports to recommendations on mainstreaming the principles of the National Waste Management Strategy 2020, and to provide an analysis of the existing waste management model by-laws, their alignment with available legislation and recommendations to the DFFE for by-law revisions.

In addition, facilitated by the European Commission and PAGE, DFFE provided guidance to Zambia's Ministry of Economy and Environment during the preparation of a Green Growth Strategy. PAGE shared analytical tools available to support green economy policy analysis and design as well as practical experiences from the various initiatives South Africa has taken in its own transition process.

**Jiangsu Province, China** has been mainstreaming and integrating climate targets in its provincial planning. In 2021, the provincial government issued the "Implementation Opinions on Accelerating the Establishment and Improvement of a Green, Low-Carbon and Circular Development Economic System" and published the 14th Five-Year Development Plan (2021-2025) and Vision 2035 of Jiangsu. Priority areas include promoting circular and green economy, developing sustainable infrastructure, accelerating digitalization and living in harmony with nature.

In line with Jiangsu Province's plan and vision, the PAGE Academy on "Accelerating the Transition to Inclusive Green Economy: Synergy between Pollution Control and Carbon Reduction" was hosted as an on-line training event by the International Institute for Sustainable Development a partnership between UNEP and Tongji University based in Shanghai. It brought together Chinese government officials, and international representative of academia, business and UN agencies, with a total of 200 participants from 15 countries. The sessions, including an ILO special session on Green Jobs and Just Transition in the Textile and Garment Sector, covered macroeconomic monitoring, green finance, green industry, energy, textiles and plastics.

The PAGE Academy that was held in Jiangsu Province in 2022 marked the transition of the PAGE programme to national ownership, building on a strengthened partnership with the Institute of Environment for Sustainable Development of Tongji University, the China

National Textile and Apparel Council and the Chinese government, which will continue to drive progress under inclusive green economy priorities.

In **Mato Grosso State, Brazil**, PAGE has been supporting the reformulation of the Strategic Plan for Family Agriculture, reinforcing its earlier work in the sector and strengthening state governance as well as environmental and social commitments by building a culture of integrity. Areas of interest with respect to a green and inclusive recovery are the development of the agro-industry value chain, the logistical and commercial market integration of family agriculture products, better technical assistance and stronger governance. In 2022, the debate about the conservation of Mato Grosso State biomes and its direct influence on containing the damage caused by global warming has gained strength. The activities of PAGE and studies developed in the forest-based and livestock sector seeking technological and efficient alternatives have contributed to this debate.

Important achievements in 2022 include the support PAGE provided to Mato Grosso's State Secretariat of Planning to develop a framework and strategy for planning, implementing and measuring achievements under the 2030 Agenda.

Together with the Federation of Industries of Mato Grosso State, PAGE conducted a study on current barriers and opportunities to greening the forest-based sector in Mato Grosso State to provide policy recommendations to the government on how to support micro and small producers and family businesses related to investments in cleaner, more efficient technology.

PAGE also conducted an assessment on the impact the COVID-19 pandemic had on production dynamics, market access, access to essential services and the income of small farmers. It resulted in recommendations on how state government and civil society initiatives can minimize post-pandemic impacts through green macroeconomic policies and incentive mechanisms. PAGE also assessed the financial services market and its accessibility for family farmers and conducted a feasibility study for establishing a Mato Grosso State Observatory for Green Jobs.

To support building institutional and individual capacity as well as to improve access and application of knowledge, PAGE developed a training programme for municipalities on the utilization of the State Integrated Family Farming System. The partnership also developed an extension course on IGE to strengthen the learning system on sustainability, launched a new website for PAGE Mato Grosso State, a media campaign to disseminate the results of the partnership since 2016, as well as a webinar on the PAGE programme that featured panel discussions on family agriculture, sustainable tourism and the forest-based sector.

PAGE supported the **Kyrgyz Republic** to prioritize the integration of IGE goals and targets into the government's long-term National Development Strategy 2040 and the accompanying five-year development programme. The country has adopted a new mid-term development document for the period 2022-2026 (Programme-2026) and green economy is one of the development priority areas of the programme. The Ministry of Economy and Commerce jointly with PAGE and other development partners, organized the "Green Economy Forum 2022: Green Economy Development in Central Asia", a regional forum offering a platform for business and institutions from Central Asia to discuss, find and later apply green solutions in the region.

Throughout 2022, PAGE worked with the Ministry of Economy and Commerce of the Kyrgyz Republic to develop a National Industrial Resource Efficiency Policy to promote climate-friendly industrial development. PAGE, in partnership with the International Institute for Environment and Development and the Biodiversity Finance Initiative (BIOFIN), also



finalized a policy brief on reforming personal income tax exemption in agriculture as a measure to support a shift towards sustainable agriculture.

PAGE launched a legal as well as a green finance market assessment to support the development of a Green Finance Facility with commercial banks. The partnership also continued to support the development of a Sustainable Finance Roadmap, as well as the collaboration with BIOFIN to advance innovative green finance solutions.

Together with GIZ, PAGE supported the institutionalization of IGE modelling in the Kyrgyz Republic through capacity building and targeted advice to the government for translating modelling results into policy recommendations. PAGE also continued to provide technical assistance to improve the national statistical system and green jobs modelling.

In addition, the Alliance of Universities of the Kyrgyz Republic for Green Economy and Sustainable Development, set up by PAGE, and the American University of Central Asia signed an agreement to promote the expansion of its membership base and to further promote the integration of courses related to IGE in the curricula of Kyrgyz universities.

### **Countries in full programme delivery**

PAGE **Guatemala** was launched by the Ministry of Public Finance in 2022 under the framework of the Environmental Fiscal Strategy with the objective to develop green fiscal policies and to support national and international processes, such as the SDGs and the country's Nationally Determined Contributions. Green economy has been recognized by Guatemala as a tool to achieve sustainable development and it is included in the General Policy of the Government. During the inception phase, the partnership focussed on supporting the implementation of sectoral and thematic IGE policies including sustainable public procurement policies and green jobs.

With the support of PAGE, Guatemala aims to introduce more sustainable public procurement practices based on selected criteria. The partnership supported the Ministry of Finance, Ministry of Natural Resources and other government institutions to identify the most important products procured by government institutions between 2018 and 2022. Subsequently, as part of the Interinstitutional Roundtable of the Fiscal Environmental Strategy, initial consultations were held with government institutions related to Sustainable Public Procurement (SPP), including the presentation of a roadmap for a national SPP policy.

In 2022, the first national dialogue on circular economy and green industry was held. The discussion, jointly organized by UNIDO and the Ministries of Finance, of Economy, and of Environment, featured interventions from representatives of the public, private and academic sectors, who shared their perspectives on the progress and challenges of introducing circularity in industrial processes in Guatemala. The dialogue served as input for the upcoming review and update of the National Cleaner Production Policy.

In addition, as part of the Inter-institutional Roundtable of the Fiscal Environmental Strategy, PAGE provided support to advancing sustainable public procurement policies in Guatemala to open markets for green business, as well as to the organization of a national stakeholder dialogue that discussed the methodology and structure of an analysis of green jobs in the cacao and tourism sectors' value chains.

PAGE in **India** aims to develop replicable models on IGE and enhance cooperation on initiatives among national and sub-national levels. This is complemented by a comprehensive capacity building effort on green economy, targeting officials of Indian civil services and other specialized services. Working closely with the Ministry of Environment, Forest and Climate Change (MoEFCC) and other government partners, PAGE is contributing to the cross-sectoral priorities for sustainable development, resource efficiency and circular economy.

The key achievements in 2022 include the development of a policy approach and a timebound strategy to integrate principles of environmental sustainability and IGE into local level development planning. PAGE developed a workplan in consultation with the government counterparts in the states of Madhya Pradesh and Uttarakhand to support specific pilot actions for integrating IGE principles in their existing policies and programmes.

PAGE also supported sectoral and thematic IGE policies through developing a framework for the MoEFCC to establish a Centre of Excellence on Circularity in India. The centre will provide a range of analytical, policy design, training and advocacy services for establishing and upscaling circular economy models across sectors. A reference group was established to provide guidance at each stage in the development of the framework.

Under PAGE as a co-chair of a local task force on circular economy and resource efficiency in India, the partnership provided advisory support to further advance circular economy at the local level. PAGE also conducted an assessment on India's policy readiness to create green jobs and ensure a just transition, as well as an assessment to identify green jobs and decent work opportunities in the Textile and Apparel sector in Jharkhand state.

To mobilize inclusive green economy in the manufacturing industry, PAGE redrafted the 2021 Baseline Assessment Report on IGE in Manufacturing as a review of policy issues and challenges, and to provide the basis for a transformative roadmap to promote inclusive and green manufacturing in India. PAGE also presented the key findings from an assessment on green manufacturing opportunities in India, a policy readiness assessment on a just green jobs transition, as well as an analysis on technology and innovation for sustainable and circular textile and apparel value chains in India.

PAGE undertook the preparatory work towards the development of a technology and innovation roadmap for the textile and garments sector and prepared a specific proposal for the development of a roadmap, aligned with both climate and sustainability imperatives as well as the objectives for the centenary of the independence of India.

PAGE also supported work on SPP by updating two sectoral market assessment reports based on the recommendations of the national task force on SPP, as well as strengthening ecolabelling for specific product categories through supporting the development of an analytical report covering the review and analysis of global and national ecolabels. An in-depth study of eco-labeling criteria was also conducted, providing recommendations for developing and strengthening ecolabels for specific product categories.

In **Morocco**, a National Charter and a Framework Law on the Environment and Sustainable Development have been adopted to place all public policies within the framework of a national sustainable development strategy. In 2022, the new administration started to develop a set of specific measures for the transition of its economy towards a green economy and to reinforce actions to be taken at the economic, social and environmental level. PAGE was therefore launched at an opportune time, with green economy among the highest priorities. As such, the partnership is benefitting from an administration that will encourage further cooperation, synergies and partnerships among PAGE partners and multiple national and international stakeholders to advance green economy in the country.

PAGE shaped the scoping study on Morocco's transition towards a green economy in 2022, which identified five key sectors for a green economic transition, including sustainable agriculture, renewable energy and sustainable waste management, and launched a debate on the green transition among national stakeholders. The results of the study were presented at the Green Crossroads Conference, which included a roundtable on waste management and an inception workshop on Green Hydrogen.

To support sectoral and thematic IGE policies, PAGE, together with national partners, developed a study on green employment creation and entrepreneurship in the organics and agroecology sectors, as well as a benchmarking study on clean energy production to provide recommendations for the institutional framework and operationalization of the Coalition for Sustainable Energy Access.

The partnership also supported building institutional and individual capacity by conducting a foundational training on IGE with a focus on effective green economy responses to COVID-19 and partnered with the ILO ProAgro project to promote green business skills in entrepreneurship training networks in line with Morocco's Generation Green 2020-2030 Strategy, which aims to create jobs through the promotion of sustainable agriculture and ecotourism.

In addition, PAGE provided support to improve access and application of knowledge for advancing IGE by developing a communication strategy and plan for PAGE in Morocco. The strategy will help to ensure that the partnership meets and maintains a good audience at the national level, while also systematically informing stakeholders and the public on IGE concepts.

The PAGE programme in **Thailand** was officially launched in November 2022. The Deputy Prime Minister and the Minister of Energy presided over the opening ceremony, which was hosted by the Office of the National Economic and Social Development Council and UNIDO. The event brought together more than 300 stakeholders, including policymakers, researchers, investors and other key actors from the government, private sector, academia, think-tanks, social organizations, press and media. PAGE Thailand will target five areas contributing to an inclusive green economy: 1) reduction of carbon emissions and pollution, 2) promotion of energy and resource efficiency, 3) biodiversity and ecosystem conservation, 4) decent job creation, and 5) a just transition creating prosperity for all.

To support a green recovery, PAGE conducted two related assessments: an impact evaluation of Thailand's economic and social recovery projects funded under the government's Rehabilitation Fund, linking to SDGs, Thailand's NDCs, and the Bio-circular green economic model; and a Green Jobs and Just Transition Readiness Assessment, analysing the green and decent jobs creation potential and existing policy settings for a just transition, particularly in agriculture.

The results were shared through a capacity building workshop on sustainable agriculture and just transition, a national and an international consultation workshop to offer technical guidance and policy recommendations based on the evaluation, and a study to raise awareness on an inclusive and green economic transition.

In addition, a Learning Needs Assessment was completed identifying Thailand's learning needs and priorities for a green recovery, which was followed by an online training series for policymakers and practitioners to strengthen the capacities of relevant line ministries and agencies to apply inclusive and green economy principles in COVID-19 recovery policies across three thematic areas: green industrialization, circular economy, and green jobs and just transition. Furthermore, experts engaged by the Green TEAM helped to conduct a policy scenarios assessment using a macroeconomic model from the UN Economic and Social Commission for Asia and the Pacific (ESCAP) as part of a collaboration between ESCAP, UNRCO and PAGE.

With PAGE support, **Argentina** aims to advance IGE transition with a focus on governance, technical analysis to inform policymaking, vocational training to support labour market transition, and sustainable productive development and finance for technological innovation, including fiscal incentives, sustainable public procurement and sustainable financial instruments. The new government elevated green economy in its agenda and has advanced many policies in the areas of green jobs, energy transition and social economy with the aim of providing new growth opportunities through a sustainable approach in line with the objectives and efforts of PAGE Argentina.

PAGE outputs in 2022 include providing support for the development of a report on post-COVID transition towards a green economy that highlights the potential to create new decent jobs on the sectors most affected by the pandemic, as well as support to the development of a National Plan for the Promotion of Circular Economy as part of the National Green Productive Development Programme, including an analysis on industrial waste flow for circular economy.

In line with the National Green Productive Development Programme, the partnership also supported the development and validation of a set of IGE policy guidelines, as well as a proposal for a sustainable production seal for the domestic market, a study on a sustainability reporting framework for SMEs, and a feasibility study for the production and export of third and fourth generation biofuels.

PAGE provided technical assistance to the development of a National Green Hydrogen Plan that included state of the art and stakeholder mapping for job opportunities resulting from green hydrogen development, an assessment of vocational profiles and skills development, as well as quantitative and qualitative measurement of labour impacts related to the value chains of green hydrogen projects.

Support to advancing the implementation of sectoral and thematic IGE policies also included the development of a National Plan for the Promotion of Green Jobs by providing technical assistance and conducting assessments, such as the development of a labour adaptation plan for the construction sector, a platform to assess employment services and training on green jobs, and labour impact scenarios within the National Emission Reduction and Adaptation Plan.



To build institutional and individual capacity, PAGE supported capacity building courses for municipalities on green economy by strengthening training on the Local Green Jobs Promoter for officials and municipal managers, responsible for planning, implementing and evaluating promotion strategies for green economies in municipal structures, and the “300 Agroecology Promoters” in the food sector.

Additionally, PAGE launched a communication campaign to promote a just transition to a green economy emphasizing the potential to create new decent jobs and preserve and restore the environment to improve access and application of knowledge for advancing IGE.

PAGE **Uruguay** celebrated five years of programme implementation in 2022. The country continued to advance a green and inclusive economy agenda. It involved strengthening collaboration with sub-national governments, creating green and blue employment indicators and formulating a comprehensive National Circular Economy Strategy. The capacity building activities implemented under the PAGE framework demonstrated Uruguay's commitment to integrating the green economy agenda throughout the country.

To encourage sustainable consumption and production methods in MSMEs in the food sector, PAGE held the second edition of the Circular Economy Laboratory that enhances the ability of businesses in Uruguay to contribute to the SDGs and circular economy through training and knowledge-transfer. Together with national partners, PAGE is managing a Research and Innovation Fund for Circular Economy. In 2022, four projects were selected to receive funding and started implementation: development of artificial intelligence to create plastic-free personal care products; applied technology for the recovery and recycling of PET bottles; Circular Economy in Small and Medium-sized Dairy Industries; and Construction Waste Management and Circularity

The Ministry of Labor and Social Security and PAGE presented a report on “Green and Blue Employment Indicators in Uruguay”. The findings of the report serve as a blueprint for setting up a permanent measurement system with employment indicators for public policy decision-making to promote green and blue jobs.

PAGE conducted a course on “Ecotourism in the Context of an Inclusive Green Economy” for civil society organizations and local groups that work on ecotourism initiatives in Uruguay to further develop ecotourism capacities. The partnership also carried out a workshop supporting sub-national governments in the promotion of policies that lead to greater resource efficiency. Furthermore, a two-month introductory course on IGE for public officers to strengthen capacities in green economy and to create a positive impact on the design of public policies was developed, and a training for 35 women from rural areas on green jobs was conducted.

In 2022, the Government of **Indonesia**, through the Ministry of National Development Planning, launched its economic transformation agenda with six grand strategies including green economy. The green economy strategy includes low carbon and circular economy, blue economy and energy transition. PAGE served as Indonesia's official knowledge partner during its presidency for the G20 summit in 2022 and helped to facilitate the consultation processes to bring a green, blue and low carbon economy into the summit agenda. Green economy was included in the high-level global discussions of the Development Working Group (DWG) to strengthen recovery from the COVID-19 pandemic and ensuring resilience in developing countries to withstand future crises: green and blue economy through low carbon development.

In line with that, the Government of Indonesia launched a green economy index, which represents a significant evolution of the concept and the strong political will to carry it forward.

In 2022, PAGE continued to support the Low Carbon Development Indonesia and Circular Economy Secretariat at the Ministry of National Development Planning (BAPPENAS), as a national coordination mechanism for integrating and mainstreaming IGE into the national policy agenda and development planning process. At the sub-national level, PAGE completed the technical assistance for the development of the Low Carbon Development Plan of West Java Province. Together with other development partners, PAGE also supported BAPPENAS in delivering different knowledge sharing activities including a workshop on low carbon and circular economy as backbone to achieve green economic transformation.

At the sectoral level, PAGE and key national stakeholders initiated a Resource Efficiency and Cleaner Production (RECP) Assessment in the iron and steel industry sector to support the government in the development and implementation of green industry standards for the iron and steel sector. PAGE conducted a policy readiness assessment for green jobs and just energy transition in Indonesia. The partnership also completed the development of business models for the installation of solar photovoltaic on rooftops to support the implementation of the Low Carbon Development Initiative at the sub-national level, which aims to accelerate the energy transition in the province of West Java.

PAGE partners are working collaboratively as part of the green recovery support to provide different inputs to the development of a National Action Plan/Roadmap on Circular Economy, which includes an assessment on green jobs for circularity in the food and beverages industry, a study on circular economy opportunities with the principles of RECP in the food and beverage sector, as well as a report on enabling the policy environment for private sector investment in the food and beverage industry.

In addition, PAGE supported a workshop “Achieving a Just Transition through Stronger Collaboration in Indonesia: A Social Dialogue on Just Transition for the Energy and Textile and Garment Sector” to facilitate social dialogue among stakeholders on just transition planning in the garment and textiles sector.

In **Kazakhstan**, PAGE’s work focuses on integrating low-carbon development into Kazakhstan’s Strategic Vision on Green Economy and the country’s Green Economy Concept, including its translation to the subnational level through the introduction of green financial mechanisms. PAGE is also supporting the country’s green economic recovery through contributions to the implementation of the “Strategic Plan for Development of the Republic of Kazakhstan until 2025”.

To support further integration of green economy into policy actions, PAGE Kazakhstan joined forces with the Economic Research Institute to finalize the development of the Carbon Neutrality Strategy until 2060, which will determine national approaches and strategic course of the state policy for consistent transformation towards decarbonization of the economy.

Achievements of the partnership in 2022 further include support for updating the Green Economy Concept to integrate SDGs and indicators, as well as to align the concept with new national strategic documents, regulations and commitments.

PAGE also provided support to the analysis of fossil fuel subsidies, to assessing the impacts of a Carbon Border Adjustment Mechanism as well as to the Strategic Environmental Assessment for the Master Plan for Development until 2035 of its capital city Astana.

PAGE organized a series of working group meetings to develop a strategic vision on green economy, which was submitted to the Ministry of Ecology, Geology and Natural Resources. The vision reinforces the plans of the Green Economy Council to reduce the energy intensity of the economy by 30 per cent by 2030 and provides guidance for implementing energy efficiency measures in residential buildings, social facilities, industrial enterprises and transport infrastructure.

PAGE contributed to the implementation of sectoral and thematic policies by developing a regional pilot programme to finance green SMEs with high emission reduction potential with the objective to create fiscal incentives that promote green business and create green jobs. The partnership prepared two assessments, one on the risks and opportunities for the gradual phase-out of coal and the second on the risks and opportunities for a just transition, that will form part of a roadmap for gradual coal phase-out.

In addition, PAGE organized dialogues and consultations to provide guidance for the reform of the national Sustainable Public Procurement Guidelines. The partnership also completed a Green Economy Learning Needs Assessment for representatives of local and national governments as part of a larger collaboration with the Academy of Public Administration to support the development and delivery of training for civil servants on sustainable development and green economy.

### **Countries in reorientation of programmes**

Despite changes in the administration in **Barbados**, the identification of IGE as a development priority has remained. The current administration has been articulating its commitment to IGE in the context of a “Blue Economy”. Over the course of 2022, PAGE Barbados discussed with the government priorities for supporting its blue-green economy ambitions through partnerships with national institutions, as well as through regional knowledge transfer and capacity building activities.

PAGE, together with the Ministry of Environment and National Beautification, Green and Blue Economy, Fisheries Division, started a dayboat fishery and value chain analysis to identify climate-resilient livelihood development opportunities for the sector’s future development. The assessment analyzes various elements of the dayboat fishery to outline policy reforms in addition to technology and investment needs. PAGE also partnered with the ministry to host a two-day Youth Climate Action Summit and Expo. The initiative was launched with the aim to meaningfully engage the youth of Barbados to be part of the climate change dialogue as well as developing a framework for youth-climate action.

In its capacity as the technical backstopping entity for the PAGE Barbados programme, the University of West Indies completed a Green and Blue Economy Learning Needs Assessment associated with current and emerging priorities for the Green-Blue Economy Learning Programme, as well as a feasibility study for the establishment of a Small Island Developing States (SIDS)-SIDS knowledge transfer hub on green economy under the programme.

PAGE's **Guyana** work programme has become more integrated with the support provided by the UN Country Team (UNCT) on the response to and recovery of the COVID-19 pandemic. PAGE supported UNCT's Finance and Economic Recovery Working Group and the work of the Guyana National Emergency Operations Centre in the early stages of the pandemic. PAGE's work programme now forms part of "Pillar 4: Macroeconomic Response and Multilateral Collaboration" of the UNCT's Social and Economic Response Recovery Plan. Additional future entry points for PAGE support on green economic recovery were provided by the new administration's 2020/2021 national budget "Agenda 2020: our plan for prosperity".

Planned PAGE activities are still being aligned with these new policy priorities, with some delays over the past year after the new government initiated an internal review process. Since then, the PAGE programme has been integrated into the UNCT CIP under the 2022-2026 Multi-Country Sustainable Development Framework and Cooperation Agreement. The agreement set the frame for the continuity of PAGE activities in 2022. PAGE has been working closely with the UN Resident Coordinator's Office to find the appropriate entry points for PAGE to engage the government in a manner that is efficient and tailored to Guyana's capacity needs.

PAGE started planning to support Guyana in greening the Technical and Vocational Education and Training (TVET) and skills development through an ILO greening tool launched at COP27. Throughout 2022, consultations took place to define the scope of the exercise with representatives of key stakeholders. The objective of greening TVET is to ensure that the green transition is fair and just, by equipping stakeholders with the skills needed regarding green job opportunities.

### **Countries in inception phase**

Under the leadership of the Department for Green Economy at the Ministry of Environment, **Cambodia** joined PAGE as a new partner country in 2022. PAGE support comes at a critical time as the government is developing its post-COVID-19 economic recovery strategy, including a pillar dedicated to promoting a more resilient and sustainable economy.

During the inception mission, the five PAGE agencies met with representatives from the government, the UN Resident Coordinator's Office, development and funding partners as well as private sector associations to discuss challenges and opportunities for a green economic transformation and secure national engagement and ownership.

To identify critical policy areas for a green economic transformation, PAGE initiated a policy scoping study in partnership with the Cambodia Development Resource Institute, building on recommendations provided by an expert from the Green TEAM. The scoping study will cover high impact sectors identified as a priority in the Government's Economic Recovery Plan, including garment, tourism and agriculture, and analyze cross-cutting theme such as green investment and finance, green technology, green industry and SME development, resource efficiency and green jobs.

**Rwanda** joined PAGE in 2022. As outlined in its vision 2050 "The Rwanda we want", the country aims to become an upper middle-income country by 2035 and a low carbon and high-income country by 2050. In 2011, Rwanda adopted the National Green Growth and Climate Resilience Strategy (GGCRS) and in 2020 submitted its revised Nationally Determined Contribution (NDC) under the Paris Agreement to UNFCCC.



Rwanda's partnership with PAGE will enable the country to accelerate the implementation of the national vision-2050, the next generation of the National Strategy for Transformation (NST), the Green Growth and Climate Resilience Strategy, NDC and the National Economic Recovery Plan after the COVID19 pandemic.

PAGE action plan for the inception phase has been developed and meetings were held with the Ministers of Environment and of Finance, banking sector representatives and development partners including the German Embassy and GIZ. Consultations and working meetings were also held with UNCT and UN RCO, including discussions with UN RCO and UNDP economists, which led to the development of the terms of reference for a green economy stocktaking study as a next step. PAGE enhanced its understanding of key government priorities for greening the economy, as well as critical knowledge and capacity gaps.

## CAPACITY DEVELOPMENT

In 2022, PAGE continued to strengthen the capacity of individuals, government and institutions by developing expertise and enabling them to put inclusive green economy principles into practice. Through self-paced courses, training-of-trainers, adjustments of university curricula, as well as tailored training for media representatives, policy makers, local government officials, business and community leaders, PAGE further contributed to the critical mass of convinced and enabled actors needed for a green economic transformation.

PAGE organized the [2<sup>nd</sup> PAGE Green Industry Summer School](#) in 2022 to provide knowledge and guidance on green industrial transformation to a mixed group of participants including policymakers from ministries, university faculty members, students, researchers, trainers from public or private training institutes, NGO members and SMEs.

The partnership delivered a two-day introductory training to economists from UN Resident Coordinator Offices (RCOs) on ["Advancing a green and fair economic transformation in a crisis-driven World: The Role of Macro Economic Modelling"](#). The training provided 32 RCO economists with a general understanding on how to use macro-economic modelling in the context of green and fair economic transformation.

PAGE's e-learning portfolio contributed to improved job performance as an impact survey highlighted the positive impacts of PAGE global capacity building services (on-line courses, the green economy academy and green industry summer school), including mention of improved job performance as well as knowledge and skills, for example in drafting national policies, coaching entrepreneurs, writing policy briefs and developing or delivering lectures.

The 11<sup>th</sup> episode of the [PAGE Green Renaissance podcast series](#) entitled ["Pacts, Protest and the Legacy of COP26"](#) featured speakers from UNITAR, the University of Massachusetts Amherst and YOUNGO - the official children and youth constituency of the United Nations Framework Convention on Climate Change. Unpacking complex policy questions related to the rebuilding economies after the COVID-19 pandemic and featuring voices from government, business, civil society and youth groups, the podcast series was an essential contribution to the global green recovery debate.

## GLOBAL OUTREACH AND KNOWLEDGE CREATION

PAGE drives global conversation to accelerate change towards building inclusive green economies. Events, platforms and knowledge products connect IGE champions throughout the world to share success stories and business cases and to drive coordination. In 2022, in collaboration with its institutional partners, PAGE continued to contribute to the dialogue on green economy and advanced the knowledge base on IGE with a focus on addressing critical themes such as resilience building and driving circularity, as well as on the challenges a crisis-driven world presents to advancing a fair and green economic transformation.

PAGE supported the Indonesian Ministry of National Development Planning in the preparation of the G20 Development Working Groups (DWG) meetings providing substantive inputs to the “G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, Least Developed Countries, and Small Island Developing States”, as well as the “G20 Chair’s Summary on Multilateralism for Sustainable Development Goals”. The G20 Bali Leaders Declaration recognized the work of the DWG referring to “focus on MSMEs, adaptive social protection, green economy and blue economy” and reconfirmed commitments to climate targets and climate financing, including phase down of the use of coal. PAGE contributed to key milestones through advisory services, data collection and inputs to scoping papers and discussions.

The Stockholm+50 Conference in Sweden offered a catalytic forum for actions on sustainability, inclusivity, recovery and nature-positive global economy. PAGE facilitated a [high-level panel discussion](#) on 2 June 2022 that focused on revisiting economics and finance to accelerate action for people and planet.

PAGE’s high-level side event at the United Nations Environmental Assembly (UNEA 5.2), [“From recovery to transformation: greening economies for people and planet”](#), brought together youth leaders and experts from ministries, the European Investment Bank, Cambridge Econometrics, the University of Pretoria and UN agencies to discuss the response of countries to the impacts of COVID-19 for a green economic recovery.

A United Nations [high-level side event](#) at the Climate COP27, co-organized by PAGE, discussed how circular economy principles and practices can serve as a catalyst to promote human well-being, preserve nature, cut pollution and make economies more competitive. At the World Circular Economy Forum 2022 that was held in Kigali, Rwanda, PAGE contributed to a panel discussion on [“Small green enterprise in East Africa, powering a circular economy transition”](#) organized by the Green Economy Coalition.

## 2. CONTEXT, VISION AND OBJECTIVES OF PAGE

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PAGE aims to put sustainability at the heart of economic policymaking and practices to advance the 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change and biodiversity targets through inclusive green economy approaches and by bringing together the expertise of five specialized UN agencies (UNEP, ILO, UNDP, UNIDO and UNITAR). It supports nations and regions to achieve sustainable and green growth, create green jobs, address inequality and climate change, advance green industrial development and improve skills, knowledge and institutional capacity. In 2022, PAGE provided support to 22 countries, out of which 17 received additional support for a green economy recovery.

PAGE works closely with policymakers and the private sector to help formulate, adopt, finance and implement economic and sectoral policies and practices, with a focus on four outcome areas, which were revised in 2021 following the update of the programme's results framework, keeping the overall logic and structure of four outcomes with some revisions on the wording.

The 2022 annual progress report reports against the revised overall programme logical framework that has become the underlying reference for the programme and the Multi-Partner Trust Fund. The accumulated results from the end of 2021 were transitioned to the new monitoring framework, and, where necessary, data has been disaggregated and new baselines established.

The updated monitoring framework provides the basis for reporting progress against the following outcomes in 2022:

**Outcome 1:** Countries have reinforced and integrated inclusive green economy (IGE) goals and targets into SDG-aligned economic and development planning and financing.

**Outcome 2:** Countries are implementing evidence-based sectoral and thematic reforms in line with national IGE priorities.

**Outcome 3:** Individuals and institutions representing public, private, social partners, civil society groups and stakeholders have acquired capacities needed to advance IGE approaches at the regional, national, and sectoral levels.

**Outcome 4:** National and regional stakeholders, including green economy champions, decision-makers, practitioners, and youth representatives, access and apply knowledge for advancing IGE.

### Sustainability Criteria

As PAGE support for countries is time-bound, and as countries approach the end of the five-year funding period, a set of sustainability criteria determine whether countries have achieved specific results and what strategies should be put in place to support long-term success.

**Criteria 1:** The economic and national development policies have been reframed around IGE, SDGs and climate action priorities.

**Criteria 2:** A national coordination mechanism for IGE is established.

**Criteria 3:** Strategies, plans, policies for implementing IGE across sectors have been developed, including within civil society and the private sector, and capacities for policy analysis have been strengthened.

**Criteria 4:** Funding opportunities have been identified and embraced by national and international actors and in particular by international finance institutions and domestic financial markets.

**Criteria 5:** IGE elements are integrated into training programmes delivered by national institutions.

## 3. PROGRESS MADE TOWARDS PAGE OUTCOMES

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In 2022, PAGE welcomed Cambodia and Rwanda. PAGE supported 20 countries and 2 provinces/states: Argentina, Barbados, Burkina Faso, Cambodia, Mato Grosso State (Brazil), Jiangsu Province (China), Ghana, Guatemala, Guyana, India, Indonesia, Kyrgyz Republic, Kazakhstan, Mauritius, Mongolia, Peru, Rwanda, Senegal, South Africa, Uruguay, Morocco and Thailand. Nine of them have completed their five-year period of PAGE support. Burkina Faso, Mauritius, Senegal, South Africa, and Uruguay celebrated their progress through high level events and transition ceremonies, in addition to Mongolia, Ghana, Peru and Jiangsu Province, China graduated in the previous years. PAGE was officially launched in Guatemala and Thailand in events bringing together policymakers, researchers, investors, government representatives, private sector, academia, think tanks, and social organizations.

### 3.1 IMPACT LEVEL OUTCOMES

Following the update of the Theory of Change and the logical framework for the PAGE Strategy 2021-2030, PAGE agencies defined the impact of the programme as

*“Countries transform their economies to eradicate poverty, increase jobs and social equity, strengthen livelihoods and environmental stewardship, and sustain investment and foster growth in line with the Sustainable Development Goals, the objectives of the Paris Agreement, Post-2020 Biodiversity Targets and other environmental conventions and sustainable development frameworks”.*

In line with this impact description, PAGE identified a number of global reference frameworks to which PAGE outcomes can be aligned to indicate the wider impact of the programme, including:

- SDGs to which PAGE has contributed to advancing;
- Regional sustainable development priorities that PAGE has contributed to advancing;
- NDCs that PAGE has contributed to advancing, by country;
- Post-2020 Biodiversity Targets to which PAGE has contributed; and
- Other relevant environmental conventions and sustainable development frameworks.

As many different factors come to play at this level, the below only aims to reference possible contributions of PAGE and is not attempting to analyse direct attribution.

PAGE is aligned with the 2030 Agenda for Sustainable Development in many ways, especially with SDGs that relate to the economy, jobs, the environment and partnerships: PAGE supports governments to work across sectors and to seek the integration of policies and strategies that will enable them to achieve multiple sustainable development targets through an inclusive green economy approach. PAGE work currently supports the achievement of 13 SDGs (1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15 and 17).



A comprehensive overview of how the specific work in countries contributes to the different SDGs is included in the online version of the [2022 PAGE Annual Report](#).

PAGE is supporting the advancement of NDC's in 11 countries (Mongolia, Peru, Senegal, Mauritius, Ghana, South Africa, Kyrgyz Republic, Kazakhstan, Argentina, Indonesia and Thailand). For example, in **Peru, Mauritius, Ghana, Argentina** and **Guatemala**, PAGE is supporting and guiding initiatives on green jobs and just transition to foster success factors for NDC implementation. Contribution to the NDC processes in other countries in 2022 is further described under **section 4.1**.

PAGE is contributing to Post-2020 Biodiversity Targets in nine countries and two provinces/states (Mongolia, Peru, Burkina Faso, Jiangsu Province, South Africa, Kyrgyz Republic, Mato Grosso State, Uruguay, Kazakhstan, India and Thailand). For example, in **Jiangsu Province** and in **Kyrgyz Republic**, PAGE is collaborating with the UNDP-led Biodiversity Finance Initiative (BIOFIN) that aims to improve biodiversity conservation outcomes with a focus on biodiversity finance plans in the former, and to reduce, replace or phase-out harmful agricultural subsidies that threaten biodiversity and the welfare of farmers in the latter. Contribution to the Biodiversity Targets in 2022 is further described under **section 4.2**.

PAGE is contributing to COVID-19 green recovery targets and goals in 10 countries (Mongolia, Peru, Senegal, Ghana, South Africa, Barbados, Kazakhstan, Argentina, Indonesia and Thailand). For example, in **Senegal**, PAGE developed a strategic orientation policy document on a green recovery from the impacts of COVID-19, and in **Argentina** the partnership supported the production of the post-COVID green economy transition report.

Five countries are contributing towards other relevant environmental conventions and sustainable development frameworks (Mongolia, Barbados, Argentina, Indonesia and Guatemala). For example, **Mongolia's** Ger and Nature scheme contributes to the implementation of the climate change (UNFCCC) and biodiversity (CBD) frameworks, in addition to localization of the SDGs.

## 3.2 INTERMEDIATE OUTCOMES

The intermediate outcome is defined as

*"Countries reframe economic policy around sustainability and strengthen enabling policy conditions, incentives, partnerships, and business practices that catalyse greater public and private investment in resource-efficient technologies, economic activities, and infrastructure that benefit all of society including vulnerable and marginalized women, men, youth, and communities."*

The purpose of the intermediate outcome is to convey the higher-level changes that result from collective progress across outcomes 1-4 throughout the country programmes, such as the promotion of green industry and jobs, for example, which may result from the accumulative progress under multiple outcome areas. This level also serves to support the development of narrative reporting through capturing the ways in which the different streams of work under each outcome area culminate to stimulate economy-wide change. There are the following 8 indicators under the intermediate outcome which connect the programmatic work to higher level impact. It should be noted, however, that indicators at this level represent a qualitative and observational assessment of the collective outcomes of PAGE, rather than measured attribution.

- Economic policy and programmes reframed along sustainability and climate action and enabling policy conditions, including finance, strengthened across sectors;
- Green Public-Private Partnerships (PPPs) and sustainable business practices strengthened;
- Green industry and green jobs promoted;
- Social conditions and social equities improved across societies;
- Knowledge and learning for green economy enable institutions, policymakers, and individuals to take effective action on green economy;
- New South-South and Triangular and PAGE alumni country collaborations resulting from established or leveraged mechanisms;
- Partnerships and alliances strengthened with key institutions and actors that help establish platforms for expanding and financing the IGE transition; and
- Joint delivery model of the five UN agencies strengthened, contributing to the UN System delivery.

### 3.3 OUTCOME 1 - COUNTRIES HAVE REINFORCED AND INTEGRATED IGE GOALS AND TARGETS INTO SDG-ALIGNED ECONOMIC AND DEVELOPMENT PLANNING AND FINANCING

To achieve the targets under outcome 1, PAGE supports countries with IGE diagnostics, assessments, policy analysis and prioritization of IGE sectors in line with the 2030 Agenda, the Paris Agreement and other international environmental and sustainable development frameworks. It also supports the mobilization and engagement of public, private and civil society stakeholders.

As of 2022, 19 countries have adopted cross-sectoral plans and strategies integrating IGE priorities. Within these 19 countries, PAGE supported the development of 51 plans and strategies, out of which five were developed in 2022, two in Argentina, one in Indonesia, one in Kazakhstan, one in Thailand and one in Uruguay.

In **Argentina**, PAGE supported the development of a mid-term productivity plan, the Argentinian Productivity Plan 2030 for Inclusive and Green Transition, including the National Plan for the Promotion of Circular Economy as part of the National Green Productive Development Programme.

PAGE supported the development of the Low Carbon Development Indonesia and Circular Economy Secretariat at the Ministry of National Development Planning of **Indonesia**, as a national coordination mechanism for integrating and mainstreaming IGE into the national policy agenda and development planning process.

Following the request of the Ministry of National Economy of **Kazakhstan**, PAGE provided support to the Economic Research Institute to finalize the development of the Carbon Neutrality Strategy until 2060. PAGE also provided support for updating the Green Economy Concept (GEC) in early 2022.

In **Thailand**, PAGE conducted a green economy stocktaking study to support the National Economic and Social Development Council with the development of the 13<sup>th</sup> National Economic and Social Development Plan, NESDP 2022-2026.

PAGE supported the implementation of the National Waste Management Plan in **Uruguay** by providing a technical expert on waste and circular economy, who worked closely with the Ministry of Environment's technical team as an advisor to the former Minister.

In 14 countries or provinces/states PAGE support continues to focus on the implementation of national plans that already integrate IGE objectives (Mongolia, Peru, Senegal, Ghana, Mauritius, Burkina Faso, Jiangsu Province, South Africa, Kyrgyz Republic, Mato Grosso State, Kazakhstan, Barbados, Indonesia and India).

Developments in 2022 achieved with the support of PAGE include:

In **Senegal**, recommendations were provided to the government, the public and the private sector and other stakeholders, based on a strategic orientation policy document on green recovery, which was developed by the Economic, Social and Environmental Council in partnership with PAGE.

In **Ghana**, PAGE worked with the Ministry of Environment, Science, Technology and Innovation, the National Development Planning Commission and the Ghana Statistical Services on aligning medium-term development plans and annual budgets with SDG targets and to greening their recovery plans.

In **Kyrgyz Republic**, PAGE continued to support the institutionalizing of IGE modelling through capacity building and targeted advice to the government for translating modelling results into policy recommendations.

The Ministry of Rural Development of **India** is developing a policy approach and a timebound strategy to integrate principles of environmental sustainability and IGE in local level development planning in partnership with PAGE.

The development and implementation of national plans and cross-sectoral policies in South Africa, Kazakhstan, Argentina and Guatemala benefitted from 16 PAGE supported cross-sectoral diagnostics, assessments and policy analysis, completed in 2022, and related cross-sectoral stakeholder consultations and dialogues. Examples include the following.

**Senegal:** Strategic orientation document on green recovery; rapid situation analysis of COVID-19 impact to the NDC process.

**Kyrgyz Republic:** Sustainable Finance Roadmap; Green Finance Market Assessment.

**Kazakhstan:** Updated policy brief on fossil fuel subsidies in Kazakhstan and options for fiscal measures to stimulate low-carbon development; impact assessment of the EU-CBAM (Carbon Border Adjustment Mechanism) on selected sectors and economy-wide macroeconomic development; report on finalizing the Carbon Neutrality Strategy; Strategic Environmental Assessment scoping report for Nur-Sultan City Masterplan until 2035.

**Argentina:** report on Post COVID-19 Transition Towards a Green Economy; study on the Fiscal Impact of the Execution of the National Circular Economy Plan and Roadmap; Industrial Waste Flow Analysis for Circular Economy completed.

**Morocco:** comprehensive evaluation of fundraising for green recovery as part of the PAGE Morocco Green Scoping Study.

Cross-sectoral stakeholder consultations and dialogues were held in 22 countries in 2022 (Mongolia, Peru, Senegal, Ghana, Mauritius, Burkina Faso, South Africa, Barbados, Kyrgyz Republic, Mato Grosso State, Uruguay, Guyana, Kazakhstan, Argentina, Guatemala, India, Indonesia, Jiangsu Province, Morocco, Thailand, Rwanda and Cambodia), including a range of public and private actors relevant for cross-sectoral policy reform.

17 National Steering Committees (NSC) in PAGE countries met on a regular basis throughout 2022 and engaged new government counterparts where necessary. 15 were already established NCSs and two new ones, for which preparatory work was completed in the previous year, were set up in Guatemala and in Thailand.

Since 2021, indicators have been added to monitor progress related to green progress measurement frameworks and green financing mechanisms established in countries, as well as the development of sustainable strategies to ensure the continuation of green economy actions after the completion of the PAGE programme.

Eight countries (Mongolia, Jiangsu Province, Argentina, South Africa, Ghana, Mato Grosso State and Uruguay) have so far established IGE measurement frameworks, and another three countries (Burkina Faso, Kyrgyz Republic and Guyana) have plans to develop such measurement frameworks going forward. Mechanisms for green budgeting have been developed in eight countries (Mongolia, Peru, Mauritius, Burkina Faso, Mato Grosso State, Argentina, Guatemala and Uruguay).

As of 2022, 10 countries have developed a sustainability strategy (Mongolia, Peru, Senegal, Ghana, Mauritius, Burkina Faso, Jiangsu Province, South Africa, Argentina and Uruguay).

A breakdown of key statistics against the updated PAGE outcome 1 indicators is provided below:

### **Outcome 1 indicators:**

Outcome 1: Countries have reinforced and integrated inclusive green economy (IGE) goals and targets into SDG-aligned economic and development planning and financing

Indicator #1.1: Number of countries or provinces (at sub-national level) that i) started implementing or ii) have adopted national development plans or cross-sectoral strategies integrating IGE priorities

**Status end of 2022:** 17 countries and 2 states/provinces (in 2022, 11 countries and 2 states/provinces are implementing with PAGE support and 4 countries have adopted policies)

Indicator #1.2: Number of national development plans or cross-sectoral strategies integrating IGE priorities

**Status end of 2022:** 51 plans and strategies (5 additional in 2022)

Output 1.1: IGE diagnostics, assessments, and policy analysis undertaken

Indicator #1.1.1: Number of reports providing national IGE diagnostics, assessments and policy analysis conducted in consultation with national stakeholders that inform national planning processes

**Status end of 2022:** 65 reports completed (16 additional in 2022)

Output 1.2: Public, private, and civil society stakeholders mobilized and engaged in cross-sectoral IGE prioritization

Indicator #1.2.1: Cross-sectoral national consultations and dialogues organized to mobilize stakeholders, share results of policy analysis and consult priorities

**Status end of 2022:** 22 countries holding cross-sectoral consultations (consultations in 2022 include Peru, Mato Grosso State, Kazakhstan, Argentina, Guatemala, Indonesia, Morocco, Thailand, Rwanda and Cambodia)

Indicator #1.2.2: Number of countries with national steering mechanism overseeing IGE work meeting regularly

**Status end of 2022:** 17 countries (2 additional in 2022 - Guatemala and Thailand)

Output 1.3: Tools to measure progress and resources allocated to a more inclusive green economy

Indicator #1.3.1: Number of countries with IGE measurement framework established

**Status end of 2022:** 7 countries and 1 state (2 additional countries - Ghana and Uruguay and 1 state - Mato Grosso State in 2022)

Indicator #1.3.2: Number of countries with mechanism for green budgeting established

**Status end of 2022:** 8 countries (1 additional in 2022 - Uruguay)

Output 1.4: Sustainability strategy for the phaseout of PAGE support developed in consultation with and endorsed by national partners

Indicator #1.4.1: Number of countries with sustainability strategies for the phaseout of PAGE support developed/updated and endorsed by national partners

**Status end of 2022:** 10 countries (2 additional in 2022 - Uruguay and Argentina)



### 3.4 OUTCOME 2 - COUNTRIES ARE IMPLEMENTING EVIDENCE-BASED SECTORAL AND THEMATIC REFORMS IN LINE WITH IGE PRIORITIES

To achieve the targets under outcome 2, PAGE supports countries and provinces with sectoral and thematic diagnostics, assessments and policy analysis, and with advisory support integrated into the design and advancement of sectoral and thematic policies, strategies and plans. Mobilization of partners to support IGE transformation is another key area of support including donors, international financial institutions, development banks, private banks and UN country teams.

As of 2022, there were a total of 36 thematic and sectoral policies, programmes and instruments supporting IGE priorities in PAGE countries. 22 policies have been adopted and 14 being implemented with PAGE support. Nine additional sectoral policies, which integrate IGE objectives, were adopted or started being implemented in PAGE countries in 2022.

**Mongolia:** Implementation of the Ger and Nature scheme, which was developed with PAGE support; of the Action Plan for Education for Sustainable Development and the Higher Education Policy informed by the PAGE Green Economy Learning Strategy; and of the renewed law on waste management.

**Peru:** Adoption of the National Decent Employment Policy.

**Senegal:** Adoption of the Law on the Distribution and Management of Revenue from the Exploitation of Hydrocarbons.

**Uruguay:** Implementation of the National Integrated Waste Management Plan; and of the National Law on Integrated Waste Management.

**Argentina:** Adoption of the National Plan for the Promotion of Circular Economy as an official resolution of the “Argentinean Productivity Plan 2030 for Inclusive and Green Transition”, which encompasses the Green Productive Development Plan; National Plan for the Promotion of Green Jobs.

Sectoral and thematic policies, strategies, programmes and plans draw on results from diagnostics, assessments and policy analysis and are designed with advisory support. As of 2022, a total of 65 policies, programmes and plans are designed and advanced in consultation with national partners, out of which 18 were additional in 2022.

**Peru:** National Mitigation Action Plan on Sustainable Urban Transport; Green Industry Policy.

**Ghana:** National Green Jobs Strategy; National Resource Efficiency Policy and Programme; Study on the potential use of fiscal policies to formulate public finance tools and policy levers.

**South Africa:** Revision of the Guideline for the Development of Integrated Waste Management Plans and associated model by-laws.

**Kyrgyz Republic:** A draft of the National Industrial Resource Efficiency Policy was developed in December 2022; Support to the implementation of the Waste Chapter of Green Economy Development Programme

**Mato Grosso State:** Review and update of the state's policy strategy for the forest-based industry; Strategy for Green Jobs.

**Uruguay:** National Plan for the Promotion of Employment (with a green jobs dimension); National Circular Economy Strategy.

**Kazakhstan:** Pavlodar regional support programme for green SMEs from polluters' payments fund; Just Transition Action Plan for a pilot city.

**Argentina:** National Green Hydrogen Strategy; Revision of the Decree on Waste Imports (Digital register for the recycling industry).

**Indonesia:** National Action Plan/Roadmap on Circular Economy; Food Loss and Waste Reduction Strategy in selected pilot provinces (West Java, Central Java and Bali).

In addition, 47 diagnostics, assessments and policy analysis were completed in 2022 in 15 countries in consultation with national stakeholders that inform sectoral and thematic planning processes, including:

**Mongolia:** Assessment of green jobs opportunities and gaps/barriers in Ger and Nature tourism in Mongolia; road map for the Ger and Nature scheme with reference to sustainable eco-tourism criteria, minimum requirements and certification framework.

**Senegal:** Study for the development of an operational green jobs' directory and inventory on green jobs and skills; report on the integration of sustainability criteria and environmental and social clauses in the different stages of the public procurement process.

**Mauritius:** Study on fiscal policy reform for sustainable agriculture: scaling-up finance for nature-based solutions (NbS) and climate smart agriculture (CSA); study on promoting sustainable urban food systems in Mauritius by enhancing urban and peri-urban agriculture with circular economy approaches.

**South Africa:** Report on the revision of the guideline for the Integrated Waste Management Plans with recommendations; system dynamics modelling on the water bio-diversity nexus at provincial levels.

**Mato Grosso State:** Study on current barriers and opportunities for green the forest-based sector; evaluation of potential for sustainable systems for livestock production; analysis of the impact of COVID-19 on family agriculture and traditional and indigenous communities.

**Kazakhstan:** Green Economy Learning Needs Assessment; coal phase out and just transition analysis.

**Argentina:** Labour adaptation plans for the just transition in the building and construction sector, for the just transition in the tourism sector, for the just transition in the recycling sector including the Social and Cooperative Economy and for the just transition in the automotive sector; feasibility study for the implementation of a National Digital System on Circular Economy.

**India:** Green Economy Learning Assessments at local level completed for two states; analytical report reviewing global and national ecolabels and in-depth study of eco-labelling criteria.

**Thailand:** Green Recovery Learning Needs Assessment and Green Jobs and Just Transition Readiness Assessment.

In all countries, PAGE serves as a vehicle for engagement of partners beyond the five main agencies and partnerships are emerging that align the interests of different institutions with the broader objectives of PAGE. In 2022, additional partnerships were mobilized in six countries, with arrangements for co-financing or follow-up support reached in 2022 a total of 71 cases. This includes mechanisms to ensure the continuation of results as part of sustainability planning in graduating countries. A summary of cooperation with other initiatives is provided in section five. Additionally, three financing sources were mobilized for IGE from a total of 40 sources in 14 countries (Mongolia, Peru, Senegal, Mauritius, Burkina Faso, SA, Kyrgyz, Mato Grosso, Uruguay, Kazakhstan, Argentina, India, Thailand, Ghana and Barbados).

A breakdown of key statistics against the updated PAGE outcome 2 indicators is provided below:

#### **Outcome 2 indicators:**

Outcome 2: Countries are implementing evidence-based sectoral and thematic reforms in line with national IGE priorities

Indicator #2.1: Number of thematic and sectoral policies, programmes, and instruments supporting IGE priorities that PAGE countries i) have adopted, or ii) are implementing

**Status end of 2022:** 36 policies (14 policies were being implemented with PAGE support, 22 policies were adopted), out of which nine additional in 2022

Indicator #2.2: Number of countries that have mobilized financing for IGE

**Status end of 2022:** 14 countries have mobilized financing for IGE (2 additional in 2022 - Ghana and Barbados) from 40 financing sources (3 additional in 2022)

Output 2.1: Sectoral and thematic diagnostics, assessments and policy analysis undertaken

Indicator #2.1.1: Number of reports available providing sectoral or thematic IGE diagnostics, assessments and policy analysis conducted in consultation with national stakeholders that inform sectoral or thematic planning processes

**Status end of 2022:** 152 reports are available, out of which 47 additional in 2022

Output 2.2: Sectoral and/or thematic policies, strategies, programmes and plans that draw on results from diagnostics, assessments and policy analysis and/or are designed with advisory support

Indicator #2.2.1: Number of sectoral or thematic policies, strategies, programmes and plans designed and advanced in consultation with national partners

**Status end of 2022:** 65 policies, strategies, programmes and plans (18 new in 2022)

Output 2.3: IGE financing partners mobilized and engaged including UNCT, donors, IFIs, development banks and private sector

Indicator #2.3.1: Number of partners formally agreeing to co-financing, complementary follow-up programming, pledges, PPPs, etc.

**Status end of 2022:** 71 partners, out of which 19 are additional in 2022

### 3.5 OUTCOME 3 - INDIVIDUALS AND INSTITUTIONS REPRESENTING DIFFERENT GROUPS ACQUIRE CAPACITIES TO ADVANCE IGE APPROACHES AT REGIONAL, NATIONAL AND SECTORAL LEVELS

To achieve targets under outcome 3, PAGE is supporting partner countries by designing and implementing nationally tailored training packages and programmes in specific priority areas with the overall objective of creating human capacity for designing and implementing IGE policies. Global and regional training packages and events are designed and delivered to individuals and institutions as part of capacity-building for a global audience with a focus on PAGE partner countries. These high-quality training, e-learning and other capacity-building products and services on IGE contribute to a growing global community of government officials and other stakeholders with the knowledge and skills to advance the transition to greener economies. In addition, the overall PAGE approach to providing technical assistance strengthens system-wide, institutional and individual capacities across all country-level activities, including those under outcomes 1 and 2. PAGE uses survey to analyse the impact of its training activities.

In 2022, PAGE further strengthened individual and institutional capacities for IGE action at the national, regional and global level.

Across PAGE countries, a total of 132 institutions, ministries and departments were reported as being able to deliver IGE analysis or trainings (35 additional in 2022). 302 institutions, ministries and departments are actively engaged in different areas of PAGE delivery at the national level and with the opportunity to continuously strengthen their capacity (46 additional in 2022).

In 2022, PAGE also continued targeted trainings at the national level and delivered tailor made training jointly with national partners. As of 2022, PAGE had supported 183 training programmes that integrate IGE elements and delivered by (sub)national institutions. 50 of these were additional in 2022, taking place in Mongolia, Peru, Senegal, Mauritius, Ghana, Jiangsu Province, South Africa, Kyrgyz Republic, Mato Grosso State, Uruguay, Kazakhstan, Argentina, Indonesia, Morocco and Thailand. The trainings cover a range of green

economy topics in support of PAGE outcomes 1 and 2, including green economy modelling sustainable tourism, waste management, resource mobilization and green entrepreneurship. By 2022, a total of 11,150 people had been trained through national training workshops (5,039 female, 6,111 male), out of which 3,469 were additional in 2022.

Strategic partnerships with institutions training current and future policymakers have been a key avenue for institutional and individual capacity-building over the past years. In addition to the one-off training programmes conducted, a total of 30 recurrent training programmes have been established so far and embedded in national institutions in 13 countries and one state (5 in Uruguay, 4 each in Mongolia and South Africa, 3 each in Argentina and Mato Grosso State, 2 each in Peru, Senegal and Ghana, and 1 each in Mauritius, Burkina Faso, India, Indonesia, and Thailand). 11 of these programmes were established in 2022, for example:

In **Senegal**, the Centre d'Études des Sciences et Techniques de l'Information integrated two modules into its journalism degree programme: Introduction to IGE in the second-year degree and Journalism and IGE in the third-year degree, which are being delivered on a recurrent basis.

The Civil Service College **Mauritius** upgraded its e-learning system platform iTrain to expand its portfolio of IGE courses. The new platform went live in February 2022 with three PAGE e-learning courses on IGE with additional courses to follow.

In **Mato Grosso State**, a consortium of four state universities developed an online extension course on IGE. The course marks the first higher education format dedicated specifically to IGE in the state.

Together with the Ministry of Industry, Energy and Mining, the Ministry of Environment, the National Office of the Civil Service and the National School of Public Administration, PAGE established a two-month introductory course on IGE for public officers, which is hosted by the University of Montevideo, **Uruguay**.

Since its inception, PAGE has supported a total of 26,679 people to increase their knowledge and understanding of IGE topics at the global level, with 10,127 additional people in 2022. For 2022, this number includes trainees obtaining certificates from the now seven self-paced e-learning courses offered by PAGE on the UN CC:Learn platform.

To assess the impact of these trainings, an impact survey was developed and sent to learners in December 2022 that enrolled in at least one PAGE training at regional and global levels between 2014 and 2022. The survey was responded to by 517 participants from 105 countries<sup>1</sup>. Key findings include:

- 75 per cent of respondents applied the knowledge and skills that they have acquired through PAGE trainings;
- 51 per cent of respondents used learning materials provided by PAGE trainings/courses to organize learning activities;
- 92 per cent of respondents increased their capacity to identify and leverage opportunities for the promotion of an inclusive, green economy;
- 94,5 per cent of respondents became more confident advocating for an inclusive green economy after taking a PAGE training or course;

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<sup>1</sup> The survey includes Brazil and China as whole countries



- 88 per cent of respondents found PAGE trainings/courses useful;
- 31 per cent improved their job performance after taking a PAGE training/course 11 per cent of respondents received a promotion and; and
- 94 per cent became better at identifying and building opportunities for IGE.

In 2022, PAGE continued to offer the 21 IGE global training programmes and specific training modules to countries at global and national levels that were introduced in the previous years, as well as two additional ones in 2022, a Green Industry Summer School and a macroeconomic modelling training for RCOs, reaching a total of 23 training programmes and modules.

A breakdown of key statistics against PAGE outcome 3 indicators is provided below:

### Outcome 3 indicators:

Outcome 3: Individuals and institutions representing public, private, social partners, civil society groups and stakeholders have acquired capacities needed to advance IGE approaches at the regional, national, and sectoral levels

Indicator #3.1: Number and percentage of survey respondents who report using knowledge and skills acquired from PAGE training and capacity development activities

**Status end of 2022:** 75% of participants surveyed reported using knowledge and skills acquired through PAGE global training and capacity development activities

Indicator #3.2: Number of (sub)national institutions which deliver IGE policy analysis, IGE training, develop IGE related policies and lead related policy processes and stakeholder consultations

**Status end of 2022:** 132 (sub)national institutions (35 additional in 2022)

Indicator #3.3: Number of training programmes for which IGE elements are integrated and delivered by (sub)national institutions

**Status end of 2022:** 183 training programmes (50 additional in 2022)

Output 3.1: Capacity development support delivered to (sub)national institutions

Indicator #3.1.1: Number of (sub)national institutions having strengthened their capacity to deliver IGE policy analysis or training or to lead policy and stakeholder consultation processes

**Status end of 2022:** 302 national institutions/ministries/departments, out of which 46 were additional in 2022

Output 3.2: (Sub)nationally tailored training programmes developed and delivered

Indicator #3.2.1: Number of people that have completed (sub)national level training programmes

**Status end of 2022:** 11,150 people (5,039 female, 6,111 male) out of which 3,469 were additional in 2022

Indicator #3.2.2: Percentage of participants who report having increased their capacity in IGE related issues through (sub)national trainings

**Status end of 2022:** An average 88% of participants reported having increased their capacity

Indicator #3.2.3: Number of IGE training programmes and specific training modules developed for recurrent use by (sub)national institutions

**Status end of 2022:** 37 IGE training programmes and specific training modules (11 were additional in 2022)

Output 3.3: Global and regional leadership and training programs and packages developed and delivered for individuals and institutions

Indicator #3.3.1: Number of people that have completed training on IGE in globally or regionally offered on-line training and on-campus training programmes (knowledge versus performance)

**Status end of 2022:** 26,679 people of which 10,127 were additional in 2022. 4,849 were from PAGE countries

Indicator #3.3.2: Percentage of participants who report having increased their capacity in IGE related issues in global and regional training programmes (with a target of 80% on average)

**Status end of 2022:** An average 92% of participants reported having increased their capacity

Indicator #3.3.3: Number of global IGE training programmes and specific training modules being offered to countries by PAGE (knowledge versus performance)

**Status end of 2022:** 23 training programmes and modules (2 additional in 2022)

### 3.6 OUTCOME 4 - NATIONAL AND REGIONAL STAKEHOLDERS' ACCESS AND APPLY KNOWLEDGE FOR ADVANCING IGE

Improving the access and application of knowledge for advancing IGE through partnership, organization of events, communication and outreach are the focus to achieve targets under outcome 4. In 2022, PAGE expanded the scope of this outcome to focus also on national and regional stakeholders, enabling PAGE countries to also report on outcome 4. PAGE is supporting countries to improve their IGE knowledge base by generating and sharing knowledge products such as manuals, reports, lessons learned and best practices with the aim to inform and support national policy analysis and formulation.

For knowledge sharing, PAGE organizes high-level events, conferences, workshops involving current and future PAGE countries to build networks and global platforms to exchange experiences and information. IGE advocacy, outreach and communications efforts of PAGE are part of the activities under outcome 4.

By the end of 2022, a total of 71 stakeholders in 15 PAGE countries and two provinces/states were identified as having used the knowledge products for the design and implementation of IGE related policy priorities at the national and sectoral levels and related capacity-building activities.

Since 2013, PAGE has produced 21 IGE knowledge products, which are available to countries for use in national policymaking processes, including two released in 2022.

PAGE also supported in previous years the establishment of four knowledge platforms for the Green Growth Knowledge Partnership: the Green Learning Network, the Green Industry Platform, the Green Finance Platform, the Green Forum and the Green Jobs Assessment Institutions Network (GAIN) that continue to grow and establish themselves as leading sources of knowledge for supporting a green economy transition.

In addition, 77 institutions and initiatives are collaborating under the wider PAGE network, of which two are additional in 2022: G20 and the New Frontiers for Green Economic Transformation Forum.

Since 2013, PAGE has held 74 IGE South-South and Triangular events, peer learning and dialogues in cooperation with other partners, that contribute to sharing knowledge and scaling of good practices on green economy. Eight additional global and regional sharing events were held in 2022. To raise visibility and contribute to the global discourse on IGE, SDGs and Climate Action in the context of COVID-19 and economic recovery, PAGE provided support to a sub-regional webinar as a regional exchange on green recovery in West Africa's tourism sector, to regional knowledge exchanges on labour impacts evaluation of climate change policies in Latin America and the Caribbean, to the regional Green Economy Forum 2022 on green economy development in Central Asia, to peer exchange to support Zambia's green growth strategy, as well as to a study tour of Kyrgyz Republic to learn from Mongolia's experiences in mobilizing green finance. Additionally, PAGE organized three informal family gatherings to facilitate exchange among national coordinators and UN agencies.

At the global level, PAGE has been working under the Communication Strategy developed in 2020 which encompasses the development and update of the website, the online annual report, monthly newsletter, outreach events and targeted social media postings, among other activities.

At the national level, as of 2022, seven PAGE countries (Senegal, Burkina Faso, Uruguay, South Africa, Argentina, Mato Grosso State and Morocco) have developed a national level outreach and communication strategy or plans to reach PAGE stakeholders.

To account for awareness-raising activities, which were previously counted primarily under output 1.2. (Public, private and civil society stakeholders mobilized and engaged in cross-sectoral IGE prioritization), an output was introduced to monitor targeted national awareness-raising activities and tools. There are currently 105 activities or tools across all PAGE countries, 48 of which were additional in 2022. For 2022, these include a high-level dialogue on IGE and Just Transition at Argentina's Climate Action Week, the fourth Uruguay Circular Award and Morocco's Agri Carbon Day event.

A breakdown of key statistics against PAGE outcome 4 indicators is provided below:

**Outcome 4 indicators:**

Outcome 4: National and regional stakeholders, including green economy champions, decision-makers, practitioners, and youth representatives, access and apply knowledge for advancing IGE

Indicator #4: Number of times that PAGE knowledge products are used for the implementation of IGE priorities at national level

**Status end of 2022:** 71 stakeholders in 15 countries were make use of PAGE knowledge products

Output 4.1: IGE knowledge products and platforms generated/leveraged and shared

Indicator #4.1.1: Number of IGE knowledge products generated and made available on PAGE website for national level application

**Status end of 2022:** 21 knowledge products, of which 2 were additional in 2022

Indicator #4.1.2: Number of platforms established or leveraged to advance IGE knowledge-sharing and dialogue, including for and by youth and green economy champions

**Status end of 2022:** 4 knowledge platforms (0 additional in 2022)

Indicator #4.1.3: Number of institutions, individuals, and initiatives collaborating under a wider PAGE network

**Status end of 2022:** 77 institutions, individuals and initiatives (2 additional in 2022)

Output 4.2: IGE South-South and Triangular events and dialogues organized to promote knowledge-sharing and debate on IGE

Indicator #4.2.1: Number of IGE South-South and Triangular events, peer learning and dialogues, including scaling of good practices, held in cooperation with other partners

**Status end of 2022:** 74 events (8 additional in 2022)

Output 4.3: Global PAGE IGE advocacy, outreach, and communications strategy to reach PAGE stakeholders developed, put into practice, and reviewed/updated annually

Indicator #4.3.1: Communication strategy, plan, or tools—with defined audiences that include decision-makers, practitioners, and youth representatives—developed, implemented, and updated annually

**Status end of 2022:** PAGE updated website; PAGE online annual report 2021; video-based primer to explain the purpose and functionalities of the Global Recovery Observatory

Output 4.4: National outreach and communication strategies/plans to reach PAGE stakeholders developed/updated and put into practice

Indicator #4.4.1: Number of national communication strategies or plans with defined audiences developed and implemented

**Status end of 2022:** 7 national communication strategies or plans developed (3 additional in 2022)

Output 4.5: Targeted national awareness-raising activities implemented and/or tools developed

Indicator #4.5.1: Number of targeted national awareness-raising activities implemented and/or tools developed

**Status end of 2022:** 105 awareness-raising activities/tools developed (48 additional in 2022)



## 4. CONTRIBUTION TO CLIMATE, BIODIVERSITY, GENDER AND CIRCULAR ECONOMY TARGETS

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### 4.1 CONTRIBUTION TO CLIMATE ACTION

Supporting countries' efforts to meet the goals of the Paris Agreement through their NDCs is a key priority which PAGE assists through various mechanisms, such as policy mainstreaming, modelling, climate finance and education. Examples from 2022 PAGE work are included below.

#### Mainstreaming climate change into policies and planning:

- In **Kazakhstan**, PAGE collaborated with the Economic Research Institute to complete the Carbon Neutrality Strategy by 2060. The strategy aims to meet the targets set by the Paris Agreement and will guide the country's policy towards transforming the economy to reduce carbon emissions.
- In **Argentina**, PAGE developed three key documents to support the development of IGE policies in the framework of the National Cabinet for Climate Change: (1) a roadmap for the development of the Sustainable Production Seal, (2) a Sustainability Reporting Framework for SMEs in Argentina in the agrifood and textiles sectors, and (3) a feasibility study for the production and export of third and fourth generation biofuels.
- In **Kyrgyz Republic**, throughout 2022, PAGE worked with the Ministry of Economy and Commerce to develop a National Industrial Resource Efficiency Policy to promote climate-friendly industrial development. The policy was drafted and presented at a validation workshop to the Ministries of Economy and Commerce, of Natural Resources, of Ecology, of Technical Supervision and of Energy, as well as to private companies. The final draft version is expected to be submitted to the government for adoption in 2023.
- In **Indonesia**, PAGE has successfully provided technical assistance in developing the Low Carbon Development Plan for West Java Province. The finalized plan has been officially shared with the West Java Provincial Development Planning Agency in August 2022.

#### Integrating climate change into education:

- In **Mauritius**, PAGE has helped incorporate green and climate change learning into Mauritius classrooms by providing teachers with a designated area to enhance their capabilities in integrating green and climate-related issues into the curriculum. The work will lead to the formal integration of green and climate competencies into teachers' qualification and school curricula at various levels.
- In **Peru**, PAGE is supporting the introduction of a Diploma on Just Transition, that will help increase the capacity of public and private managers in San Martín, empowering them with the knowledge and skills needed to act as agents of change to understand and address the impacts of the climate crisis in the transition to green economy.

- In **Mato Grosso State, Brazil**, PAGE worked with a consortium of four state universities to develop an extension course on IGE. The course addresses knowledge and skills gaps identified in 2020. The first edition of the course was launched through an online platform with the Federal University of Mato Grosso State, consisting of a self-paced foundational module and a supervised module on promoting a green and climate resilient economic transition.

### **Mobilizing climate finance:**

- In **Kyrgyzstan**, PAGE aims to launch the Green Finance Facility with active participation of the commercial banking sector in partnership with the Union of Banks of the Kyrgyz Republic, the Ministry of Economy and Commerce and the Global Green Growth Institute. The demand and supply sides for green financing are being evaluated in an assessment launched in 2022, with the aim to inform the feasibility study on setting up the facility.
- In **Kyrgyzstan**, PAGE has provided technical support for the drafting of the Sustainable Finance Roadmap, which aims to define the Action Plan for the development of a sustainable financial system and has initiated a green finance market assessment in 2022 to evaluate the demand and supply sides for green finance.
- In **Kazakhstan**, PAGE collaborated with the Ministry of Ecology, Geology and Natural Resources and a UNDP-GEF project to establish a pilot programme that redirects emission payments towards financing green SMEs in the Pavlodar area. The initiative's objective is to create fiscal incentives that promote green business, increase green employment and support green projects by SMEs.
- In **Mauritius**, PAGE conducted a study to [analyse the access to, and use of, green finance by SMEs](#) and their integration of sustainability in business operations, given their significant contribution to overall industrial pollution. The report also examines best practices and lessons from other regions, identifies the primary hurdles to green financing and recommends solutions to expand green finance opportunities for SMEs. Green finance is mobilised in Mauritius for climate adaptation and environmental conservation, aiming to promote investments in emission reduction and energy and water saving measures.
- In **Ghana**, PAGE has recently completed a report in collaboration with the Overseas Development Institute's research team, outlining fiscal policy recommendations for Ghana's post-COVID green economic recovery, which suggests measures to combat climate change, biodiversity loss and pollution. The report evaluates the existing fiscal policy frameworks and identifies opportunities to use green fiscal policy instruments to generate public revenue for initiatives under the [national COVID-19 recovery programme](#).

## Supporting the development of NDCs:

- In **Ghana**, PAGE is working with the Ministry of Employment and Labour Relations and SINTEF, a global research institute, to develop a Green Jobs Assessment Model that will serve as a foundation for identifying green jobs and green businesses in Ghana across key economic sectors. It will guide the implementation of the country's revised NDCs and the National Green Jobs Strategy among other relevant national instruments.
- In **Senegal**, in partnership with the Economic, Social and Environmental Council, PAGE developed a strategic orientation document that identifies the sectors most likely affected by the implementation of climate change measures, analyses the impact of COVID-19 on those sectors, and proposes policy measures to mitigate negative employment impacts and maximize prospects for green job creation in line with NDC targets.
- In **Mauritius**, PAGE organized consultations to bring together all key research findings, qualitative data and forward-looking recommendations to contribute to the development of a national action plan addressing skills gaps defined in Mauritius's NDC targets.

## 4.2 CONTRIBUTION TO BIODIVERSITY

An inclusive green economy aims to respect planetary boundaries and restore the ecosystem services provided by the natural environment. In line with this, PAGE is engaged in various initiatives that focus on sustainable environmental management and halting the loss of biodiversity. Notable developments in 2022 include:

- In **South Africa**, in partnership with the Department of Forestry, Fisheries and the Environment (DFFE), Stellenbosch University and the consulting firm KnowlEdge, PAGE finalised a report on modelling the water-biodiversity nexus in four South African provinces using a system dynamics model. The report analyses the relationship between water and biodiversity in the four provinces, resulting in policy options for sustainable water management and freshwater biodiversity conservation. The modelling focuses on the impact of different green economy policies on the water-biodiversity interlinkage, focusing on water demand and supply, climate and weather, land use and invasive alien species, and agriculture.
- In **Thailand**, PAGE will focus on actions related to biodiversity and ecosystem conservation, among four other areas contributing to an inclusive green economy: (1) reduction of carbon emissions and pollution, (2) promotion of energy and resource efficiency, (3) decent job creation, and (4) a just transition creating prosperity for all.
- In **Peru**, PAGE worked with the Biodiversity Finance Initiative (BIOFIN) to support the Peruvian Government in scaling up the public investment programme "Public Works for Tax deductions" (WxT), that allows private firms to pay a portion of their income taxes in advance in the form of public works that enhance green infrastructure, biodiversity, and ecosystem services. In 2022, PAGE, through BIOFIN, supported the General Office of Economics and Environmental Financing of the Ministry of Environment to implement a roadmap for the mobilization of investments in natural infrastructure which was approved by Ministerial Resolution.

## 4.3 PROMOTING GENDER EQUALITY AND WOMEN'S EMPOWERMENT

Greener economies hold the potential to reduce gender inequalities and increase women's economic participation. However, green policies should be designed to be fair, incorporating gender perspectives to address gender inequalities and identify opportunities to incentivize women's participation. Processes to support the inclusion of gender targets in policy frameworks are already well developed and supported through other initiatives. Against this background, PAGE analyses and observes the situation and provides targeted support if there are perceived gaps and specific opportunities, as cases from 2022 show below.

- In **Senegal**, PAGE organized [training sessions for women who process agricultural and beekeeping products from the Mbao forest \(region of Dakar\)](#). The sessions focused on biological control methods, safe use of low residual biopesticides, quality, hygiene, post-harvest conservation and packaging. The goal was to empower female business owners, boost their income by improving market access for local produce like honey, royal jelly, propolis, cashew nuts and help conserve the forest.
- In **Senegal**, PAGE also supported the Ministry of Industrial Development and Small and Medium Industries in collaboration with the UNIDO project "[Economic Empowerment of Women in Green Industry](#)" to incorporate environmental and gender perspectives into the Industrialization Policy and Strategy 2021-2035.
- In **Uruguay**, PAGE organized a training session for rural women to promote decent work and green jobs. The training covered productive enterprise practices and emphasized the importance of incorporating a green component to enhance development. Participants were trained in designing the process of implementing seed capital, co-managing resources and identifying potential synergies between green enterprises.
- In **Morocco**, PAGE supported local partners to conduct a study on green employment and entrepreneurship in the organics and agroecology sectors. The study analysed the sectors' potential for economic growth and job creation, as well as the involvement of women and youth. PAGE also assisted in identifying necessary skills and gaps in the industry.

## 4.4 CONTRIBUTION TO CIRCULAR ECONOMY

The timely adoption of sustainable consumption and production patterns is key to mitigate threats to human wellness, to economies and to the planet. Choosing more efficient production methods and use of natural resources can be one of the most effective ways to reduce our impact on the environment while simultaneously advancing human wellbeing. PAGE has a record of accomplishment in providing demand-driven policy and capacity-building support combining agendas for growth, jobs, sustainability and reduced inequalities. Using its toolkit and years of experience working towards green economic growth, PAGE has supported countries in achieving multiple targets of SDG 12 – Responsible Consumption and Production – and moving towards a circular economy. Key examples from 2022 include:

- In **Argentina**, PAGE supported the Ministry of Economy in the development of a [National Plan for Circular Economy](#) as part of the National Green Productive Development Programme. The Plan is an official resolution of the [“Argentinean Productivity Plan 2030 for Inclusive and Green Transition”](#), linked to its first plan on a “Just Transition Towards a Greener Economy”.
- In **Guatemala**, the [first national dialogue on circular economy and green industry](#) was held with more than 120 participants. The dialogue included speakers from various sectors such as public, private and academic, who expressed their views on the advancements and challenges of implementing circularity in industrial processes in Guatemala.
- In **India**, PAGE is working on a framework to assist the Ministry of Environment, Forest and Climate Change in setting up a Centre of Excellence on Circularity. The centre will offer various services such as analysis, policy design, training and advocacy to promote and expand circular economy models in different sectors. The centre's efforts are anticipated to support the alignment of India's economic policies and investments with SDG 12 and the country's 2070 net-zero goal.
- In **Indonesia**, the Ministry of National Development Planning and the Institution of Engineers collaborated with PAGE to hold a virtual discussion on the development of a circular economy in the planned new capital city, Nusantara.
- Also in **Indonesia**, PAGE initiated a study on circular economy opportunities with policy recommendations in the context of resource efficiency and cleaner production in Indonesia's food and beverage sector. The study focuses on the palm cooking oil industry which, through a previous assessment conducted by UNDP, has been identified as one of the most potential food and beverage sub-sectors for circular economy. Several consultation meetings were organized with the implementing partner (PT ASH Economic Research and Business Consulting - Indonesia) and the Ministry of National Planning to finalize the study's scope and develop a survey questionnaire.
- In **Mauritius**, PAGE released a report on “Industrial Waste Management - Cost Structure Review” that evaluates the current distribution of solid waste management (SWM) costs among various sectors, including the public sector and enterprises of different sizes. The report also offers suggestions for implementing extended producer responsibility schemes to enhance industrial SWM, promote circular economy, and boost the competitiveness of businesses in Mauritius.
- In **Senegal**, PAGE held a workshop on “Strengthening the Senegalese plastic recycling industry” and featuring the “Dakar Vision on circular economy, green industries and jobs in West Africa”, in collaboration with the Ministries of Environment and of Industry. The workshop brought public and private sector actors together to jointly determine how to best restructure the plastics sector in line with the vision and the 2020 law on the prevention and reduction of the environmental impact of plastic products.

- In **South Africa**, PAGE provided support to revise the “Guideline for the Development of Integrated Waste Management Plans” and its associated model by-laws under the Department of Forestry, Fisheries and Environment (DFFE). This resulted in two reports, the first report provides recommendations for mainstreaming the principles of National Waste Management Strategy 2020, integrating waste pickers in municipal waste planning and following best practices and principles of a circular economy. The second report analyses existing waste management model by-laws, their alignment with available legislation and provides recommendations to DFFE for by-law revisions.
  
- In **Uruguay**, PAGE supported the government’s ambition for a circular economy with different activities, including:
  - o Implementation of the National Waste Management Plan where PAGE supported for example the analysis of glass recycling capacities in different productive value chains;
  - o Facilitation of the development of a certification scheme and a seal for “single-use plastic-free” entities and organizations;
  - o Hosting of the second edition of the Circular Economy Laboratory (LabEC), which combined training on circular economy principles and their application to the food manufacturing sector, with business support in the form of ideation, planning, and implementation of circular projects related to responsible consumption or production;
  - o Organization of the 4<sup>th</sup> Uruguay Circular Awards where four projects among a total of 54 were recognized and winners from large companies, MSMEs and tertiary education institutions and science clubs were awarded; and
  - o Management of a Research and Innovation Fund for Circular Economy, together with the National Agency for Research and Innovation, the Inter-American Development Bank’s Innovation Lab and the Ministry of Industry, Energy and Mining. The fund provides up to 70 percent financing for project proposals that advance innovation in goods or services or business processes through the circular economy.



## 5. CHALLENGES, LESSONS AND OPPORTUNITIES

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As national economies were tested in 2022 through renewed shocks to supply chains and food and energy systems resulting from the armed conflict in Ukraine and other structural challenges of the global economy – just after overcoming COVID-19 slowdowns – the call for building resilient, green and inclusive economies has been more urgent than ever. At the same time, the policy and budget space for countries in the Global South to drive a green economic transformation has declined in a situation of high inflation, increase in food and energy prices, high debt service and immediate risks to fall-out on debt commitments.

The situation also comes, however, with opportunities for the UN and PAGE to promote fair and green economic transformation and demonstrate the value addition of the UN System through its convening power and its policy and technical expertise. The current energy and food crises present wide untapped opportunities to break the cycle, to scale up green economy solutions that offer options for food and energy, and to strengthen resilience.

In this new international context, PAGE reinforces its message on the need for coherent and coordinated policy responses in line with the aspirations of the reform of the UN Development System. Building on its existing body of work, PAGE can upscale and increase its support for integrated and sustainable solutions at the global and at country levels. In 2022, PAGE established a feedback mechanism to understand country needs, reprogrammed, repurposed and refocused country activities to address the challenges emerging from this new crisis. At a PAGE family gathering, partner countries confirmed that effects of the Ukraine conflict have made it more challenging to maintain the momentum of green, inclusive and SDGs aligned economic transformation. There is a risk that political authorities in some countries, particularly those most affected by the crises or with upcoming national elections, de-emphasize the environmental aspects of development and/or labour rights regulations.

With the secured funding in 2022, PAGE was able to deliver a scope of work comparable to previous years with commitments going into 2026, anticipating five years of support to Rwanda and Cambodia. However, as new crises emerge, shifting priorities for funding are impacting the multi-year funding arrangements and programming of PAGE. PAGE partners will have to align with new priorities, assess shorter planning horizons and adjust the scope of delivery in line with secured funds.

Against this background, PAGE will continue to review, revise and revamp its tools, services and delivery modalities to scale up its impacts and be ready to respond to any new global challenges. In 2022, some of the more specific challenges that PAGE was facing include:

**Shifting priorities of funding partners:** Since 2021, several of PAGE funding partners have informed about shifting priorities of their government (Switzerland, Finland, Norway). While still supporting green economic transformation and PAGE's approach, additional funding commitments were not possible under previously used funding instruments. In 2022, the armed conflict in Ukraine with important implications on European countries altered the priorities of governments' agendas. A planned pledge from Sweden to PAGE has been postponed again from 2022 to 2023, because of a cut and freeze in the government's cooperation budget in favour of an increase in humanitarian assistance to Ukraine. With additional pledges received in 2022 from the EC and Germany, PAGE will be able to maintain the same level of activities for the coming three years that are in line with its first phase and with a focus on the already selected 22 PAGE countries.

Plans to further scale up PAGE as described in the PAGE Strategy 2021-2030 are currently on hold. After Cambodia and Rwanda joined PAGE in 2022, no new countries have been invited to apply for PAGE support for the moment.

**Green recovery blurring with new evolving challenges:** With new emerging economic challenges in 2022, the basis for assessing the success of the green recovery efforts by governments and related PAGE support became less clear, as one crisis gets blurred into another. At the beginning of the COVID-19 pandemic, the conceptual idea of green recovery support was that there was a shock leading to an economic downturn, from which countries gradually recover by building-back-better, and then reach a stable state of sustainable development. This clear trajectory cannot be seen any longer. Development paths have become less defined and less stable as crisis management prevails combined with ambitions to decrease dependence on other countries and enhance self-sufficiency in key sectors. This also makes it more difficult for PAGE to describe the ultimate results of green recovery support, which increasingly became embedded into the overall package of PAGE support, which in itself has been refocused to support countries in a less predictable and volatile economic situation. It is important to note that countries' overall goals and targets for a green economic transition are not in question, countries are still maintaining their overall political commitment to developing an inclusive green economy. However, making long-term plans for systematic transformation of the economy, supported by consistent sectoral policies, has become more challenging in times of persistent economic crises and reduced policy and budget space.

**Uncertain political commitment and governmental capacities while ensuring continued support:** In some of PAGE's partner countries, such as Guyana and Barbados, challenges were faced regarding the advancement of the respective programmes. Embedding PAGE into the UN Country Team's results framework and the UN-Guyana Country Implementation Plan (CIP) was a necessary step for PAGE to officially re-engage in the country. In Barbados, uneven progress has been due to programme implementation constraints, and the process of confirming engagement priorities and obtaining official signoff has been particularly challenging.

Partner countries that have officially graduated from PAGE support and held transition ceremonies in 2022 include Burkina Faso, China, Mauritius, Senegal, South Africa and Uruguay. PAGE will have to rely on global activities and its network to continue monitoring developments, which might turn out to be challenging without national coordinators in place and dedicated post-graduation support. Closer alignment of PAGE with UN RCOs and the UN Country Teams' results frameworks in PAGE countries could potentially aid continuous reporting of results after the decommissioning of the PAGE country infrastructure.

While those challenges emerged, the following opportunities were highlighted for PAGE in 2022:

**PAGE reinforces its message on the need for coherent and coordinated policy responses in line with the aspirations of the reform of the UN Development System:** Through the UN Resident Coordinators, PAGE supports countries to leverage the UN System for green economic transformation and to accelerate green recovery. The United Nations Development System (UNDS) reforms provides an opportunity to harness the structures in place to improve cohesion across the system, build regional strategies, improve decision-making and bolster the capacity of UN Country Teams.

PAGE is actively engaged in greater coordination and is using this approach to reinforce support to partner countries and to further drive innovative and unified change towards integrated and sustainable solutions at global and country level:

- Serving as a multistakeholder platform to advance and catalyse UN's sustainable development efforts and deliver integrated coherent policy at the country level in line with the 2030 Agenda;
- Leveraging existing networks and working closely with the UN RCOs and their economists. In particular, the UN Country Teams can be galvanised to convene multi-stakeholder partnerships at sufficiently elevated levels in the national government to elevate the green economy agenda;
- Making the response to countries' current challenges and priorities the entry point for building a model of collaboration and partnership that can support the long-term green economic transition;
- Engaging further with relevant global platforms and initiatives working in key areas for the green economic transition;
- Putting 'economics' at the core of PAGE - UNRCOs/UN Development Cooperation Office (DCO) collaboration;
- Partnering with academia to strengthen analytics, while building on the analytical tools and capacity-building packages created over the past 10 years; and
- Finding innovative ways to remain engaged with PAGE alumni countries.

**PAGE amplifies effects of existing networks through strengthening the role of global mechanisms, such as PAGE's Green TEAM (Green Transformation Economic Advisory Mechanism):** In 2022 the Green TEAM was endorsed as a key complementary support mechanism to increasing the focus of global and country workplans on upstream economic policy reforms, bringing PAGE closer into the operational space of UN RCOs, facilitating dialogue and knowledge sharing, and mobilizing economic expertise. Special emphasis was put on the need to amplify the "network effect" around the Green TEAM. In addition to continued collaboration and dialogue with UN RCOs and UN DCO and the further support of the UN reform agenda, as well as the enhanced support of the Green TEAM to PAGE, it has also been suggested to expand the international network of experts and their role by inviting them to inform discussions and processes, such as the development of the global work plans, meetings of PAGE's governance bodies and PAGE flagship global events.

**For wider impact, PAGE finds value in partnering with non-PAGE UN agencies as well as non-UN institutions in the areas of energy transition, circular economy and finance:** For a green and fair energy transition, partnering with organisations and partnerships that lead in this area (such as the Just Energy Transition Partnership), will allow for an effective and comprehensive offer to national governments considering the related economic, environmental and job impacts. Circular economy is another essential pillar in the transition to IGE and it is gaining traction in many countries, including several PAGE countries.

By working with think tanks and international and regional institutions specialised in this area, as well as other initiatives to link action on circular economy, concrete assistance in developing legislation and standards can be provided to countries beyond the reframing of policies. On finance, PAGE can play a role in ensuring that the flow of subsidies provides the right signals and incentives to accelerate the IGE transition.

For PAGE to continue its impact in those areas, there is the need to strengthen the engagement with financial institutions and the private sector by developing a systematic approach for outreach and engagement with the private sector and financial institutions at global as well as at country level. While this point is explicitly included in the PAGE 2030 Strategy, its materialisation would require guidance on concrete actions and means of implementation.

**PAGE's value proposition remains relevant yet needs to be updated to reflect the "new normal" marked by unpredictability in geopolitics and economics:** PAGE can have a role in promoting an integrated approach to resilience-building, considering its economic dimension but also its social, environmental and institutional aspects. Resilience should be placed at the centre of the IGE agenda in countries, to build back better from crises while leaving no one behind. As was already a good practice during the rise of COVID-19 in 2022, PAGE partner countries were invited in the first half of 2022 to reflect on planned activities under their country workplans to see how these could be adjusted to the evolving economic context in their country. PAGE has been flexible to adjust and support those entry points into policy development that promise to provide the best results and highest impact in a challenging context.

In this spirit, PAGE is establishing the 'New Frontiers for Green Economic Transformation' forum for substantive discussion around the prospects for green economy policy and the role of PAGE in the new evolving context. Agencies will work together to update the PAGE Strategy 2021-2030 building on what PAGE is already doing - leveraging the 'collective expertise and intelligence' of the network of UN economists, national coordinators, international and local think tanks, and alumni champions to respond to the pressing issues and to anticipate future challenges and opportunities.

**Related to resilience-building is PAGE's approach of tapping into existing initiatives and partnerships for supporting countries in contemporary challenges.** The close contact that PAGE keeps with its partner countries to monitor the overall political and economic situation allowed PAGE to analyse and react timely to the new challenges the countries were facing. In Thailand, the introduction of a carbon tax was put on hold due to the rising levels of inflation throughout the country's economy. However, as an alternative, the option of developing and establishing an emissions trading scheme will be explored. Technical support was requested from PAGE to address the technical aspects of emission trading. In Morocco, the challenging socioeconomic context that arose from the conflict in Ukraine is considered as an opportunity to foster inclusive green economy by scaling up renewable energy mega projects and modernization of the agricultural sector to reduce dependence on energy and crop imports.

In that respect, communicating and cooperating with policymakers will remain vital to delivering green, just and resilient economic transformation. At the country level, expanding tailored approaches that consider different national contexts, considering the involvement of multidisciplinary partnerships to provide an integrated approach beyond economic perspectives. Examples for action include:

- Developing food systems and supply chains that are less vulnerable to external shocks (Food Systems Coordination Hub);
- Accelerating the energy transition, including through fiscal policy and greater investment efforts in renewables (Just Energy Transition Partnership); and
- Ensuring that the green transition is also a 'just' transition that puts people first (Global Accelerator on Jobs and Social Protection for Just Transitions).

Both, building high-level political support in partner countries for IGE and strengthening connections between PAGE's upstream normative work as well as follow-up action on the ground to operationalise IGE through optimising connections is supported by the recommendations of the PAGE 2023 evaluation report ("Evaluation of the Implementation of PAGE Interagency Programme Operational Strategy 2016-2020").

**Macroeconomic modelling is key to demonstrating an Inclusive Green Economy future for countries, reflecting the dynamics of the new reality more accurately:** Modelling can demonstrate to policymakers that energy transition can not only address the energy crisis but also poverty and unemployment because quantitative measurements add critical evidence and show potential sustainable pathways. The new frontiers in modelling include bi-directional feedback loops between economy and environment, the use and risks of natural resources, intergenerational and other distributional effects, assessment of risks and opportunities under different policy scenarios, and uncertainties and extreme events. Although there has been advancement in terms of methodology and rigorousness, simpler tools and messages would be best suited for policymakers in decision making. There is some room for improving on simplifying the results, and incorporating more modules and complexity to the modelling tools permits the capture of various linkages between systems (environment, economy, social and others), identify trade-offs and connecting synergies, and indicate losses and damages avoided.

## LIST OF ABBREVIATIONS AND ACRONYMS

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BIOFIN	Biodiversity Finance Initiative
CIP	Country Implementation Plan
CBD	Convention on Biological Diversity
CSA	Climate Smart Agriculture
DCO	Development Coordination Office
DFFE	Department of Forestry, Fisheries, and the Environment
EC	European Commission
EU-CBAM	Carbon Border Adjustment Mechanism
GAIN	Green Jobs Assessment Institutions Network
GEC	Green Economy Concept
GEF	Global Environment Facility
GGCRS	Green Growth and Climate Resilience Strategy
Green TEAM	Green Transformation Economic Advisory Mechanism
IGE	Inclusive Green Economy
ILO	International Labour Organization
LabEC	Circular Economy Laboratory
MPTF	Multi-Partner Trust Fund
MSME	Micro Small and Medium Enterprises
NbS	Nature-based solutions
NDCs	Nationally Determined Contributions
NESDP	National Economic and Social Development Plan
NSC	National Steering Committee
NST	National Strategy for Transformation
PAGE	Partnership for Action on Green Economy
PPP	Public-Private Partnerships
RCOs	Resident Coordinator's Offices
RECP	Resource Efficiency Cleaner Production
SDGs	Sustainable Development Goals
SMEs	Small and Medium-sized Enterprises
SSTC	South-South and Triangular Cooperation
SWM	Solid Waste Management
UN	United Nations
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
UNDS	United Nations Development System
UNEP	United Nations Environment Programme
UNFCCC	The United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
WxT	Public Works for Tax deductions





# PAGE PARTNERSHIP FOR ACTION ON GREEN ECONOMY

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**PAGE** PARTNERSHIP FOR ACTION  
ON GREEN ECONOMY

# PAGE 2022 ANNUAL PROGRESS REPORT

## PART II: Comprehensive Summary of Country Progress and Global Work



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# 1. PROGRESS IN PAGE COUNTRIES

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PAGE has delivered inspiring results in line with its four key outcomes and its sustainability criteria for graduating countries. Below is a summary of the main progress by country and at the global level in 2022.

## 1.1 Mongolia

### Country context and PAGE portfolio

Mongolia has made significant strides towards sustainable development. The country has established institutional mechanisms to oversee implementation of the SDGs, and the Vision 2050 provides a framework for the Government of Mongolia and its partners to implement strategic and inclusive programmes in a better integrated and coordinated way. However, structural weaknesses, including governance challenges, continue to be persistent and threaten progress towards the achievement of the SDGs. Despite efforts in maintaining macroeconomic stability after the economic difficulties in 2016-2017, Mongolia's economic growth has been volatile due to continued dependence on the mining sector, which is vulnerable to shocks, such as the decline of copper and coal prices and inconsistent demand from China. Unemployment remains high and quality of available jobs is low, leading many rural households to move to urban areas and many young and educated Mongolians to work abroad.

Climate change is one of the key factors that threatens sustainable development in Mongolia. The projected increase in the frequency and severity of climate related natural disasters, such as droughts, floods, windstorms and sand and dust storms is expected to have an adverse impact on agriculture and livestock, water and land resources, infrastructure development, human health, wellbeing and survival. While the government announced new ambitious carbon emissions targets, the current fossil fuel subsidies continue to encourage overconsumption of coal, and investment in renewable energy and green development remains low. The COVID-19 pandemic worsened the underlying challenges of sustainable development in Mongolia, by pushing the government to prioritize financial resources for the immediate health and socio-economic response, which have significantly reduced a fiscal space for development investments. Yet, it has also created opportunities for economic diversification, digitalization, regional cooperation, and improving the emergency preparedness of education and health sectors.

PAGE's work in Mongolia commenced in 2013, supporting the development and implementation of the National Green Development Policy (NGDP), providing technical support, fostering political commitment, and modelling economic, social and environmental implications of NGDP targets. This set the tone for strong evidence-based policy analysis, resulting in reforms across a range of sectoral and thematic areas, including sustainable 4 public procurement, finance and trade, green economy learning, green jobs, green buildings, and industry and waste management.

Mongolia was the first country where PAGE started to phase out its support since 2018 accompanied by the development of a comprehensive sustainability plan. PAGE's support has culminated in several achievements including: integration of IGE goals and targets into national economic and development planning; sectoral and thematic reforms in green buildings and construction, green finance, waste management and sustainable procurement; and strengthened institutional capacity of government institutions, the media, universities, research institutes and businesses. **In turn, this work has contributed to**

**SDG 4 (Quality Education), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action), and 17 (Partnerships for the Goals).**

Following graduation, Mongolia remains in the partnership as an alumni country, sharing knowledge to help replicate its achievements on a global scale.

To help the country recover greener and better from the COVID-19 crisis, PAGE is supporting the government in implementing its Action Plan for 2020-2024, which considers “sustainable tourism based on nature, history and cultural heritage” as key to economic recovery. The tourism sector is the third largest contributor to the Mongolian economy and has been severely impacted by the pandemic. To promote a green recovery of the sector, PAGE is supporting the development of a “Ger and Nature” scheme with the Ministry of Environment and Tourism, contributing to economic diversification, improving rural livelihoods and reducing greenhouse gas emissions. Another important area for PAGE is to support on green recovery are the government’s plans to reform energy subsidies, which will be critical to creating fiscal space, redirecting incentives and achieving Mongolia’s ambitious climate targets.

## Progress in 2022

### Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

#### **Promotion of Renewable Energy through Tariff Reforms**

PAGE (UNEP) is supporting the Government of Mongolia in the promotion of renewable energy at national and provincial levels. Together with the Mongolian Energy Economics Institute (MEEI) and the UN Resident Coordinator Office, PAGE analyses potential reforms of energy subsidies and tariffs to accelerate renewable energy development. MEEI collected data on Mongolia’s fossil fuel subsidies and presented options for reform at the 2022 International New Energy Summit in September that took place in Ulaanbaatar.

#### **Study on Renewable Energy in the Agribusiness**

With the support of the Mongolian Renewables Industries Association, PAGE, led by UNIDO, launched a study on the opportunities to expand renewable energy deployment from solar and wind in the province of Dundgovi, looking specifically at green jobs and emissions reduction potential in the agribusiness sector. Following the agreement on the scope of the feasibility study with the Ministries of Energy and Environment and Tourism, the Provincial Governor’s Office and the National Renewable Energy Center, an expert team visited the province in July and collected data from 21 small and medium-sized enterprises in order to map renewable energy options for the agribusiness food sector (meat, dairy and vegetables) and non-food sub-sectors (wool, cashmere and leather). The study is expected to be completed in the second quarter of 2023.

#### **Ger and Nature Scheme and Roadmap**

To promote a green recovery of the sector, PAGE (UNDP) supported the development of a “Ger and Nature” (GaN) scheme, with the aim to contribute to economic diversification, improving rural livelihoods and reducing greenhouse gas emissions. Since 2022, the government started to implement the GaN scheme and supported its further implementation through the development of a roadmap. The road map was completed in cooperation with the Mongolian Sustainable Tourism Development Centre, following consultations with selected provincial governments called Aimags. It includes an



investment plan for operationalizing the GaN scheme and facilitating private sector engagement.

### **Green Jobs Assessment in the Nature-based Tourism Sector**

In support of Mongolia's "Ger and Nature" (GaN), PAGE conducted a Green Jobs Assessment to identify opportunities for and barriers to the promotion of green jobs and decent work in the nature-based tourism sector ([Green jobs potential in ger and nature tourism in Mongolia](#)), as well as an analysis of decent work standards and gaps. The findings show growing international and domestic demand for GaN tourism which involves Mongolia's herders, tour operators and other actors, and ensure local green jobs and decent work. The research findings were validated on 4 July in Ulaanbaatar, engaging 28 representatives from PAGE partner agencies, government, workers' and employers' organizations, as well as local communities. The reports will be finalized in 2023. Based on the recommendations of the study, an on-site training of local herder communities and SMEs (see Outcome 3) was conducted.

### **Building institutional and individual capacity (Outcome 3):**

#### **Trainings in the Nature-based Tourism Sector**

Throughout 2022, PAGE rolled out a comprehensive onsite training-of-trainers programme for the "Ger and Nature" brand resulting in 23 trainers and five certified auditors, who subsequently conducted training for over 300 herders, small and medium-sized enterprises (SMEs) and community-based organizations in Bayankhongor, Gobi-Altai, Arkhangai and Ulaanbaatar. In addition, PAGE provided on-site training for local communities and SMEs in Hustai National Park and Tuv province on decent work and safety for herders, local income generation, investment opportunities and preservation of traditional nomadic culture. Trainings held on 6-7 July 2022 built on the the green jobs assessment and were jointly carried out with the National University of Mongolia, herding communities, tour operators and other stakeholders involved in nomadic GaN tourism activities and the cashmere industry, being a related sector in Mongolia. The training enhanced participants' understanding regarding necessary skills for nature-based tourism as well as the links to green jobs and just transition.

### **Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):**

#### **Awareness-raising Material to Promote Nature-based Tourism**

To further support the tourism sector, PAGE supported the development of promotional videos for the Ger and Nature brand for a target audience that includes decision makers, private sector and herders in three languages (Mongolian, English and Russian). The partnership also supported a project on identifying specific routes on nomadic culture, destination contents and interactive maps in six languages for the tourism sector, as well as a video to promote green jobs and just transition in the nature-based tourism sector in Mongolia and beyond.

### **Measures to Sustain the Sustainability of Results:**

#### **PAGE Support to Mongolia - SDG-based Environmental Budgeting**

PAGE under UNDP's Special Project has been supporting a pilot project at the Ministry of Environment and Tourism, designed to assist the Ministry of Finance to integrate the SDGs into the budgeting process. The initiative is designed to ensure that public expenditures are more directly aligned with priorities identified in the country's Green Economy Action Plan and related environmental strategies. Within the reporting period, assessments on

fiscal analysis and financing mechanism of Mongolia's environment and tourism sector were finalized.

In 2022, as a result of PAGE's technical support, the staff of the Ministry of Environment and Tourism involved in policymaking gained practical skills to differentiate between different levels of results and their interlinkages and expressed more acceptance for intersectoral and vertical coordination for better environmental protection.

PAGE support was focused on the institutionalization of results-based planning and budgeting that was piloted in the environment sector in the previous two years. 10-year, medium-term development policy framework or six National Targeted Programmes (NTPs) were drafted using Integrated Results-based Management (IRBM) methodology. Even though the approval of the NTPs is pending, the results framework is already being used in annual development planning for the sector. The Ministry of Finance included the environment sector results-based budgeting for its 2023 workplan.

The support provided by the PAGE programme was coordinated with another project that UNDP is implementing with EU funding, SDG-aligned Budgeting to Transform Employment, complementing its two pilot sectors, employment and agriculture. Further support to the environment sector's results-based planning and budgeting will be provided under this project in 2023, enhancing continuity and sustainability.

PAGE support was also extended to a study to analyse each budget programmes based on the last 5 year fiscal statistics of Mongolia's environment and tourism sector, to determine expenditure trend, and to identify issues in the top-down and bottom-up budgeting process. In addition to conducting a budget analysis of the budget of the MET portfolio, it attempted to conduct a statistical analysis of the revenue of natural resource use fees, the main source of environmental protection at the provincial level and its spending. It also explores international good practices of SDG-budgeting and aims to identify the prerequisites for the transition to SDG-budgeting to integrate the long- and medium-term national development policy objectives of Mongolia. The partnership also supported a study to explore international experience in implementing sustainable financing mechanisms to support biodiversity and tourism development, to identify the types of financing mechanisms exist in Mongolia, and to investigate possible ways to improve fund biodiversity conservation. In order to improve public funding, which is a main source of funding for biodiversity conservation, it aims to develop a long-term and medium-term fiscal reform proposal for this sector.

## 1.2 Peru

### Country context and PAGE portfolio

Located on the west coast of South America with more than 50 per cent of its territory covered by forest, Peru has an abundance of natural resources that serve as the backbone of its economy. Decades of resource-driven growth have degraded the environment, resulting in water and air pollution, soil erosion and deforestation, affecting all segments of society, particularly the most vulnerable. In recent years, Peru has made significant efforts to not only offset the balance between economic growth and environmental preservation, but to turn its sustainability concerns into drivers of government policy and long-term prosperity. This is no more prevalent than in its Bicentennial Development Plan of 2011. Against this backdrop, PAGE commenced work in Peru in 2014, with the aim of promoting efficient use of resources, environmental quality and green jobs creation. PAGE has since

supported the integration of green growth into national planning, assisted the implementation of green sectoral and thematic policies, and built both individual and institutional capacity to support long-term change. As an important milestone, Peru approved a National Competitiveness and Productivity Policy, including a chapter on sustainability in 2018.

In 2019, Peru's objective to achieve sustainable and inclusive green growth was enshrined in the Vision of Peru to 2050, which establishes the country's medium- to long-term vision for development, as one of its five axes. Other key achievements include sectoral and thematic reforms in green jobs, teleworking and urban transport, introduction of IGE courses into national curricula, and strengthened capacity on forward looking policy analysis.

**PAGE work in Peru has supported the achievement of the Organisation for Economic Co-operation and Development (OECD) Declaration on Green Growth and several Sustainable Development Goals (SDGs), including SDGs 4 (Quality Education), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 10 (Reduced Inequalities), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action) and 17 (Partnership for the Goals).**

PAGE started a gradual phase out of its support from Peru in 2019, accompanied by the development of a sustainability plan and supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), led by the Green Economy Transformation (GIZ-GET) project, to enhance national capacity and ownership and generate lasting results. PAGE, however, continued its engagement in the country, as the theme of green growth has become more relevant in the context of the pandemic and following the request to provide targeted green economic support by the Ministry of Environment and the Ministry of Economy and Finance in 2021.

Besides political uncertainty, that includes frequent shifts in Peru's government and low expectations of economic growth, several initiatives were advanced in 2022, such as a revision of the national climate change strategy to integrate green economy and eco-business concepts. PAGE focused on a set of targeted activities promoting inclusive green jobs, green entrepreneurship, green industry, green finance and capacity building for public servants, under the broader objective of green growth.

## Progress in 2022

### **Development of an Inventory of Scalable Good Practices**

In partnership with the Regional Management of Economic Development and Regional Environmental Authority of San Martín, PAGE developed an inventory of scalable good practices aligned with the National Environmental Plan and the National Plan for Decent Employment. The inventory will be validated in the San Martín region with the intention of further scaling it in other territories of Peru (Loreto, Ucayali, Amazonas and others). The counterparts are the Regional Management of Economic Development and the Regional Environmental Authority of the Regional Government of San Martín.

### **Green Economy Modelling Support in the Context of Peru's Common Country Analysis**

PAGE's Green Team supported the use of models for policymaking in close collaboration with the United Nations Resident Coordinator's Office (UNRCO) economists for updating the Common Country Analysis.

In 2021, the United Nations System in Peru developed the Common Country Analysis as a step prior to the new UN Framework of Cooperation for Sustainable Development 2022-2026 (UNFCSD). The document, which entered into force on 1 January 2022, identifies circular economy as one of the key accelerators in the country to advance with the national development priorities to achieve Agenda 2030 and the SDGs.

To generate this evidence, a 'soft-link' will be developed between the set of economic models used in the decarbonization project and the T21-model supported by PAGE Peru. The country's T21-model has the capacity to generate additional social, economic and environmental indicators, which will allow to expand the set of indicators used in Peru. Policies applied in the model will mostly be based on NDC instruments related to mitigation in sectors with highest GHG emissions in Peru. The main partner will be Pontificia Universidad Católica del Perú.

## Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

### Study on the Sustainability of the Peruvian Industry

In partnership with the Ministry of Production, PAGE is conducting a study to identify and prioritize manufacturing products that have the potential to contribute to diversification and sustainability of the Peruvian industry. The study is being conducted within the framework of two national policies, the National Industrial Development Policy and the Policy for Sustainable Development and Environmental Management. It will support the ministry to make investment decisions for greening and diversifying the manufacturing sector.

### Roadmap for the Mobilization of Investments in Natural Infrastructure

Building on its work from 2021, PAGE worked with the Biodiversity Finance Initiative (BIOFIN) to support the Peruvian government in scaling up the public investment programme "Public Works for Tax deductions" (WxT) that allows private companies to pay a portion of their income taxes in advance in the form of public works that enhance green infrastructure, biodiversity and ecosystem services.

In 2022, PAGE, through BIOFIN, supported the General Office of Economics and Environmental Financing of the Ministry of Environment to implement a roadmap for the mobilization of investments in natural infrastructure. The roadmap was approved by Ministerial Resolution No. 210-2022-MINAM and is being carried out in the regions of Piura, Arequipa and Apurímac. As the portfolio of participating projects continues to grow, the expectation is that WxT becomes a leading mechanism for developing green infrastructure projects across the country.

### Study on Green Jobs for Refugees, Migrants, and Nationals

PAGE provided technical support for the development of a study on the ["Opportunities to generate green jobs for refugees, migrants and nationals in Peru"](#) which was developed under a regional ILO project promoting labour integration (financed by the United States Agency for International Development, USAID). The publication referred to work that PAGE has completed since 2014. The study provides case studies for the sub-national departments of Piura, Lambayeque, La Libertad, Cusco and Lima. The study identified agriculture, solar energy, sustainable construction and recycling as the economic sectors with the greatest potential to create green jobs and sustainable enterprises for Venezuelan refugees and migrants, as well as for host populations in the framework of a Just Transition.

The ILO-coordinated project “Promotion of the Labour integration of refugees and migrants under decent work conditions in Ecuador and Peru” took up the main recommendations of the study and started promoting skills certification in the identified sub-sectors in the Piura region.

### **Improving Private Enterprises Access to Green Finance**

PAGE, led by UNDP, has started to support development of a plan for improving private enterprises' access to green finance. The Terms of Reference for this work are being drafted in close coordination with ILO, national and local partners. There are two sub-activities, including technical support through an incubator mechanism for green business in San Martín and a training programme on green economy and finance, targeting public servants.

### **Targeted Scenario Analysis to Inform Greener, Inclusive Public/Private Investments**

As a UNDP special project, the Targeted Scenario Analysis (TSA), an economic valuation approach designed to provide sector-focused economic information to decision-makers, supports sustainable policies and better-funded implementation plans. During 2022, results and recommendations of PAGE-supported TSA continued to be applied to advance policy reform in Peru with the aim to improve sustainable sectorial development, and to reduce pressure on forests, ecosystems and biodiversity. It included the revision of the National Plan for Developing the Cocoa-Chocolate Value Chain 2020-2030, a regulatory framework for sustainable cocoa production and marketing, as well as a National Palm Oil Value Chain Plan among others. The PAGE-supported TSA led to the development of two additional TSA in the livestock and coffee sectors. The former is under implementation and the latter is planned for 2023.

### **Building institutional and individual capacity (Outcome 3):**

#### **Promoting the Development of Green Entrepreneurship in San Martín**

Since November 2022, PAGE (through ILO) has been supporting processes to strengthen the capacities of professionals linked to business development services for local entrepreneurs and cooperative companies. The work has been carried out in coordination with the BIOINNOVA San Martín Regional Center for Innovation and Entrepreneurship of the National University of San Martín and the Regional Government of San Martín.

In the Think Coop and Start Coop methodology, 10 professionals (4 men and 6 women) have been trained. These professionals are carrying out their replicas (an essential requirement to obtain their certification) with cooperative companies linked to value chains of bamboo, cocoa, and others.

In the My Green Business methodology, 14 professionals (10 men and 4 women) have been trained. Currently, the professionals are carrying out their replicas with entrepreneurs from the San Martín region.

In this context, PAGE (ILO) prepared a proposal in coordination with the Regional Center for Innovation and Entrepreneurship and the National University of San Martín's BIOINNOVA to improve the institutional framework to promote eco- and bio-businesses in San Martín. The regional development plan considers bio- and eco-businesses and financing options. PAGE support aims at improving the capacity for promoting bio- and eco-businesses, specifically, by increasing the capacity of cooperatives and other associative enterprises in the bamboo value chain.



## University Diploma on Just Transition

PAGE is supporting the introduction of a diploma on Just Transition that will support an increase in the capacity of public and private managers to support the transition to a green economy in San Martin. The Faculty of Ecology of the National University of San Martin is currently developing the content, based on ILO guidance and in line with the national frameworks.

## 1.3 Senegal

### Country context and PAGE portfolio

In recent years, Senegal has established itself as one of West Africa's economic hubs and in the process, made significant strides towards improving the well-being of its population. Nevertheless, with approximately 50 per cent of its territory classified as semi-arid, the country is especially vulnerable to climate change, which is expected to intensify environmental threats such as desertification and water scarcity. As a large share of the population relies heavily on natural capital for their livelihood, committing to a green and inclusive economy is key to developmental success.

Recognizing the importance of sustainability, Senegal adopted the "Plan Senegal Emergent" (PSE) in 2014, outlining a new development model designed to accelerate its progress towards emerging market status and facilitate its transition to a green economy in the mid to long-term. This was bolstered by the adoption of a National Strategy for Sustainable Development in 2015.

In this context, the Senegalese Ministry of Environment and Sustainable Development (MEDD) requested PAGE support in early 2014. PAGE intervention has focused on the operationalisation of the PSE and its five-year Priority Action Plan (PAP 2014-2018), specifically two pillars integral to green economy transition: "Structural Transformation of the Economy and Growth" and "Human Capital, Social Protection and Sustainable Development". Since 2018, the reinforcement of IGE objectives in the elaboration of the PSE II and the second PAP to span 2019-2023 has become an area of attention for PAGE support.

Since 2019, PAGE began a gradual phase out of its support from Senegal, with a sustainability plan in development to further embed PAGE results and take the green economy agenda forward.

To date, PAGE's work in Senegal has already culminated in several achievements, including the integration of IGE into national policies; sectoral and thematic reforms across green jobs, sustainable construction, waste management, green industry and sustainable use of revenues from oil and gas; the establishment of a national multi-stakeholder platform; and enhanced green entrepreneurship. **As such, PAGE work has contributed to the achievement of several SDGs, including SDGs 4 (Quality Education), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production) and 17 (Partnership for the Goals).**

In 2022, Senegal marked a new milestone in its efforts to become an inclusive green economy and marked 8 years of partnership with PAGE to capitalize on the achievements. The adjustment of the Programme d'action prioritaire (PAP) of the (PSE) for 2019-2023 in 2021 provided new entry points for PAGE in 2022. For instance, the focus was on mitigating the main socio-economic challenges of the pandemic while promoting sustainable and inclusive growth, through the support in green recovery policymaking and the integration of gender dimensions into national plans.



In addition, PAGE supported the integration of sustainable practices in public procurement processes and plastic recycling, while also building national capacity in processing bio-organic products.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Celebrating 8 Years of Partnership with PAGE**

The Government of Senegal, under the aegis of the Ministry of Environment and Sustainable Development, invited key stakeholders involved in green economy action to Dakar on 12-14 October to celebrate 8 years of partnership with PAGE, present a sustainability strategy, reinforce the government's commitment to continuing working on inclusive green economy (IGE) in the future, and exchange on challenges and opportunities in the run-up to UNFCCC COP27.

The two-day event included panels and thematic sessions, an exhibition and a media award ceremony to award outstanding journalistic productions related to green economy. It was attended by 150 participants, including high-level representatives of the government and other state structures, UN representatives, development partners (Embassies of Germany, Switzerland, Finland and the Republic of Korea, the European Union and the Global Green Growth Institute), the private sector, civil society, the research and education sector, workers' and employers' organizations and NGOs.

The meeting officially installed the bodies of the National Multi-Stakeholder Platform on Green Economy (PNEV) mandated by a government decree to anchor green economy in Senegal. PNEV will take the lead on developing a roadmap for the pursuit of green economy promotional activities in Senegal beyond the interventions of PAGE, based on the presented sustainability strategy.

The event included different thematic roundtable discussions related to PAGE achievements, including the following examples:

- UNITAR organized a roundtable on the theme of "Renforcer les capacités humaines pour une économie verte et inclusive - Leçons apprises de PAGE et opportunités pour l'avenir". The session focused on the sustainability strategy for both the Centre d'Études des Sciences et Techniques de l'Information, as well as the Ecole Nationale d'Administration for delivering IGE trainings on a recurrent basis. Both institutions are now offering IGE modules that were developed with the support of PAGE (UNITAR) as part of their regular training programmes.
- UNEP led a round table on Sustainable Public Procurement (further details below) and the management of revenues from oil and gas resources. PAGE has supported Senegal with a study on the use of revenues derived from their exploitation that highlighted the experiences of other countries. Since its release, important progress has been made with the adoption of a new Petroleum Code in 2019, and more recently in 2022 the adoption of the Law on the Distribution and Management of Revenue from the Exploitation of Hydrocarbons. Important questions still to be clarified include transparency and accountability in the management of hydrocarbon revenues, governance of the sovereign wealth fund and additional fiscal rules.

### **Workshop on the Impact of COVID-19 on NDCs**

In collaboration with the Directorate of Environment and Classified Establishments, PAGE (ILO) organized a workshop on 1 April to validate the impact study of COVID-19 on the country's NDCs, as well as the proposed post-COVID implementation strategy. The study identified technical and social measures that could be integrated into Senegal's contributions to climate protection in priority sectors such as industry, energy, agriculture, livestock, water resources and fisheries. The workshop was attended by more than 30 participants, including representatives of the Ministries of Environment, Maritime Economy, Energy, Sanitation, Transport, Water, and Health, the National Committee on Climate Change and other members of civil society. The official publication will provide guidance to the strategic pathway for a green recovery.

### **Development of a Strategic Orientation Document on Green Recovery**

In partnership with the Economic, Social and Environmental Council, PAGE developed a strategic orientation policy document on green recovery. The document provides an overview of the strategic sectors, such as water and sanitation, fisheries, construction (energy efficiency) and agriculture from a value chain perspective and proposes a matrix of strategic actions following four guidelines: (1) resource mobilization, (2) capacity development, (3) green practices and technologies promotion and (4) green entrepreneurship and green jobs promotion. The final report was validated in a workshop on 23 March, where a series of recommendations were also made to the government and the public sector, the private sector and other stakeholders. The document is available [online](#).

## **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

### **Integrating Environmental and Gender Dimensions into the National Industrialization Policy**

PAGE supported the Ministry of Industrial Development and small- and medium-sized industries, through the UNIDO project "Economic empowerment of women in green industry" (EEWiGI), in integrating environmental and gender dimensions into Senegal's Industrialization Policy and Strategy 2021-2035 building on the study "[Evaluation of Women's Economic Empowerment in the Green Industry](#)". The Industrialization Policy is aligned with the National Plan for Land Use and Development and proposes reforms to improve the business environment, build the capacity of industrial units and drive innovation, while also promoting inclusive and sustainable development.

In a workshop on 25 October, PAGE, the UNIDO EEWiGI project, UN Women and sectoral ministries jointly assessed existing policies and the level of integration of gender and green industrialization and put forth recommendations for closing the gender gap in green industries. The PAGE national coordinator presented potential avenues for addressing inclusivity gaps to facilitate green industrial growth.

### **Integration of Sustainability Criteria into the Public Procurement Process**

The draft National Action Plan for Sustainable Public Procurement (SPP) from 2019 obliges public authorities in Senegal, particularly contracting authorities, to carry out environmental assessments for government plans, projects and programmes. This SPP National Action Plan has been an entry point for PAGE under the broader objective to embed green economy principles into Senegal's on-going recovery efforts, with a focus on pilot testing of SPP for selected impactful product categories.

In accordance with the plan, PAGE drafted a report advising the government on how to integrate sustainability criteria and clauses into different stages of the public procurement process. The report includes an analysis of nine commodity groups that make up most public procurement contracts and proposes a series of steps for the administration to take action on. Related to the report, PAGE organized a SPP session during the PAGE closing workshop on 14 October 2022 to receive comments on the draft market readiness analysis and prioritization report, which also analysis the opportunities of women-owned businesses in Senegal's public procurement. To ensure the sustainability of this work beyond PAGE support, an agreement was signed in April 2022 with the Direction des Financements Verts et des Partenariats to finance the remaining project activities.

### **Workshop on the Operational Directory of Green Jobs**

PAGE supported the development of an operational directory of green jobs in 2021. Building on this work, PAGE, led by ILO and UNITAR, and the Directorate of Employment organized a workshop in March 2022 at the Ministerial Spheres of Diamniadio (a new city under development to relieve population pressure) to validate the directory including a list of 100 green jobs in Senegal. The directory provides a reference for labour market actors, both in the public and private sectors, to identify, express and meet their needs with respect to green skills. In addition, the training institutions benefit from guidance on how to develop training services in line with the labour demand.

### **Restructuring the Plastics Industry in Line with National Plans**

On 21 December, PAGE (through UNIDO), in collaboration with the Ministries of Environment and Industry, held a workshop entitled "Support to strengthen the Senegalese plastic recycling industry" and presented the "Dakar Vision on the circular economy, green industries and employment in West Africa" adopted on 23 July. The workshop brought public and private sector actors together to jointly determine how to best restructure the plastics industry in line with the vision, as well as the 2020 Act on the Prevention and Reduction of Environmental Impact of Plastic Products. The event was attended by 112 participants from the Ministries of Environment and Industry, the Ambassador of Austria, and several private sector actors engaged in the plastics industry.

## **Building institutional and individual capacity (Outcome 3):**

### **Trainings for Women on Beekeeping Products**

Between 5 and 30 April 2022, PAGE (led by UNDP and ILO) conducted a series of training sessions for women groups involved in the processing of agricultural and beekeeping products from the classified forest of Mbao to help increase their income generated from the conservation of forests and processing of bio-organic products. The training aimed at empowering female business owners by improving market access of local produce, such as honey, royal jelly, propolis and cashew nuts. The focus was on biological control methods and the safe use of low residual biopesticides, quality and hygiene, post-harvest conservation and packaging. One third of the group members was designated as leaders to disseminate key learnings to community groups and youth in the surrounding areas of the capital Dakar (150 participants, 140 women).

### **Trainings for Journalists on Inclusive Green Economy**

In partnership with the Centre d'Études des Sciences et Techniques de l'Information (CESTI), PAGE organized two training sessions for journalists on IGE on 23-25 May and 11-12 June 2022 to encourage greater media coverage on related topics. A total of 55 journalists and aspiring journalists were trained, including 35 journalist-students from CESTI.

Following this, the management of CESTI integrated two modules into its journalism degree programme: “Introduction to IGE” in the second-year degree and “Journalism and IGE” in the third-year degree, which are now being delivered on a recurrent basis, and a network of journalists on IGE has been set up.

In addition, the Ecole National de Administration (ENA) continues to offer IGE training as part of their ‘formation continue’. A decree to include IGE modules as part of their ‘formation standard’ is under consideration.

### **South-South Exchange:**

PAGE Senegal participated in two South-South exchanges in 2022:

- The regional webinar to exchange experiences on post-COVID-19 economic recovery and ecological transition in West Africa: the case of the tourism sector (organized by Burkina Faso), and
- The PAGE closing workshop in Burkina Faso (29 November-1 December) to foster South-South cooperation between Senegal and Burkina in the promotion of green jobs, just transition and sharing Senegal's experience in capitalizing the achievements of the PAGE programme.

## **1.4 Ghana**

### **Country context and PAGE portfolio**

Ghana is a lower middle-income country and West Africa’s second largest economy after Nigeria. The country is considered one of the fastest-growing economies in Africa, with real Gross Domestic Product (GDP) growth of 6.5 per cent in 2019, driven by the mining and oil sectors. However, the COVID-19 pandemic resulted in a steep fall in economic growth, with contraction of the economy by 3.2 and 1 per cent in the second and third quarters of 2020 respectively, pushing the country into a recession for the first time in 38 years. The medium-term negative impact of the pandemic on growth will continue to be felt through low external demand, lower foreign direct investment, and low number of tourists. The World Bank projections indicate that the economy may grow by an average of 2.2 per cent during 2021-2023, far lower than the average growth rate over the past two decades. According to the International Monetary Fund, Ghana’s external and domestic financing conditions, though tightened considerably at the start of the pandemic, have improved since, and Ghana was able to issue USD 3 billion Eurobond in March 2021.

Ghana’s policy environment for transitioning to a green and circular economy is anchored in many instruments including the 2013 National Climate Change Policy that envisaged a climate-compatible economy that achieves sustainable development through equitable low-carbon growth. The subsequent Ghana Shared Growth and Development Agenda II (2014-2017) and National Medium-Term Development Policy Framework (2018-2021) further refined Ghana’s vision by providing an overarching policy framework for transformative change. Further, the UN Secretary General’s appointment of Ghana’s President as co-chair of the Group of 16 Eminent Advocates for the SDGs in 2016, demonstrated the country’s strong political will to achieve sustainable development and green growth.

This policy framework provided the entry point for PAGE engagement since 2014. In line with the existing policies and Ghana’s decentralized planning approach, PAGE focused on the planning and monitoring processes of Metropolitan, Municipal and District Assemblies.

PAGE supported the further integration of IGE into sub-national planning processes, select sectoral and thematic policy reform processes and related capacity development across institutions and levels of government.

So far PAGE work has contributed to the following achievements: mainstreaming of IGE into sub-national planning and reporting; inclusion of climate change education in basic schools across the country; initiation of thematic policy reforms across sustainable finance, green jobs and resource efficiency; as well as individual and institutional capacity-building.

**This in turn contributed to the achievement of SDGs 4 (Quality Education), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), 13 (Climate Action) and 17 (Partnerships for the Goals).**

PAGE began a gradual phase-out of its support in 2019 and completed the development of a sustainability plan to safeguard PAGE results and maintain the green economy agenda. In 2022, the government started to consolidate gains and recover from the impact of COVID-19 by introducing the ambitious Ghana COVID-19 Alleviation and Revitalization of Enterprises Support (CARES) programme to mitigate the impact of the pandemic, return the country to a path of sustained and robust growth and to create a more resilient and transformed economy. This flagship government programme served as strategic and catalytic framework of interventions that will foster a quicker recovery and boost the country's post-pandemic economic transformation, through the promotion of green finance, green sub-national recovery plans and capacity development for green enterprises.

In line with these objectives of the CARES Programme, PAGE has been providing support to green recovery through analysing and strengthening green financing opportunities, while supporting local governments, MSMEs and the informal sector in their recovery. In 2022, PAGE helped leverage green fiscal policy instruments and initiated a workstream to assess green jobs potential across key economic sectors.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Alignment of Local Development Plans with SDGs and Green Economy**

PAGE (through UNDP) worked with the Ministry of Environment, Science, Technology and Innovation, the National Development Planning Commission, and the Ghana Statistical Services (GSS) on aligning medium-term development plans and annual budgets with SDG targets, green their recovery plans. UNDP has supported the development and deployment of tools (metadata document and related templates) and related capacity development of district statisticians and budget officers from Metropolitans, Municipalities and District Assemblies (MMDAs - the local government) to green their development planning processes and outcomes. Additional technical and financial support was leveraged from GIZ and the Commonwealth Local Government Forum.

By the end of 2022, this resulted in 101 MMDAs (out of a total of 261 in the country) aligning their development plans with climate change targets, green economy and local economic development goals, and putting in place a robust data management system for measuring and reporting on delivery of these outcomes.



MMDAs now have access to concrete and reliable data systems to inform continuous planning, resource mobilization and sustainable local economic development, while contributing to the country's international obligation through the Voluntary National Reporting of the SDGs. A total of 1,100 staff from the 101 MMDAs averaging 11 persons per district benefited from the training on mainstreaming climate change, green economy and local economic development aligned SDGs in medium-term and green recovery plans. GSS is in discussions with the World Bank scaling up the tools, templates and procedures to the remaining districts in Ghana (160) that the project could not cover, including discussion on additional funding.

## Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

### Development of Green Jobs Assessment Model

PAGE (through ILO) is working with the Ministry of Employment and Labour Relations to develop a [Green Jobs Assessment model \(GJAM\)](#) that will provide a baseline for green jobs and green enterprises in Ghana and determine green jobs potential across key economic sectors, including energy, transport, agriculture and forestry, and industry and waste. The work is being carried out by SINTEF, a contracted International Research Institution, and with the support of an ILO-Sida Partnership project.

The assessment will guide the implementation of the National Green Jobs Strategy and other relevant national instruments with employment and Just Transition objectives, such as the Medium-Term National Development Framework and the country's revised NDCs. It will ensure that employment and just transition policies are integrated into the national policymaking process and will also serve as a tool for monitoring. A national green jobs stakeholder meeting is planned for the first quarter of 2023 to discuss and validate results. The National Green Jobs Strategy has been drafted and is currently pending approval by the cabinet.

### Analysis of Fiscal Policies in Support of Post-COVID-19 Recovery

In 2022, PAGE finalized a report on fiscal policies to support Ghana in developing a post-COVID green economic recovery programme, working with the Overseas Development Institute's research team. The study analyses the current fiscal policy frameworks with green recovery objectives and assesses opportunities that would leverage green fiscal policy instruments to raise public revenue for initiatives under the national [COVID-19 recovery programme](#), while making progress towards combatting climate change, biodiversity loss and pollution. Recommendations for potential reforms were included in the report, which the Ministry of Finance and Economic Planning will use to formulate public finance tools and policy levers to scale-up green finance from the private sector and financial institutions.

### Case study on Green Recovery of Ghanaian Micro, Small and Medium Enterprises

PAGE, led by UNIDO and in collaboration with ILO, developed a case study related to green recovery of Micro, Small and Medium Enterprises (MSMEs). The study will be published as part of the upcoming global publication in 2023: "Impact of COVID-19 on green enterprises: policy guidance towards inclusive, resilient and sustainable recovery". The case studies (also including India and Uruguay) analyse the impact of COVID-19 on MSMEs, the measures taken by enterprises, the support schemes adopted by governments as well as business and job creation opportunities, providing sustainable mechanisms for MSMEs to recover and transform. Based on the findings, a recovery toolkit for global use was designed to provide knowledge and resources to MSMEs on how to recover from shocks and increase resilience.

As a follow-up in Ghana, UNIDO will further assess business opportunities for MSMEs through digital platforms and the ways they can help promote innovation, growth and competitiveness. In addition, training to enterprises within the framework of the 1 District 1 Factory (1D1F) Government Policy on resource efficiency and sustainable production principles will be conducted in 2023.

## 1.5 Mauritius

### Country context and PAGE portfolio

Mauritius has come a long way since its independence in 1968, transforming into a diversified upper middle-income economy, benefitting from dynamic industrial, financial and tourism sectors and high levels of human development. However, increased economic activity has adversely affected the environment, and the island's vulnerability to climate change has made it essential for Mauritius to build a resource-efficient and resilient economy.

The overarching [Mauritius National Vision](#) (previously named Vision 2030) sets a clear path towards tackling environmental and social challenges, as well as achieving the country's ambition of becoming a high-income, sustainable and inclusive green economy.

Since 2014, PAGE has worked closely with the Mauritian government to achieve its vision, linked to the delivery of the Three-Year Strategic Plans. Key achievements include capacity development for the issuance of green bonds, guidance on social policies and the tracking public environment expenditures, the assessment of industrial waste and related industrial strategies, and advanced green economy learning. A significant contribution was towards the Marshall Plan Against Poverty, including the Marshall Plan Social Contract, which aids households at risk of extreme poverty.

**More broadly, PAGE has supported achievement of the country's Nationally Determined Contributions (NDCs) and several SDGs, including SDGs 1 (No Poverty), 4 (Quality Education), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), 13 (Climate Action) and 17 (Partnerships for the Goals).** Mauritius also directly recognised PAGE as contributing to their achievements in the Voluntary National Review (VNR) of its SDGs presented at the High-Level Political Forum (HLPF).

PAGE began a gradual phase-out of its support in 2019, developing a sustainability plan to safeguard results and the future of green economy in Mauritius. In the following year, the COVID-19 pandemic brought unprecedented economic challenges and social disruptions to Mauritius, resulting in shifts in government plans and budget allocations, with priorities for stimulating economic recovery, including supporting tourism, manufacturing, investment in climate smart agriculture, renewable energy, circular economy and sustaining SMEs.

In line with these government recovery priorities, PAGE continued its support in 2022 by strengthening the enabling environment for promoting sustainable agri-food systems and green finance, contributing to waste management reform, building national capacity for public servants and integrating green economy into schools' curricula. Importantly, Mauritius celebrated eight years of engagement with PAGE in a transition ceremony that marked the opening of greater opportunities in sustaining the achievements towards an inclusive green economy.

## Progress in 2022

### **Celebrating 8 Years of Partnership with PAGE**

On 21-22 September, key stakeholders including three Ministers, the UN Resident Coordinator and other representatives from the Mauritian Government, the UN and development partners, came together in Port-Louis to [celebrate eight years of partnership in the country](#). The Transition Ceremony was attended by 100 participants and was an opportunity to highlight PAGE work in Mauritius since 2014 and to present the Sustainability Plan for future action. It resulted in stakeholders, through working groups, jointly developing key priorities and next steps for further transitioning Mauritius towards IGE.

### **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

#### **Study on the Access to Green Finance by SMEs**

PAGE conducted a study on the access to, and use of, green finance by SMEs in Mauritius. The study by extension evaluates the integration of sustainability in the business operations of SMEs in Mauritius and explores applicable good practices and lessons learned from other countries and regions. The study also identifies key barriers to green financing and proposes recommendations and potential solutions to scale up green finance opportunities for SMEs in Mauritius. The Ministry of Industry will use the report to re-evaluate and reform the current public funding schemes available for SMEs and explore attaching additional small business development services to the schemes to better set-up SMEs for success.

#### **Study on Financing Nature-based Solutions and Climate Smart Agriculture**

To support a green economic recovery, PAGE produced a technical study that analysed the challenges and opportunities for financing nature-based solutions (NbS) and climate smart agriculture (CSA) in Mauritius, with a related toolkit on scaling up finance for NbS and CSA. The study "Fiscal Policy Reform for sustainable agriculture: Scaling-up finance for nature-based solutions (NbS) and climate smart agriculture (CSA) in Mauritius" assessed the environmental and socio-economic impacts of 11 fiscal government schemes, calculating the level of finance for CSA and NbS, and recommending fiscal policy reforms and complementary measures, as well as potential new green finance instruments. Findings and recommendations were shared with the Ministry of Agro-Industry and Food Security and the Ministry of Finance, Economic Planning and Development with the aim of supporting the two Ministries to revise or develop financing mechanisms for NbS and CSA.

#### **Promoting Sustainable Urban Food Systems**

In response to the government's priority on food security and promoting circularity, PAGE produced a study on "promoting sustainable urban food systems in Mauritius by enhancing urban and peri-urban agriculture with circular economy approaches". It explored the main food system challenges (environmental, socio-economic, food and nutrition security), the policy framework and the interventions that can enhance urban and peri-urban agriculture. Two multi-stakeholder dialogues on food systems were organized to validate the findings, prioritize the recommendations and to agree on establishing a multi-level, multi-stakeholder mechanism to take forward the prioritized actions.

The study was conducted in collaboration with the International Institute for Environment and Development and the University of Mauritius under the technical coordination of UNEP's Cities Unit, and in close consultation with the Food and Agricultural Research and Extension Institute and the Ministry of Agriculture.

### **Boosting the Agro-Processing Industry for SMEs**

In 2022, PAGE, with green recovery support and led by UNIDO, completed the study: “Creating an enabling environment and incentives to boost sustainable agro-processing industry including high growth potential SMEs in Mauritius” in collaboration with the Ministry of Agro and Food and Agricultural Research and Extension Institute (FAREI). The study reviewed the current policies and schemes for SMEs in the agriculture sector, assessed the impact of COVID-19 on SMEs and proposed mitigation measures.

On 12 May, PAGE held a one-day workshop to share the results of the study. The workshop, with 42 participants representing public and private sectors, NGOs and SMEs, facilitated a direct interaction between decision-makers with farmers to sustainably address key constraints in the sector. Feedback from the workshop informed the final proposal and recommendations which were integrated into the final report. The report was launched during the PAGE closing ceremony in Mauritius from 21-22 September 2022.

### **Cost Structure Review of Industrial Waste Management**

In May 2022, PAGE published an [Industrial Waste Management - Cost Structure Review in the Republic of Mauritius](#) that assesses how solid waste management (SWM) costs are currently assumed by different sized enterprises and the public sector and provides general recommendations for implementing extended producer responsibility schemes. It aims to improve industrial SWM and facilitate development of the circular economy while enhancing enterprises’ competitiveness in Mauritius. The report was a response to the recommendations of an industrial waste assessment that PAGE produced in 2017 together with the Ministry of Industry, Commerce, and Consumer Protection, UNIDO and Business Mauritius. The report has since been referenced by the Ministry of Environment as well as the private sector with regards to waste management reform.

### **Report on the Employment Impact of a Low Carbon Strategy**

Together with the University of Mauritius, PAGE (led by ILO) finalized a report entitled “Employment and Skills impacts of a Green and Low Carbon Strategy in Mauritius.” The report used ILO’s GJAM’s methodology to identify future skills needs in emerging green sectors, working in close collaboration with the Ministries of Finance, Labour, Education and Human Resources, and Statistics, as well as trade unions.

There is a strong commitment in Mauritius to develop both the economy and society whilst subduing the adverse impact on the living environment. With the new and ambitious climate target and socio-economic expectations, the key question is which type of policies and strategies would maximize employment creation and economic growth while at the same time reaching the climate target. This report finds that economic sectors having a potential for green jobs directly offer opportunities to reduce GHG emissions. While the link between the creation of green jobs and a transition to a green/low carbon economy seems evident, there is a need to establish their mutual benefits and possible pathways.

### **Building institutional and individual capacity (Outcome 3):**

#### **Upgrade in IGE e-learning Portfolio at the Civil Service College**

PAGE provided technical support to the Civil Service College Mauritius to upgrade its [e-learning system platform iTrain](#) and expand its portfolio of IGE courses. The new platform went live in February 2022 with three PAGE e-learning courses (1) Indicators for an Inclusive Green Economy: Introductory Course, (2) Indicators for an Inclusive Green Economy: Advanced Course, and (3) Introduction to Green Economy. More courses will be added in the future, including Green Economy and Trade, Green Fiscal Reform, Sustainable Finance, Sustainable Diet and Sustainable Consumption and Production in Africa.

### **Training on GJAM for Public Servants**

Six Mauritian public sector representatives had the chance to further build their capacity in a GJAM training in Madagascar which focused on analysing green-blue economy and climate policy impacts on employment, GDP, skills, gender, income distribution and inequality. In parallel, PAGE organized consultations to bring together all key research findings, qualitative data and forward-looking recommendations to contribute to the development of a national action plan addressing skills gaps defined in Mauritius's NDCs.

### **Support the Green Recovery of the Tourism Sector through Trainings**

To support a green recovery of the tourism sector and position Mauritius as a sustainable tourism destination, PAGE worked with Operation COSHARE - a project jointly organized by the Ministry of Tourism, the National Productivity and Competitiveness Council (NPCC) and the Tourism Authority - to improve the sustainability of the sector.

In 2021, the project worked with local trainers from NPCC to conduct a COVID-19 recovery and safety protocol training for 1,340 enterprises. In January 2022, in a second step, 20 of the newly trained enterprises received training on resource efficient practices. A training of trainers (14 trainers) was conducted by ILO for local trainers from NPCC for further dissemination of the programme to enterprises. Working with the national 14 trainers from the NPCC helped to ensure that the training can be replicated in the future.

On 21 October 2022, PAGE held an award ceremony for the 25 enterprises which also marked the end of Operation COSHARE. High-level government officials from the Ministry of Industrial Development, SMEs and Cooperatives attended and NPCC shared ideas and opportunities for continuing the work. In November 2022, a dissemination workshop and an award ceremony were successfully delivered on Phase II of the Operation COSHARE programme.

### **Integration of Green Economy and Climate Change into School's Curricula**

In 2022, PAGE (led by UNITAR) supported the integration of green and climate change learning into Mauritius classrooms. The Civil Service College collaborated with the Mauritius Institute of Education (MIE) to create a dedicated space for teachers to increase their capacities to integrated green and climate relate issues in the curriculum. The collaborations and consultations with MIE and Ministry of Education, Tertiary Education, Science and Technology (METEST), open a channel for a formal integration of green/climate competencies into teachers' qualification, as well as a formal integration of those topics into school curricula at different levels.

A national school essay competition for both primary and secondary schools was organized in summer 2022 under the aegis of METEST and the Ministry of Environment, Solid Waste Management and Climate Change. The competition helped with raising awareness among children and teachers on the impact of climate change and how to mitigate its effect by taking actions and/or proposing measures for a better and sustainable island. All participants were provided with a Certificate of Participation and winners received medals and cash prizes to undertake a green project at the school. A total of 591 essays were received. Additional information is available in the report ["Integrating Green Economy Learning for Present and Future Generations in the Republic of Mauritius"](#).



## 1.6 Burkina Faso

### Country context and PAGE portfolio

Burkina Faso has one of the lowest carbon emissions and ecological footprints in Sub-Saharan Africa, with GDP growth continuing to rise. However, it faces persistent challenges in the form of limited natural resources, high poverty levels and heavy reliance on agriculture. In the face of these challenges, the government has taken forward several national initiatives that highlight the country's commitment to sustainable development. It was one of the first countries in the world to adopt a National Adaptation Plan, with combatting climate change positioned as a high-ranking goal for the country. In recent years, recurrent terrorist attacks, particularly in the Northern and Eastern parts of the country, have added an additional challenge and hampered government development efforts.

In 2014, PAGE was requested to support the development of a National Green Economy Strategy (Stratégie Nationale de l'Economie Verte - SNEV) to serve as the backbone of the country's transition to a green economy, as well as contribute to the National Plan for Economic and Social Development (PNDES 2016-2020). Several macroeconomic and sectoral assessments were conducted to inform this strategy, including the Green Economy Assessment that identified priority sectors for green investment. Steps to introduce reforms and build capacity have since been taken by different ministries in several thematic and sectoral areas, including sustainable agriculture, sustainable trade, green industry and green taxation.

Following the start of the gradual phase out of PAGE in Burkina Faso in 2019, the country's next national development plan for the period 2021-2025 (PNDES 2) was adopted by the government on 30 July 2021, providing a new entry point to better mainstream IGE within sectoral strategies, building on the SNEV.

Since 2014, the key achievements of PAGE work include the adoption of the SNEV in July 2019, completion of activities in line with its objectives and the development of a specific support project for its implementation; contributions to sectoral and thematic reforms in the areas of sustainable trade, green industry, tourism, and sustainable agriculture; and capacity development on sustainable agriculture and green entrepreneurship. Further, the country created a model for joint delivery of complementary UN initiatives, bringing together PAGE, the Poverty-Environment Action (PEA) and SWITCH Africa Green into one coherent programme aimed at greening the economy.

**Through this work PAGE has contributed towards the achievement of several SDGs, including SDGs 2 (Zero Hunger), 4 (Quality Education), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), 13 (Climate Action), 15 (Life on Land) and 17 (Partnerships for the Goals).**

With additional resources made available to promote a green recovery from the impacts of the COVID-19 pandemic, PAGE has been able to engage in the economic recovery of the tourism sector, despite challenging national circumstances, including terrorism and two coup d'états in January and September 2022. The partnership promoted sustainability of the tourism sector through exploring financial opportunities for mobilising finance and encouraging the integration of employment and just transition policies in the national policymaking process.

## Progress in 2022

### **Celebrating 8 Years Partnership with PAGE**

In 2022, Burkina Faso celebrated eight years of achievements under PAGE and the start of a new chapter to make the country's economy low carbon, job rich and socially inclusive. [The transition ceremony on 1 December](#), attended by 300 stakeholders, displayed results since 2014 and discussed perspectives as the country graduates from PAGE's core engagement. The ceremony, held during the National Green Economy Week, was co-chaired by the Ministers of Environment and Tourism and supported by the Global Green Growth Institute.

The Minister of Environment announced the institutionalization of the National Green Economy Week and the establishment of a technical secretariat, both to be funded with national budgetary resources. Participants, including the public and private sectors, NGOs, regional and international organizations, economic interest groups and civil society, strongly supported the further leveraging of PAGE's achievements.

Several funding partners expressed their interest in supporting the implementation of the National Green Economy Strategy (SNEV) and related actions. A green technology fair attracted practitioners from various sectors, including agri-food, agriculture, forestry, renewable energy, solar-powered manufacturing and electric cars. In the future, the yearly Green Economy Week, which together with the fair had 500 visitors, will provide a framework for dialogue and monitoring of the implementation of the SNEV and other strategies contributing to sustainable development.

### **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

#### **Assessment on the Role of Public and Private Finance in the Tourism Sector**

PAGE (UNEP) launched an assessment that focusses on a stronger role of public and private finance in greening Burkina Faso's tourism through the implementation of the National Strategy for the Promotion of Sustainable Tourism. The assessment aims to explore methods through which fiscal policy can mobilize public finance and attract private finance towards the revival of sustainable tourism in Burkina Faso and serve as a technical contribution to Burkina Faso's efforts to make a green economic transition, and to its green and sustainable recovery from the COVID-19 pandemic. The assessment highlights opportunities for developing private finance instruments and offers recommendations for mobilising public finance for the promotion of sustainability in the tourism sector.

#### **Integration of Employment and Just Transition Policies in National Policymaking**

In 2022, PAGE (through ILO and supported by UNITAR), in partnership with the Norwegian Foundation for Industrial and Technical Research, initiated a study on the impact of public policies and incentive measures on green recovery and decent job creation in Burkina Faso's tourism sector, with active involvement of the Ministry of Economy, Finance and Development. The data collection, analysis and model building for the sector will contribute to the development of a national Green Jobs Assessment Model, which will in turn ensure employment and just transition policies are integrated in the national policymaking process, notably in the tourism sector. The preliminary results with methodology were presented at the Technical Monitoring Committee session in September 2022. The draft report of the Burkina Green Jobs Assessment was revised in November-December 2022 and will be validated by the committee in May 2023.

## 1.7 South Africa

### Country context and PAGE portfolio

South Africa has become one of the largest economies in Africa, benefiting from high levels of industrialisation and abundant natural resources, including large mineral deposits. The country has also made considerable strides towards improving the well-being of its citizens, significantly lowering poverty rates and increasing access to public services. Whilst the economy is still expanding, economic growth has slowed down in recent years, with many social and environmental challenges persisting. South Africa still grapples with inequality, poverty, and unemployment; and industrialisation coupled with increasing exploitation of natural resources has resulted in a heavy ecological footprint.

Recognizing the potential of green economy strategies, the South African government embarked on a development path linking economic prosperity to environmental sustainability and social equity. Released in 2010, South Africa's New Growth Path identified green economy as a national priority, with the subsequent Green Economy Accord of 2011 - a result of social dialogue between government, business, civil society and labour. Through the South African National Development Plan 2030, a long-term strategy adopted in 2012, the government significantly strengthened its ability to manage environmental costs and respond to the increasingly severe impacts of climate change. The Medium-Term Strategic Framework (2014-2019) provided an action plan for realizing the country's national development vision.

Given the comprehensive green economy policy framework already in place when South Africa joined the partnership in 2015, PAGE work has been structured around improving policy coordination, deepening collaboration between different stakeholders and supporting policy implementation. PAGE has also helped to identify sectors and industrial segments with potential for Inclusive Green Economy (IGE) transformation and strengthened capabilities through green economy learning and capacity development. PAGE further aligned its support with priority areas identified in the Medium-Term Strategic Framework that refers to the following areas focused on: (1) planning, piloting and investing in the creation of a framework for implementing the transition to an environmentally sustainable and low-carbon economy; and (2) harnessing research and information management capacity to identify, develop and maintain datasets to generate policy-relevant statistics, indicators and indices.

Since 2015, PAGE work has resulted in several achievements, including a green economy progress measurement framework, the creation of social dialogue on Just Transition, and contributions towards policy reforms related to green industry, trade, water management, waste management and renewable energy. PAGE activities also enabled South Africa to assume a leadership position as a green economy champion, as demonstrated by hosting the Third PAGE Ministerial Conference in Cape Town in January 2019, the first hosted by a PAGE partner country, which culminated in the Cape Town Action Pathways Towards 2030. **In turn, PAGE has contributed to the achievement of SDG 8 (Decent Work and Economic Growth) and cut across several other SDGs, including SDGs 4 (Quality Education), 9 (Industry, Innovation and Infrastructure), 10 (Reduced Inequalities), 12 (Responsible Consumption and Production), 15 (Life on Land) and 17 (Partnership for the Goals), as well as South Africa's NDCs.**

Following the onset of the COVID-19 pandemic and the deepening socio-economic crisis with a large drop in employment rate, PAGE engaged in a rapid economic modelling exercise to assess the impact of South Africa's relief package on IGE, amongst other initiatives to promote green and decent employment. In line with this, in 2022, PAGE engaged unemployed youth in data collection through the Youth Barometer and announced new awards for and support to young green entrepreneurs, for them to stimulate innovation for a greener and more just economic recovery. PAGE's intervention has also focused on enhancing the enabling environment for sustainable water management through modelling and mainstreaming the principles of waste management.

South Africa's recovery has been slow. As the country stepped out of the fourth COVID-19 wave, GDP returned to pre-pandemic levels in the first quarter of 2022, only to decline again to below pre-pandemic levels in the next quarter. Unemployment continued to increase, reaching record highs at the end of 2021 with young people affected the most. As such, PAGE showed an ability to swiftly shift gear in the context of the crisis fuelled by the pandemic, to focus on incorporating green economy dimensions in recovery efforts whilst addressing unemployment challenges and the needs of young people.

As the partnership drew to a close, PAGE marked its seven years of successful collaboration and partnership with the Government of South Africa and other partners in a close-out event that highlighted the achievements made towards IGE and a green recovery whilst looking into the future to ensure sustained positive impact.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Celebrating 7 Years of Partnership with PAGE**

With the aim to continue long-term action towards building an Inclusive Green Economy and to pass the baton to the South African Government, PAGE South Africa, the Department of Forestry, Fisheries and Environment (DFFE) and other national partners held a Transition Ceremony on 31 October 2022. In celebration of the seven years of partnership towards IGE and a green recovery, this close-out ceremony highlighted the progress made by national stakeholders over the years. The ILO's opening remarks highlighted "the strong government leadership, effective policy coordination, solid inter-ministerial collaboration and policy implementation for a green economy transformation addressing unemployment challenges and the needs of young people".

National stakeholders reaffirmed their commitments to sustainable development and climate change priorities. In this context, the event provided a platform for participants to learn from the lessons shared by DFFE and to strategize on how to continue to promote IGE in South Africa as a continuation of PAGE support. This transitional event acknowledged new challenges and opportunities as PAGE South Africa looks at sustainability planning and partnerships to sustain PAGE's work over the longer term. It was the occasion to release a video of the [PAGE story in South Africa](#) and an [infographic](#) on the impact and achievements of PAGE, alongside keynote addresses, presentations and feedback solicited from participants on sustainability planning.

The most important output of this transition ceremony was the sensitization and sharing of experiences of the work that PAGE has supported since 2015. The transition ceremony presented an opportunity for government to revisit the "Sustainability Report for PAGE South Africa: 2022 and Beyond", which was submitted to the government in 2020.

The Sustainability Report highlighted the key results achieved through PAGE support at the three PAGE outcome levels: national multisectoral level, thematic or sectoral level, and capacity development, which outline various means of sustaining the achievement and bringing impact at scale. Through active input from its National Steering Committee (NSC), the Sustainability Report reflects the most recent progress of the country's initiatives towards an IGE, and what could be further actions to achieve sustainability.

### **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

#### **Report on Modelling the Water-biodiversity Nexus**

In partnership with the Department of Forestry, Fisheries and the Environment (DFFE), Stellenbosch University, and the consulting firm KnowlEdge, the report "Modelling the Water-biodiversity Nexus in four South African Provinces: Northern Cape, Eastern Cape, Western Cape and Limpopo" was finalized under PAGE (through UNEP). Using a system dynamics model, the report analyses the interactions between water and biodiversity in the four provinces to provide a new knowledge base for high-level policy and decision-makers in governments. The modelling resulted in a set of policy options for creating an enabling environment for sustainable water management and freshwater biodiversity conservation. Further, the modelling demonstrates the effects of different green economy policies on the water-biodiversity interlinkage, focusing on water demand and supply, climate and weather, land use and invasive alien species, and agriculture.

#### **Awards and Mentorship for Green Entrepreneurs**

Together with the DFFE, PAGE South Africa hosted on 2 August 2022 an awards ceremony where the Minister of Environment announced the 17 entrepreneurs (6 women and 11 men) to take part in the second edition of the programme. "Driving Force for Change II" is a youth support initiative for green and growth-oriented young entrepreneurs that is focused on climate change, waste and biodiversity. The programme is supported by different government departments and funders, including the Departments of Employment and Labour, Science and Innovation, and Trade, Industry and Competition, as well as the German Technical Agency GIZ and the National Business Initiative.

Following the event, PAGE, led by ILO, worked with Indalo Inclusive, a local not-for-profit company supporting green entrepreneurship, to offer the 17 youth entrepreneurs business mentorship and coaching for green business development and economic recovery. This included a five-months mentorship programme and extended capacity development interventions with high-quality, industry-specific technical assistance, customized business development services, as well as business management and operations training on tools related to financial modelling and planning, pitching business ideas, developing growth strategies, business plan refinement and legal and organizational compliance. As part of the Driving Force for Change (DFC) II Challenge, a two-day workshop was held for the beneficiaries on 15-16 September 2022. The challenge enhanced the youth-led businesses' viability and success so that they, in turn, are better equipped to drive change for IGE and a more just economic recovery.

#### **Supporting Principles and Best Practices of Integrated Waste Management**

In South Africa, under the leadership of DFFE, PAGE (led by UNEP) supported the revision of the "Guideline for the Development of Integrated Waste Management Plans" and associated model by-laws. A report for the revision of the guidelines provided recommendations on how to mainstream the principles of the National Waste Management Strategy 2020, integrate waste pickers in the municipal waste planning process, and follow best practices and principles of a circular economy.



It was based on consultations with national stakeholders, the UN Country Team, and the Council for Scientific and Industrial Research. A second report provided an analysis of existing waste management model by-laws, their alignment with available legislation, and recommendations to the DFFE for by-law revisions.

A validation workshop was organized on 31 May 2022 to share the results of the two reports.

The updating of both the bylaws and the guideline, to be inclusive of circularity, has prompted the appointment of a consultancy to inform the updating of the South African Waste Information Centre online platform for reporting. The inclusion of circularity in the waste sector has informed broader policy through mandatory reporting requirements, once actioned by the successful service provider. Information and outreach sessions for municipalities on the proposed revisions will take place in 2023 before the adoption of the guideline.

### **Engagement of Unemployed Youth in Green Economy Activities**

In partnership with iSpani, a youth-led start-up, PAGE conducted a Youth Barometer on Just Transition, employing young people to collect data from the youth. The barometer helped to surface the views and perceptions of diverse youth groups regarding climate change, the green economy, and a just transition. To implement the barometer, over 100 unemployed youth (66 per cent women and 34 per cent men) were trained to conduct interviews and do surveys in their communities and surrounding areas using an app for capturing responses.

The survey reached 10,000 youth respondents across the country, including in rural and peri-urban areas and generated insights on how young people feel climate change will impact their future, what skills will be necessary for the future of green jobs, and which green sectors they would be most interested in working in. Based on the results, an in-depth analysis of policies and interventions related to youth and climate change, green economy and a just transition is being conducted to highlight barriers and opportunities.

The findings from the Youth Barometer were presented at the African Regional Conference of the Youth (RCOY) and contributed to the development of the Regional Conference of the Youth COP27 Youth Statement. In addition, the findings supported the South African Institute of International Affairs to host "Model Government Sessions", bringing youth together from across four provinces to develop the "South African Youth Statement to COP27".

### **Building institutional and individual capacity (Outcome 3):**

#### **Training on Industrial Waste Management**

In cooperation with the Department of Forestry, Fisheries and Environment (DFFE), PAGE (led by UNIDO) organized a three-day virtual training on industrial waste management from 30 November to 2 December 2022, covering solid waste management, hazardous waste and industrial symbiosis. Participants included 22 winners and runners-ups (10 women and 12 men) from the "Driving Force for Change II" programme, representatives from Special Economic Zones, Industrial Economic Zones, and the National Cleaner Production Centre.

## 1.8 Jiangsu Province, China

### Country context and PAGE portfolio

As the second largest economy in the world, China has positioned itself as a forerunner of sustainable development, guided by the national development vision known as 'Ecological Civilisation'. In 2015, the Chinese Government expressed an interest to join PAGE, starting at the provincial level in Jiangsu - the second richest province in the country. Located on the eastern coast of China, Jiangsu province is home to around 85 million people. Characterized by a dense network of rivers, lakes and waterways, it has a strong resource base but is faced by several challenges, including high population density, environmental degradation and a reliance on heavy industry.

Jiangsu has demonstrated a strong commitment to green economy in recent years by fostering green and high-tech industries, shifting towards energy saving and resource efficient production and consumption models, redefining the eco-redlines of conservation zones, and enhancing the policy monitoring, coordination and evaluation of green development progress. The 13th Five-Year Development Plan (2016-2020) of Jiangsu, formally established these as priority areas.

As one of China's major industrial powerhouses, Jiangsu was the first province to release a provincial plan on Ecological Civilisation Construction (2013-2022), highlighting the mid- and long-term development goals for Jiangsu. This plan foresees the greening of industrial parks as a means for achieving clean and circular production, setting the target for all provincial-level industrial parks to meet the national Eco-Park standard by 2022. In addition, policy guidelines on Strengthening the Green Industrial Development along the Yangtze River Economic Belt (YREB) were issued by five ministries, which focused on accelerating green industrial transformation in heavy industry sectors.

Against this background, Jiangsu Province joined PAGE in 2015 with the objective to i) leverage new opportunities and overcome existing challenges in Jiangsu, ii) identify and share success stories at the provincial and sub-provincial levels, in an effort to inspire other provinces and countries to embrace green economy; iii) identify and analyse major barriers to an inclusive green economy transition; and iv) advance green industrial transitions and policy coordination in Jiangsu's industrial parks. PAGE has since supported the province with capacity development, macro-level green economy policy monitoring, and targeted sectoral policy advice on green industrial development, green jobs and green trade centred around the concept of green industrial parks. **In doing so, it has contributed to several SDGs, including SDG 4 (Quality Education), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Sustainable Consumption and Production), 13 (Climate Action) and 17 (Partnerships for Goals).**

With Jiangsu Province approaching graduation from the partnership in 2020, a national sustainability plan is under development to sustain results in the future. PAGE findings were also submitted to inform the development of the 14th Five-Year Development Plan (2021-2025) at the national level through the China Council for International Cooperation on Environment and Development (CCICED).

In 2020, China was the first country affected by the COVID-19 crisis, followed by economic recovery measures launched in the first half of 2020. Jiangsu Province has continued to pursue the green economy agenda considering COVID-19 and associated impacts.

In March 2020, the provincial government issued the 'Opinions on Promoting Green Development'. This official guidance document covers 33 aspects of green development, including green industrial parks, circularity, resource efficiency, green trade, green value chains, green textiles, renewable energy, low-carbon economy and international cooperation. This was combined with increased domestic green investment, with USD 4.3 billion provided for major projects especially in sustainable infrastructure within the province with a focus on environmental protection, and the National Green Development Fund unveiled on 15 July 2020, featuring USD 12.7 billion in its first phase.

Since the Chinese President announced China's 2060 Carbon Neutrality Target in 2020, Jiangsu Province has been mainstreaming and integrating climate targets in its provincial planning. At the beginning of 2021, the provincial government issued the Implementation Opinions on Accelerating the Establishment and Improvement of a Green, Low-Carbon and Circular Development Economic System - a systematic planning document on sustainable consumption and production, value-chain, infrastructure, energy transition, innovation and enabling environment. Later that year, the province published the 14th Five-Year Development Plan (2021-2025) and Vision 2035 of Jiangsu. Priority areas include promoting circular and green economy, developing sustainable infrastructure, accelerating digitalization and living in harmony with nature.

Over the past years, Jiangsu Province has been continuing to abate environmental pollution, decrease energy consumption intensity, reduce excess capacity of high emitting industry, and grow green business. More specifically, Jiangsu has piloted various green financial instruments, such as green bonds, green loans and green guarantees to mobilize finance for investing in environmental infrastructure.

## Progress in 2022

### Building institutional and individual capacity (Outcome 3):

#### **Online Training on Accelerating the Transition to Inclusive Green Economy**

On 14-18 November 2022, the PAGE Academy "[Accelerating the Transition to Inclusive Green Economy: Synergy between Pollution Control and Carbon Reduction](#)" was hosted as an on-line training event by the Institute of Environment for Sustainable Development (IESD), a partnership between UNEP and Tongji University based in Shanghai. It brought together Chinese government officials, international representative of academia, business and UN agencies, with a total of 257 participants. UNDP and Shanghai Academy of Environmental Sciences shared their findings from the BIOFIN project. UNIDO and GGKP's Green Industry Platform also delivered a session on Green Industry and Industrial Parks.

#### **Special session on Green Jobs and Just Transition in the Textile and Garment Sector**

PAGE (through UNEP and ILO) provided technical support for greening the textile sector in China, covering topics on voluntary sustainability standards, non-tariff measures for the textile trade and clean production in the textile industry.

As part of the PAGE Academy, a special session on [Green Jobs and Just Transition in the Textile and Garment Sector](#) was conducted at an International Summit and Capacity Building Workshop on Green Development and Responsible Transformation for a Just Transition in the Textile and Garment Sector, held in Humen Township, Guangdong Province of China on 17 November 2022, which was supported by the China National Textile and Apparel Council (CNTAC) and Humen Township Government.

The workshop was held in a hybrid format with around 120 participants joining from both online and on-site. It provided a platform for participants to share knowledge and exchange views, and a shared vision on green development and a Just Transition of the industry in China, Asia and worldwide was proposed.

The event also marked the transition of the PAGE programme in China to national ownership, building on a strengthened partnership with IESD, Tongji University, CNTAC and the Chinese Government which will continue to drive progress under inclusive green economy priorities.

## 1.9 Mato Grosso State, Brazil

### Country context and PAGE portfolio

In recent years, the Brazilian State of Mato Grosso has benefitted economically from the growth of its large agricultural sector. It is now working towards increasing the added value of agriculture commodities through processing and addressing the environmental and social challenges associated with this growth.

Recognizing the importance of achieving inclusive sustainable growth, Mato Grosso State opted to tackle these challenges by promoting new economic activities and technologies to rehabilitate its natural resource base. In 2015, Mato Grosso State launched the Strategy - Produce, Conserve and Include (PCI) - with the objective to increase production, encourage added value through the processing of agriculture commodities, achieve international standard labels, conserve natural resources and promote the inclusion of families in rural settlements and traditional and vulnerable communities. This approach requires decarbonizing the economy and increasing energy efficiency, planning capacities and skilled labour. The strategy falls in line with the objectives of PAGE and benefits from various national level planning instruments advancing sustainable development across Brazil, including the Action Plan for the Prevention and Control of Deforestation in the Amazon, the National Climate Change Policy (NCCP), and the Low Carbon Agriculture Plan - a sectoral plan of the NCCP.

Against this backdrop, Mato Grosso State joined PAGE in 2016, with a priority to support the development of a green economy with emphasis on the generation of green employment opportunities and poverty eradication, both linked to the economic transformation pursued by Mato Grosso State. Thematic and sectoral reforms were pursued in a variety of priority areas, including agriculture, agro-industry, tourism, renewable energy, land regularisation and green jobs.

**These activities contribute to the achievement of SDGs 2 (Zero Hunger), 4 (Quality Education), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production) and 17 (Partnership for the Goals).**

Considering the COVID-19 crisis, the Government of Mato Grosso placed green recovery at the core of the economic recovery plan and recognized the importance of investing in programmes that bring significant environmental, social and economic benefits to the population.

The green recovery policy promoted by the Government of Mato Grosso focuses on strengthening family agriculture, which accounts for 51 per cent of the workforce in Mato Grosso State, implemented through the State Plan for Family Agriculture in partnership with the Secretariat of Family Farming.

Since 2021, PAGE has aided the reformulation of the Strategic Plan for Family Agriculture, reinforcing its earlier work in the sector and strengthening state governance as well as environmental and social commitments by building a culture of integrity. Areas of interest with respect to a green and inclusive recovery are the development of the agro-industry value chain, the logistical and commercial market integration of family agriculture products, better technical assistance and stronger governance.

In 2022, the debate about the conservation of Mato Grosso State biomes and its direct influence on containing the damage caused by global warming has gained strength. The government expanded the dialogue on public policies aimed at preserving the environment with the 141 municipalities of the state and explored collaboration with new partner institutions aimed at preventing and combating illegal deforestation in Mato Grosso State. The state's challenge is to reduce greenhouse gas emissions by up to 80 per cent by 2030 and by up to 100 per cent by 2050. The activities of PAGE and studies developed in the forest-based and livestock sector seeking technological and efficient alternatives have contributed to this debate.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### Framework for Monitoring Achievements under the 2030 Agenda

Mato Grosso's State Secretariat of Planning developed a framework and strategy for planning, implementing and measuring achievements under the 2030 Agenda with PAGE support. A quantitative assessment analysed existing government systems and proposed indicators to track SDGs achievements. The diagnostics and evaluations were presented at both the municipality and state levels, to private and public institutions. A seminar to present the state sustainable diagnosis was held in June and gathered PAGE partners and stakeholders as well as a team from the Planning Secretariat responsible for the Multi Annual Planning of the state in which the SDGs will be aligned. Two five-day training workshops were held in September and December 2022 in Mato Grosso's capital city Cuiabá for 58 participants, including the public and private sector, civil society and academia, on how to adopt the 2030 Agenda and its 17 SDGs in the formulation and implementation of local public policies.

Related to the framework, PAGE also supported

- The development of an online course for state and municipal public managers on "Integrating the 2030 agenda and the SDGs" in partnership with the School of Government of Mato Grosso; and
- The development of integrated rapid diagnostics and evaluations for 10 municipalities and for Mato Grosso State.



## Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

### **Study on Barriers and Opportunities to Greening the Forest-based Sector**

Together with the Federation of Industries of Mato Grosso State, PAGE (UNIDO) produced a study on the “Review and update of the strategy of industrial policy for the forest-based sector including elements for greening the industrial development in Mato Grosso State”, which was presented in a workshop on opportunities of green industries in Mato Grosso State, held on 6 October 2022 in the city of Sinop to timber industry stakeholders.

The study provides:

- An evaluation of the value adding potential in the forest-based segment with focus; on green economy models in Mato Grosso State;
- An assessment of potential environmental impact and benefits; and
- A review of the predictable forest-based industry focusing on the green economy model and an analysis of policies related to the forest-based sector.

The study provides policy recommendations to the state government on how to support micro and small producers and family businesses related to innovation, machinery, logistics, energy use and investments in cleaner, more efficient technology.

### **Study on the Impact of COVID-19 on Agriculture and Opportunities for Recovery Funds**

PAGE (UNDP) conducted an assessment in 2022 on how the COVID-19 pandemic affected production dynamics, market access, access to essential services and the income of small farmers, entitled “Analysis of the impact of COVID-19 on family agriculture and traditional and indigenous communities in Mato Grosso State”. It resulted in recommendations on how state government and civil society initiatives can minimize post-pandemic impacts through green macroeconomic policies and incentive mechanisms. The study also looks at vulnerable groups in family agriculture and how they may be considered in recovery plans, with a focus on well-being, justice, sufficiency, efficiency and good governance in the context of a green economy.

### **Evaluation of Practices for more Sustainable Livestock Sector**

To support the state government in greening the livestock sector in Mato Grosso, PAGE (UNIDO) worked with the Meat Institute and the Federation of Industries of Mato Grosso State to evaluate existing technologies and best practices for making livestock value chains more sustainable and productive ([Study Evaluation of potential for sustainable systems for livestock production in Mato Grosso, Brazil](#)). The work focused on three important ecosystems of Mato Grosso State: Pantanal, Cerrado and the Amazon. The analysis provides recommendations for the rehabilitation of degraded land and deforested areas considering social responsibility and market opportunities for producers engaged in or wanting to adhere to sustainable production systems. As the next step, PAGE plans to organize an event to present the study to the state government.

### **Concepts and Options for Green Jobs Assessment**

In 2022, PAGE (ILO) prepared a report on “Recommendations for the creation of decent work and green jobs to promote a green recovery in the State of Mato Grosso” to enhance the understanding of the methodological options for assessing green job creation in the context of recovery from COVID-19. In addition, the report provides recommendations for the development and implementation of a Green Jobs Observatory in partnership with the government and the Federation of Industries of Mato Grosso State. The report was built on the previous assessment of income and employment generation developed for Mato Grosso State.

### **Development of a Green Jobs Observatory**

PAGE (UNIDO) launched an assessment on green jobs generated in view of supporting the development of a strategy to support green jobs. This activity is under development in partnership with the Federation of Industries. It includes a feasibility study for the development of Mato Grosso's Green Jobs Observatory, which will serve as a guide for the implementation of public policies, strategies and investments for generating green jobs. Two dialogue events were held in November 2022 with private and public stakeholders to understand the different views and understanding of green jobs within each sector. The Federation of Industries of Mato Grosso State will develop a website to share the main outcomes of the activities with all stakeholders (associations, the state government, key companies, investors, universities, research institutions, etc.). The validation workshop will be held in March 2023.

### **Building institutional and individual capacity (Outcome 3):**

#### **Online Training Programme on Sustainable Constructions**

PAGE offered an online course build on the previous guidelines for sustainable constructions developed in 2021 "Parameters and Guidelines for the construction and renovation of sustainable public administrative buildings (direct administration) in the State of Mato Grosso". The online course was offered by The School of Government, the official institution for capacity building for state public servants. 574 people from different Secretariats subscribed for the online training.

#### **Training Programme for Municipalities on State Integrated Family Farming**

PAGE is promoting partnerships between marginalized businesses and financial institutions, including banks and dedicated credit lines and guarantee funds at the national and international level to support the socioeconomic recovery of small farmers and entrepreneurs in the informal sector, encourage entrepreneurship, and accelerate a green transition. A list of high potential opportunities was provided to the Family Farming Secretary to guide investment strategies in the sector. Working with the State of Mato Grosso, PAGE also started the development of a training programme for municipalities on how to utilise the State Integrated Family Farming System (SEIAF) to upload data related to the sector's composition, production, and productivity in their jurisdictions. The SEIAF is an online information platform for which PAGE helped develop a "Progress Measurement Framework" to monitor and assess the development of family farming in different municipalities and inform policy development. The implementation of a system of this size, considering the 141 municipalities of Mato Grosso State, is a great challenge, which requires perfect methodological alignment, training of local agents and the availability of a robust and easy-to-use electronic system. To ensure an assertive adhesion process and to validate the electronic tool, four pilot municipalities were selected to implement SEIAF Mato Grosso State in its initial phase: Alta Floresta, Querência, Cotriguaçu and Várzea Grande. The training sessions are expected to take place in June 2023, followed by a rollout to other municipalities.

#### **Extension Course on Inclusive Green Economy**

To strengthen the learning system about sustainability in Mato Grosso State, PAGE worked with a consortium of four state universities to develop an online extension course on IGE. The course addresses knowledge and skills gaps identified in the PAGE Green Economy Learning Assessment completed in 2020.

The pilot edition was held between 18 April and 6 June 2022 via the virtual learning environment of the Federal University of Mato Grosso State (UFMT) consisting of a self-paced foundational module and a supervised module in which participants developed a pilot project promoting green economy principles within their respective areas of work. 57 students passed the foundational module while 14 students passed the foundational module while 14 students submitted. The course marks the first higher education format dedicated specifically to IGE in the state, targeting students from various disciplines, such as economics, business administration, sociology, political science, engineering and others.

### Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):

#### Launch of Media Campaign to Share PAGE Results

On 22 March, PAGE [launched a media campaign](#) with the Civil House of Mato Grosso and the State International Advisory, to disseminate the results of the partnership since 2016. It kicked off with a webinar “PAGE Programme in Mato Grosso State” that featured panel discussions on family agriculture, sustainable tourism and the forest-based sector. To further showcase results and provide access to resources developed under the programme. A [new website for PAGE Mato Grosso](#) was launched. Speaker included the Governor of Mato Grosso, Ambassadors of the European Union and Finland, Councilor of the European Union, Secretaries of State for Family Agriculture, Environment and Economic Development, President of the Federation of Industries, and representatives of the Brazilian Service of Support to Micro and Small Enterprises as well as universities and NGOs.

#### Green Jobs in the Transition Process

A dialogue on “Green Jobs in Brazil: concepts and methodological aspects” with key stakeholders was organized in May 2022 to present the findings of the report and discuss the suitable methodologies to assess employment generation in key economic activities supporting a just transition, suggest a set of indicators and possible data sources to monitor the generation of green jobs in the transition process, and to come up with recommendations for the establishment of a Green Jobs Observatory, led by the government and the Federation of Industries of Mato Grosso State.

## 1.10 Kyrgyz Republic

### Country context and PAGE portfolio

The Kyrgyz Republic is a landlocked country in Central Asia, with a rich natural heritage. A large mountainous region, its economy is mainly driven by agriculture (accounting for 40 per cent of employment), extractive industries, hydropower energy, service and construction sectors. It has a medium human development status, shrinking unemployment rates to eight per cent in recent years. However, for an economy heavily reliant on agriculture and natural resources, land degradation and desertification pose serious threats to the economy, its people and the environment.

The Government of the Kyrgyz Republic is committed to advancing inclusive sustainable growth, as set out in its long-term National Development Strategy 2040, that recognizes the importance of integrated policies balancing social, economic and environmental dimensions of development. To realize this strategy, the government has prepared an accompanying five-year development programme - Unity, Trust and Creation. Spanning the period 2018-2022, it provides a medium-term framework for all national, sub-national and sectoral strategies, including those related to the environment and climate change.

To complement the strategy, the government developed a Green Economy Programme 2019-2023 with a special focus on green energy, agriculture, industry, low carbon economy and environment, friendly transport, sustainable tourism, waste management and natural ecosystems sectors. The latest mid-term National Development Programme for the period of 2022-2026 is now serving as a mid-term development horizon, highlighting IGE as one of the priorities.

It is within this broader national context that PAGE, together with other bilateral and multilateral partners, including GIZ, EU, BIOFIN and OECD, are collaborating to support the transition to IGE in the Kyrgyz Republic. Since 2016, PAGE has prioritized support to advance the integration of IGE goals and targets into the government's national planning processes. PAGE is also facilitating evidence-based sectoral reforms in green industry, sustainable agriculture and jobs and strengthening institutional capacities around IGE diagnostics, coordination, finance and public procurement.

**This work supports progress towards achieving SDGs 2 (Sustainable Agriculture) 4 (Quality Education), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action) and 17 (Partnerships for the Goals), as well as implementation of the Paris Agreement, which the country ratified in November 2019.**

In 2020, the COVID-19 pandemic and a political crisis significantly affected the economy of the Kyrgyz Republic, prompting PAGE to develop a proposal to create an enabling environment policy for enhancing the sustainability and growth of MSMEs as a key avenue for a green recovery. A new president was elected in 2021, which was followed by a shift from a parliamentary to a presidential form of government and a major restructuring of ministries and agencies, creating challenges as well as new avenues for green economy efforts to continue moving forward.

The SDGs and green economy remain a high priority in the development policy of the new leadership of the Kyrgyz Republic in a new political context following the presidential elections in and the subsequent constitutional reform. The long-term Strategy-2040 remains valid and serves as the strategic framework for sustainable development. The country has adopted a new mid-term development document for the period 2022-2026 (Programme-2026) and green economy is one of the development priority areas of the programme. Despite these positive developments, implementation challenges remain at all levels and progress has been slow. However, the government is planning to review the Green Economy National Programme for 2019-2023 to identify progress, challenges and lessons learned, which will be followed by a revision based on the results of the review.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Institutionalisation of Inclusive Green Economy (IGE) Modelling**

In 2022, PAGE, together with GIZ, supported the institutionalization of IGE modelling in the Kyrgyz Republic through capacity building and targeted advice to the government for translating modelling results into policy recommendations. A technical group was established on green economy modelling by the order of the Ministry of Economy and Commerce. The group consists of 29 representatives (50 per cent women) of departments and educational institutions, including members of the "Alliance of Universities

in Kyrgyz Republic for Green Economy and Sustainable Development". The members of the technical group will receive further trainings to become key players in institutionalizing green economy modelling in strategic planning and integrating green economy into the country's governance system. To date, 22 half-day trainings have been held out of the planned 25. The modelling capacity will be tested during the development of the updated version of the Green Economy Development Programme for the period of 2023-2027.

### **Green Economy Forum and Green Expo**

On 11 November 2022, the Ministry of Economy and Commerce jointly with PAGE and other development partners (UNDP, GIZ, OSCE, Accelerate Prosperity) organized the "[Green Economy Forum 2022: Green Economy Development in Central Asia](#)", a regional forum offering a platform for business and institutions from Central Asia to discuss, find and later apply green solutions in the region, including participation from Azerbaijan, Kazakhstan, Georgia and Mongolia. The forum brought together experts across sustainable business and government for the day of the conferences, exhibitions, and high-level business to business and business to government dialogue sessions. More than 500 representatives of different organizations, companies and businesses took part in the Green Economy Forum or showcased solutions at a Green Expo.

38 companies and organizations from private and financial sectors demonstrated their services and products at the Green Expo in partnership with the Ministry of Economy and Commerce, GIZ, JIA Business Association and the Association for the Development of the Agro-Industrial Complex.

As an outcome document, a Forum Resolution was adopted, highlighting the need for strengthening the information campaign among the population and business on the principles of green economy, attraction of new and green technologies, revisiting the existing norms and regulations in the construction sector and fiscal incentives for green projects. The Green Economy Forum is held annually, currently in its seventh year, and has become a platform to consolidate the efforts of government, entrepreneurs, international and local development programmes and business associations on green economy.

### **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

#### **Development of a National Industrial Resource Efficiency Policy**

Throughout 2022, PAGE (UNIDO) worked with the Ministry of Economy and Commerce to develop a National Industrial Resource Efficiency Policy to promote climate-friendly industrial development. A draft of the policy was finalized in November. The policy was informed by a detailed survey with 15 resource-intensive industries, interviews with policy experts and national stakeholders, as well as a pilot project in which efficiency measures were implemented in five industrial plants.

In December 2022, UNIDO conducted a mission to Kyrgyz Republic and visited the piloted industries. The team held bilateral policy consultations with the Ministry of Economy and Commerce, Ministry of Energy, and Ministry of Environment and Ecology, and presented the policy draft at a validation workshop, which had 27 attendees from ministries, different government departments, private sector, industry representatives, think tanks and UN entities. The final draft version of the policy is expected to be submitted to the government for adoption in March 2023.



### **Policy Brief on Tax Exemption in Agriculture**

Written in both Russian and English, the policy brief “Reforming personal income tax exemption in agriculture as a measure to support a shift towards sustainable agriculture in the Kyrgyz Republic” was finalized by PAGE (UNEP) in partnership with the International Institute for Environment and Development and BIOFIN. The policy brief, methodology and its main outcomes have been presented at the national PAGE board meeting in partnership with the Ministry of Economy of the Kyrgyz Republic on 16 November 2022 in Bishkek.

### **Launching of a Green Finance Facility with Commercial Banks**

In partnership with the Union of Banks of the Kyrgyz Republic, the Ministry of Economy and Commerce and the Global Green Growth Institute, PAGE led by UNDP, is aiming to launch a Green Finance Facility with active participation of the commercial banking sector. In 2022, several foundational studies have been conducted or started to analyse the framework conditions for such a financing vehicle. A legal assessment has been finalized and a green finance market assessment was launched in 2022 in collaboration with the Ministry of Economy and Commerce and the Union of Banks. It is expected that the assessment will evaluate the demand and supply sides for green financing and the resulting findings will inform the feasibility study on setting up the facility. The feasibility study was launched in December 2022 and will be completed in the second quarter of 2023.

### **Improvement of the National Statistical System and Green Jobs Modelling**

PAGE (through ILO) continued in 2022 to provide technical assistance to the National Statistical Committee to improve the national statistical system in three areas:

- National Accounts and production of supply and use tables, Input-Output (IO) tables and social accounting matrices with environmental sectors and more details on employment and income distribution;
- Environmental Goods and Services Sectors (EGSS) statistics and Production of Economic and Environmental Accounts according to the System of Economic and Environmental Accounts (SEEA); and
- Labour market statistics, including informality.

These new elements were integrated into a capacity-building programme for the NSC, as well as data collection activities on EGSS and other environmental and job-related data. The support to the NSC included for instance conducting working sessions with experts on SEEA, as well as hiring and training two local experts to enhance the national statistical system.

Related to these activities, ILO and NSC worked on the design of a questionnaire and a workplan to carry out two surveys, an establishment survey on green sector and jobs and a household survey that will measure green sector activities in the informal sector. A related agreement was signed by ILO and NSC for conducting the national survey, which.

The work conducted on data production has supported the development of the Green Jobs Assessment Model (GJAM) for the Kyrgyz Republic as an analytical tool to support long term strategies. PAGE (through ILO) worked on the development of a prototype for the GJAM to analyse the impact of green policies on the labour market and household income distribution. A key component of this has been extensive technical assistance to the NSC in producing a national account matrix, which will be expanded with labour force and household budget data to provide a comprehensive picture of the economy, the income distribution and the employment structure. A full social accounting matrix was completed, which constitutes the basis for an extensive database for the GJAM.

The analytical tool represents a complementary analytical tool for policy analysis focusing on the socio-economic dimension of conventional and green policies.

Once finalized, the GJAM could be used to support the development of long-term strategies and complement other analytical tools with important areas of interests to the government, such as the analysis of inequality, green jobs and the assessment of measures for just transition.

### **Dissemination of a Sustainable Finance Roadmap**

Since 2019, PAGE has supported the development of a Sustainable Finance Roadmap (SFRM) that has been further refined and elaborated up to 2022. The roadmap was drafted with technical support of PAGE, led by UNDP, in close partnership with the Ministry of Economy, National Bank of the Kyrgyz Republic and the Union of Banks (UOB) of the Kyrgyz Republic. It reviews the current state of sustainable finance in Kyrgyzstan, providing an overview of existing practices, policies and regulations, investment opportunities, incentive mechanisms and challenges to mainstreaming sustainable finance and the growth of a sustainable financial system. The SFRM also defines an action plan for the development of a sustainable financial system in Kyrgyzstan, as well as or tangible steps forward in its attainment of a low-carbon, resource-efficient and sustainable economy.

On 10 November 2022, back-to-back with the 2022 Green Economy Forum, PAGE, through UNDP, and the UOB organized a platform to discuss sustainable finance, including the national sustainable finance road map, as a vehicle for the country's transition to a low carbon, resource-efficient and sustainable economy. The workshop gathered representatives from the private banking sectors of Georgia, Kazakhstan and Mongolia to exchange ideas with colleagues from the Kyrgyz Republic on how to enhance sustainable finance in the context of the 2030 Agenda and the goals of the Paris Agreement.

### **PAGE-BIOFIN Collaboration to Advance Innovative Green Finance Solutions**

Synergies between PAGE and BIOFIN as a UNDP special project continue to be leveraged to advance green finance solutions in Kyrgyz Republic. To support the reform of agricultural subsidies harmful for biodiversity, UNDP-BIOFIN supported the UNEP-PAGE Project "Fiscal policy reforms for sustainable, climate-resilient agriculture" implemented by the International Institute for Environment and Development (IIED), leading to the development of a study on fiscal policy reforms for sustainable agriculture. National workshops and advocacy activities were conducted to communicate and discuss the findings of the study and the proposed recommendations. PAGE-UNEP and BIOFIN proposed and tested a methodology to identify and analyse potentially harmful subsidies for biodiversity. The methodology can be applied to any other subsidy in Kyrgyzstan and other countries.

## **Building institutional and individual capacity (Outcome 3):**

### **Green Economy and Climate Change Learning**

In April 2022, the Alliance of Universities in Kyrgyzstan for Green Economy and Sustainable Development (AVZUR), set up by PAGE, and the American University of Central Asia signed an agreement to promote the expansion of AVZUR's membership base and further the integration of courses related to Inclusive Green Economy (IGE) in the curricula of Kyrgyz universities. Under the agreement, universities commit to (1) building capacities of faculty members on green economy through on-site and online training, (2) improving collaboration with policymakers and other stakeholders through multi-stakeholder roundtables, and (3) awareness raising on IGE for youth and the public through outreach and communication activities.

The key achievements of the UNITAR-AVZUR collaboration include membership expansion to 12 new universities (total of 25), trainings of trainers for teachers in vocational schools, bachelors and masters' programmes, integration of academic courses into the members' curricula, organization of webinars, participation in the Green Learning Conference and PAGE Green Forum, and wide outreach through press releases and online publications.

Trainings completed in 2022 include:

- Training for teachers from regional universities on green economy and innovative student learning, Jalal Abad city 13 June 2022 (55 participants); and
- Training for teachers from regional universities on green economy and innovative student learning, Osh city 15 June 2022 (40 Participants).

### **End User Training on Energy Management Systems (EnMS)**

PAGE (UNIDO) conducted an Energy Management System (EnMS) 2-Day End User Training on 3 and 4 February 2022, in Bishkek, Kyrgyz Republic. The training was attended by 43 participants from ministries, representatives from cement and steel plants, energy managers, maintenance managers, technical safety managers, environmental and quality managers, plant engineers, utility managers, control systems auditors and technical consultants who have a basic understanding of energy management systems. The training was designed to provide knowledge, understanding and tools that will allow attendees to develop and implement an ISO 50001 EnMS. The training focuses on the key components of energy management, such as developing effective energy policies, conducting energy audits and preparing companies to integrate and achieve ISO 50001 certification. Attendees received a certificate of participation at the end of the training.

### **Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):**

#### **Learning from Mongolia's Experience in Mobilizing Green Finance**

A 17-member delegation from Kyrgyz Republic representing both the public and private sector visited Ulaanbaatar from 21 to 25 June 2022 to learn from the experiences of Mongolia in mobilizing green finance. The study tour resulted in the Kyrgyz delegation designing a pathway for launching a Kyrgyz Green Finance Corporation, which would facilitate blended finance from domestic public and private sources for green projects in different sectors, a priority measure outlined in the National Development Strategy 2026. Following the study tour, a feasibility study was launched for the Green Finance Corporation, building on a legal framework analysis conducted in 2021 with the support of the Global Green Growth Institute.

## **1.11 Uruguay**

### **Country context and PAGE portfolio**

Uruguay ranks high in the Latin American region in terms of human development, and opportunity and national progress is supported by institutional stability and inclusive social policies. In recent years, the government has integrated sustainable, inclusive and green development into its core pillars of economic development, setting ambitious goals for equality, the environment and a diversified economy. At the same time, its open economy remains vulnerable to oscillations in the global market. Exports still rely on primary sectors such as agriculture and livestock that are intense in the use of natural resources.

To address these issues, the government is committed to sustainability and green economy in pursuit of higher income and better wealth distribution, job creation, poverty reduction, equality and shaping the environment into one of its core pillars of economic development. Uruguay completed several national planning processes to set out its ambition and strengthen its overall policy frameworks.

Since joining in 2017, under the leadership of the Ministry of Industry, Mining and Energy, PAGE informed and promoted sustainable national planning processes and built related capacities. PAGE initially focused on strengthening the capacity of policymakers to assess the impact of environmental policies using macroeconomic models, enhancing public-private collaboration, and broader engagement and awareness-raising on IGE.

Uruguay has embraced the concept of circular economy, given its potential to generate new businesses and jobs in an environmentally conscious manner. This has provided an important entry point for PAGE on a sectoral and thematic level. PAGE helped to integrate circular economy into sectoral public policies and national plans, such as the former National System of Productive Transformation and Competitiveness. For this purpose, PAGE promoted the generation of a National Circular Economy Action Plan presented and published in 2019.

Under this overall framework, PAGE is providing technical assistance (including the greening of MSMEs, waste and by-product valorisation, green production methods in specific industries, and sectoral and thematic analysis in several areas (including land use tensions in residential metropolitan areas with industrial activities)).

**PAGE activities in Uruguay are contributing towards the achievement of SDGs 8 (Decent Work and Economic Growth), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action) and 17 (Partnerships for the Goals), as well as Uruguay's Nationally Determined Contributions (NDCs) to the Paris Agreement.**

PAGE was selected as an example of action on SDG 17 as part of Uruguay's Voluntary National Review (VNR) presented at the HLPF.

In 2020 a new government took office, introducing a number of institutional and political changes in Uruguay. A Ministry of Environment was established and new authorities designated. With the COVID-19 pandemic also starting in 2020, the new government has been actively promoting circular and green economy as a pathway for economic recovery. Against the background, Uruguay was selected to receive additional PAGE support from 2021 focused on circular economy, the generation of green employment and support to SMEs, particularly in the food sector. The government considers these areas as potential drivers for reviving Uruguay's economy, from the perspective of both long-term planning and short and medium-term sectoral policy interventions. In this new setting, Uruguay made considerable progress in the development of a law on integrated waste management, with PAGE supporting the implementation of the national waste management plan, led by the Ministry of Environment.

In 2022, Uruguay remains steadfast in its dedication to advancing a green and inclusive economy agenda. This involves strengthening collaboration with subnational governments, creating green and blue employment indicators and formulating a comprehensive Circular Economy National Strategy, which involves the Ministry of Industry, Energy and Mining, the Ministry of Livestock, Agriculture and Fishery, and the Ministry of Environment.

Furthermore, the capacity building activities implemented under the PAGE framework demonstrate Uruguay's commitment to integrating the green economy agenda throughout the country.

## Progress in 2022

### **Celebrating 5 Years of Partnership with PAGE**

PAGE Uruguay celebrated five years of programme implementation with the event [“Learnings and Perspectives of the Inclusive Green Economy: five years of PAGE Uruguay”](#) on 18-19 October. The event highlighted a wide range of successful national efforts that contributed to the integration of the green economy into public policies in key economic sectors, including policies and programmes that promote resource efficiency, environmental quality and sustainability, green jobs and circular economy. The event provided a platform to share the results achieved, experiences and learnings gathered with different stakeholders, also included an element of regional exchange with other PAGE countries in the region to strengthen the regional network of green economy programmes. Approximately 150 participants from the national and local government, civil society, international organizations and academia attended the event.

### **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

#### **Implementation of the National Waste Management Plan**

PAGE supported the implementation of the National Waste Management Plan, which is a national milestone in which the circularity principle is applied to waste management throughout the entire policy. The plan outlines how the National Waste Management Law is being implemented in Uruguay. PAGE supported the plan's implementation by providing a technical expert on waste and circular economy, who worked closely with the Ministry of Environment's political and technical team.

Related to the plan, PAGE also facilitated the creation of a certification scheme and a seal for “single-use plastic-free” entities and organizations. PAGE supported the analysis of glass recycling capacities in different productive value chains, with the objective of contributing to the implementation of the National Waste Management Plan. The goal was to contribute to the generation of information and knowledge that enables a better understanding of the various territorial contexts of the country, and hence contribute to the design of policies and a transparent management of information. The work builds on the report that PAGE supported in 2021 (released in 2022) on IGE statistics at sub-national level.

### **Building institutional and individual capacity (Outcome 3):**

#### **Second Edition of the Circular Economy Laboratory**

To encourage sustainable consumption and production methods in MSMEs in the food sector, PAGE held the Circular Economy Laboratory (LabEC) with 80 participants. Based on the UNDP “SDG Accelerator” methodology, LabEC is a platform that enhances the ability of businesses in Uruguay to contribute to the SDGs and circular economy through training and knowledge-transfer. It was launched in 2021 and developed collaboratively by PAGE Uruguay, the Ministry of Environment, the Ministry of Industry, Energy and Mining, UNDP, and Uruguay's Chamber of Industries, with the support of the Plastic Technological Center, the Uruguayan Technological Laboratory and the DERES business association.



The 2022 edition of LabEC combined training on circular economy principles and their application to the food manufacturing sector, with business support in the form of ideation, planning and implementation of circular projects related to responsible consumption or production. This second edition focuses on the food sector, due to its fundamental role in a green recovery, considering the need to align efforts to reduce food loss and waste, in line with the national policy to reduce waste and promote circularity in the agri-food sector.

### **Course on Inclusive Green Economy for Public Officers**

Together with the Ministry of Industry, Energy and Mining, the Ministry of the Environment, the National Office of the Civil Service and the National School of Public Administration, PAGE developed a two-month introductory course on IGE for public officers, which is hosted by the University of Montevideo. The virtual, self-paced course aims to strengthen capacities in green economy and to create a positive impact on the design of public policies. It was offered for the first time between 4 April to 31 May 2022 to a total of 48 participants (34 female and 14 male), which included government officials as well as private companies.

### **New Course on Ecotourism in the Context of Inclusive Green Economy**

Between March and June, PAGE (UNITAR) organized the course "Ecotourism in the context of an Inclusive Green Economy" directed at civil society organizations and cooperatives that run or develop eco-touristic initiatives in the country. A joint effort between PAGE and the Ministry of Tourism, the course was delivered in a virtual format based on conceptual discussions and practical activities, combined with a field trip to a sustainable establishment in the Laureles ravines in Tacuarembó. To pass the course, participants had to develop a proposal applying the acquired concepts to a potential ecotourism venture. The activity facilitated exchange and collaboration among entrepreneurs and prepared them for further development of the ecotourism sector in the country. 50 participants took the course.

### **Practical Tool to Improve Environmental Trainings and Programmes**

PAGE (ILO) supported the Ministry of Labor and Social Security of Uruguay, the National Institute of Employment and Vocational Training and the Inter-American Center for the Development of Knowledge in Vocational Training has finalized a ["Guide for mainstreaming environmental perspectives into training"](#) in November 2022, which contributes to the mainstreaming of the environmental perspective in the vocational training offer.

The tool targets curricular designers, heads of training entities, coordinators, facilitators, internship tutors and INEFOP teams (technicians responsible for designing calls to present training offers, evaluation of offers and projects, supervision of training actions, managers, directors, among others). It presents methodological and practical guidelines that the various actors and teams involved in the design and implementation of courses can apply, both to adjust and improve existing programmes, and to design new training proposals.

### **Online Course on Green Jobs**

PAGE (ILO), in coordination with National Institute for Employment and Vocational Training (INEFOP), the Ministry of Labor and Social Security, the Employment National Direction of the Ministry of Labour and ILO/Cinterfor developed the online course-workshop "Greener Jobs" with integration of the environmental perspective in employment and also conducted a training to strengthen the capacity of the technical teams of the training entities and INEFOP on the mainstreaming of environmental issues and green jobs in training.

The adopted methodological approach was based on the 'Guide to mainstreaming the environmental perspective in training'.

In 2022, 40 participants from different entities were distributed to 10 teams and took part in different types of learning activities, meetings, and exchanges over a period of eight weeks. The course is hosted on INEFOP's educational platform and its first edition ran until the end of December 2022.

### **Training on Green Jobs for Rural Women**

Within the framework of promoting decent work, PAGE (ILO) conducted a training for 35 women from rural areas on green jobs on 3-4 June 2022. The training provided the participants with an overview of good practices in productive enterprises and promoted projects which include a green component, which could be further developed through seed capital. The activity included designing, together with rural women's organizations, the implementation of seed capital and capability in co-managing resources for the implementation of green projects, collaborating in the identification of synergies between green enterprises, promoting coordination, associativity and strengthening women's networking.

### **Capacity Building for Subnational Governments in Inclusive Green Economy**

During 2021 and 2022, a cycle of training and exchange on IGE was developed through virtual and face-to-face instances with technical teams from the local governments. The Planning and Budget Office, the Ministry of Environment and the Ministry of Industry, Energy and Mining, the MA, MIEM together with the PAGE agencies, aimed to generate capacities for the development of public policies to promote sustainable development and the transition to an inclusive green economy. It was designed around a combination of theoretical principles and practical examples, and their possible linkage to local needs. This experience not only promoted training, but also the exchange of experiences, the generation of networks and the implementation of concrete solutions.

## **Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):**

### **Improvement in the Application on Solid Waste Recovery**

In a joint effort with the Ministry of Environment and the "Corporate Commitment to Recycling" (CEMPRE), which brings together private sector companies that seek to contribute to sustainability and circular economy, PAGE (UNDP) supported the improvement an application providing guidance on recycling "Dónde Reciclo UY". This application was created by CEMPRE and DATA Uruguay in 2017 with the aim of systematizing information on solid waste recovery. In 2022, PAGE supported the incorporation of public policies, a mapping of enterprises and different layers of information on circularity options such as recycling, reuse, repair and composting.

### **Technological Prototypes for the Implementation of GGE Solutions**

Related to the sub-national government training process, UNDP reached an agreement with UTEC (Technological University of Uruguay) in close coordination with the Planning and Budget Office to incorporate information technologies to local governments' management from a circular approach. Four prototypes of technological solutions were developed together with local governments: the generation of an intelligent container module for monitoring the volume of solid waste; a prototype of remote monitoring of solid waste in watercourses; a solar street prototype lighting with recycled lithium batteries; and a chat box on tourism attractions and services.

## 1.12 Guyana

### Country context and PAGE portfolio

Guyana is an upper to middle income country in South America endowed with natural resources, fertile agricultural land and extensive forests that cover around 87 per cent of the country. Agriculture and mining are key economic sectors, accounting for 21 and 20 per cent of GDP respectively. With its abundance of rivers, the country is susceptible to climate change effects, particularly floods and droughts, and its resource-based economy remains highly exposed to fluctuations in global commodity prices. Petroleum was discovered off the coast in vast quantities along the continental shelf in 2015, and oil exports began in 2020. This offers the potential for rapid industrial development and increased revenues but comes with environmental, governance and economic risks.

Against this background, the Government of Guyana has recognized the importance of taking measures to combat environmental degradation, preserve forest cover and support sustainable development, by committing to low impact, climate resilient development.

The PAGE partnership with Guyana began in 2017, linked to the development and implementation of its Green State Development Strategy (GSDS): Vision 2040 (2019). The strategy was intended to be the country's long-term economic and socio-cultural national development vision and was aligned to the SDGs and Guyana's Nationally Determined Contributions (NDC). The strategy was developed based on previous national policies, including the Low Carbon Development Strategy (2013), the Climate Resilience Strategy and Action Plan 2015 (CRSAP), the Renewable Energy Transition Plan, the Climate Change Resilience Strategy and Adaptation Plan, the National Biodiversity Strategy and Action Plan, and the National Adaptation Strategy for the Agricultural Sector (2009-2018). Most of these prior strategies were not fully implemented but were found to still be relevant to Guyana's economic development.

**PAGE provided support for policy development, including through the Guyana Green Economy Modelling Study, and to building stakeholder and institutional capacities contributed towards the achievement of SDGs 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 13 (Climate Action) and 17 (Partnerships for the Goals), as well as Guyana's NDC, especially as it relates to developing the country's renewable energy potential.**

In 2020, the PAGE programme experienced delays arising from general elections in March and the COVID-19 pandemic. After taking office on 2 August 2020, the new government set priorities for the next five years in line with its Low Carbon Development Strategy (LCDS), initially launched in 2013 and updated in 2021, with an emphasis on COVID-19 response and recovery, job creation, renewable energy, climate mitigation and adaptation and SDGs. The UN Resident Coordinator's Office has streamlined all UN agency work into the Country Implementation Plan (CIP), a strategic document that outlines the priorities, goals and actions for the United Nations' (UN) engagement and collaboration with the country.

PAGE's Guyana work programme has become more integrated with the support provided by the UN Country Team (UNCT) on the response to and recovery of the COVID-19 pandemic. PAGE supported UNCT's Finance and Economic Recovery Working Group and the work of the Guyana National Emergency Operations Centre (NEOC) in the initial stages of the pandemic.

PAGE's Guyana work programme now forms part of "Pillar 4: Macroeconomic Response and Multilateral Collaboration" of the UNCT's Social and Economic Response Recovery Plan (SERRP). Additional future entry points for PAGE support on green economic recovery were provided by the new administration's 2020/2021 national budget "Agenda 2020: our plan for prosperity".

Planned PAGE activities are still being aligned with these new policy priorities, with some delays over the past year after the new government initiated an internal review process. Since then, the PAGE programme has been integrated into the UNCT CIP under the 2022-2026 Multi-Country Sustainable Development Framework and Cooperation Agreement. The agreement, approved by the Government of Guyana, set the frame for the continuity of PAGE activities in 2022. PAGE has been working closely with the UN Resident Coordinator's Office to find the appropriate entry points for PAGE to engage the government in a manner that is efficient and tailored to Guyana's capacity needs.

## Progress in 2022

### Building institutional and individual capacity (Outcome 3):

#### Greening TVET Tool

In 2022, PAGE (ILO) started planning to support Guyana in greening the Technical and Vocational Education and Training (TVET) and skills development through a greening tool launched in 2022 at COP27, Egypt. Throughout 2022, consultations took place to define the scope of the exercise with representatives of key stakeholders from the Council for TVET (CTVET), the Board of Industrial Training and TVET institutions, mainly involved in the forestry sector in Guyana. Greening TVET is important to ensure that the green transition is fair and just, by equipping everyone with the skills needed to play an active role in green job opportunities that will arise. It will also play a key role in ensuring a resilient recovery. In late 2022, terms of reference were drafted to hire international and national consultants to support the process.

## 1.13 Argentina

### Country context and PAGE portfolio

As the third largest economy in Latin America and an upper to middle income country with a well-diversified economy, Argentina recently experienced a slowdown in economic progress with low to negative growth in GDP and a rise in unemployment. The specific dynamics of the Argentinian economy over the last decade, with altering periods of accelerated growth and recession, as well as exchange rate crises, have resulted in sudden changes in regulatory frameworks, the deterioration of productive factors and significantly impacted investments in technological change and productivity.

Against this background, the country recognizes that economic reforms need to be pursued to facilitate growth, stimulate employment and promote sustainability, with important structural challenges to overcome on the road to IGE.

Argentina has demonstrated a strong commitment to sustainability in the context of international processes and has expressed a clear interest in pursuing economic, social and environmental objectives in an integrated manner. During its Presidency of the Group of Twenty (G20) in 2018, Argentina selected “Building Consensus for Fair and Sustainable Development” as the theme of the G20 Leaders’ Summit, highlighting its commitment to promoting green economy as part of the global sustainability agenda. It has taken forward a series of important commitments in environmental and socioeconomic matters, assuming Voluntary Commitments on emission reductions according to the Paris Agreement and promoting an agenda within the framework of its G20 Presidency focused on the “Future of Work”, a “Sustainable Future of Food” and the “Infrastructure for Development”.

Argentina joined PAGE in 2018, with the government recognizing the potential for IGE to provide a means for achieving the 2030 Agenda for Sustainable Development. With PAGE support, Argentina aims to advance IGE transition with a focus on governance; technical analysis to inform policymaking; vocational training to support labour market transition; and sustainable productive development and finance for technological innovation, including fiscal incentives, sustainable public procurement schemes and sustainable financial instruments. Emerging areas that would most benefit from PAGE contribution include the facilitation of cross-sectoral dialogue and targeted support to waste management and green industry.

**PAGE work is likely to support SDGs 4 (Quality Education), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), 13 (Take urgent action to combat climate change and its impacts), and 17 (Partnerships for the Goals).**

In 2020, PAGE Argentina faced challenges in its inception year with a complete government reshuffle following general elections in December 2019 and the COVID-19 crisis further exacerbating the economic crisis. As the country set out plans for economic recovery, PAGE offered additional support to the National Cabinet of Ministers on Climate Change, which linked recovery to SDGs and Climate Change targets through a range of different sector based activities, including emission reduction scenarios, industrial reconversion and technological innovation, green employment and just transition measures, as well as fiscal strategies, green financing and capacity-building.

Deep economic and political crisis from the already challenging situation of external debt, high inflation and unemployment were further deepened by the impacts of the pandemic in 2021. However, the new government elevated green economy in its agenda and has advanced many policies in the areas of green jobs, energy transition and social economy with the aim of providing new growth opportunities through a sustainable approach in line with the objectives and efforts of PAGE Argentina.

In Argentina, 2022 was marked by a growing crisis of multilateralism, growing trade tensions, economic recession and stagnant globalization. Employment has grown, but mostly in low quality job segments and youth unemployment remains high. The external debt crisis constraints fiscal and monetary policy, which prevents the government to address the annual inflation of approximately 90 per cent. The International Monetary Fund forecasts a slowdown of the Argentine economy with low growth in GDP. However, Argentine foreign policy continues to be committed to multilateralism and active participation in the United Nations. Its commitment is manifested within the framework of the 2030 Agenda for Sustainable Development, in the field of triangular cooperation, in Mercosur and in G20.



## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Report on Post-Covid Transition to a Green Economy**

PAGE supported the production of a report on [Post-COVID Transition towards a Green Economy](#). Released in April 2022, the report highlights the potential to create new decent jobs in the sectors most affected by the pandemic and underscores the importance of leveraging opportunities to promote a just transition and an inclusive green recovery.

With this analysis, PAGE is well positioned in Argentina to promote a joint vision for Just Transition in the country, in accordance with decisions taken at UNFCCC COP 27. It has supported joint inter-ministerial articulation and action in the field under the umbrella of the National Climate Change Cabinet with the result of a very solid partnership of the country with the ILO Climate Action for Jobs Initiative (CA4J).

#### **National Green Productive Development Programme**

PAGE (mainly UNIDO) has been supporting the development of the National Green Productive Development Programme since 2020 through conducting assessments and consultations with sectoral productivity boards. In 2022, the Ministry of Economy announced the National Green Productive Development Programme to align the country's production processes with the global climate agenda. This programme is part of the Argentina's Productivity Plan 2030, which will mobilize the country's productive potential to tackle some of its socioeconomic, technology and environmental challenges ahead with the aim to develop the green economy for an environmentally and just transition. Key economic sectors such as agriculture, transport, tourism and mining are to be aligned for an increased adherence to sustainable production patterns.

#### **Development of a National Plan for Circular Economy**

As part of the [National Green Productive Development Programme](#), the Ministry of Economy (the former Ministry of Productive Development) developed a [National Plan for the Promotion of Circular Economy](#) with PAGE support.

A mid-term productivity plan was designed: the ["Argentinean Productivity Plan 2030 for Inclusive and Green Transition"](#) (launched in May 2022), specifically its mission on a "just transition towards a greener economy". As a next step, PAGE will develop implementation tools for the plan to be taken up by policymakers at the Ministry of Economy.

A study on Fiscal Impact of the execution of the National Circular Economy Plan and Roadmap from 2021 and an Industrial Waste flow analysis for the circular economy completed in 2022, provided recommendations for structuring political decision-making related to the plan, involving different partners of the recycling industry. Jointly with the Industrial Union of the Province of Buenos Aires and the Secretariat for Industry (Ministry of Economy), the national PAGE coordinator presented the two studies with the recommendations at the National Industry Fair on 15 October 2022 and a joint workshop on normative recommendations for boosting Green Industry Development on 15 November 2022.

A study on Fiscal Impact of the execution of the National Circular Economy Plan and Roadmap from 2021 and an Industrial Waste flow analysis for the circular economy completed in 2022, provided recommendations for structuring political decision-making related to the plan, involving different partners of the recycling industry. Jointly with the Industrial Union of the Province of Buenos Aires and the Secretariat for Industry (Ministry of Economy), the national PAGE coordinator presented the two studies with the recommendations at the National Industry Fair on 15 October 2022 and a joint workshop on normative recommendations for boosting Green Industry Development on 15 November 2022.

## Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

### **Advancing Sustainable Production and Sustainability Reporting**

In line with National Green Productive Development Programme, PAGE (UNDP) is supporting the development and validation of a set of Inclusive Green Economy Policy Guidelines. These guidelines are based on a series of reports (to be published in 2023) that support the National Just Transition and Labour Board and Sustainable Consumption and Production Board to develop IGE policies within the framework of the National Cabinet for Climate Change.

### **Proposal/Roadmap for a Sustainable Production Seal**

PAGE started work on a proposal for a sustainable production seal for the domestic market, which will contribute to fostering supply and demand of more sustainable goods and services. Based on a mapping of sustainability standards the conceptual basis was drafted in October 2022. After a workshop with key stakeholders, a roadmap was developed, focused on consolidating and expanding Argentina's exportable production.

### **Study on Sustainability Reporting Framework for SMEs**

PAGE conducted a study for a sustainability reporting framework for SMEs during the second half of 2022. The study defines the scope, the target audience, the segmentation of topics to be included, the allied actors, the productive sectors prioritized, the evaluation methodology in addition to the elaboration of all technical and institutional material. In addition to this study, PAGE worked on the design of a comprehensive and country-wide training plan on social responsibility and sustainability reporting, with a focus on green jobs, targeting the middle management of SMEs.

### **Feasibility Study for the Production and Export of Third and Fourth Generation Biofuels**

The study analysis the status of these biofuels at a global and regional level, focusing on the potential of their production at the national level by conducting a deep analysis of the technical, technological, legal, economic, and social (including employment) gaps and challenges. Within this context, PAGE organized the establishment of a multi-stakeholder committee (Evaluation Committee) in Argentina with key actors from the public, private and academic sectors, to promote dialogue and support the design of a national plan for developing the biofuels industry. Several meetings of this committee were conducted in the second half of 2022.

On 30 September 2022, the above three documents were approved by the Ministry of Environment in a validation workshop with 38 participants, including representatives and senior officials from key Ministries, technical institutes, UN agencies and social partners.

### **Technical Assistance to the National Green Hydrogen Plan**

In coordination with the Secretary of Strategic Affairs and the UN RCO, PAGE is providing technical assistance to the development of a National Green Hydrogen Plan. The Secretary of Strategic Affairs under the Presidency Office is leading the process of the Green Hydrogen Strategy and coordinating with relevant ministries concerned with related issues such as energy transition, which also relates to central policies implemented by the Ministry of Economy. The National Congress is planning to discuss the progress made next year (from February 2023 until March 2023).

In 2022, progress was made through the technical assistance for the development of three studies and related consultations:

- State of the art and stakeholder mapping for employment opportunities resulting from green hydrogen development in Argentina (concluded in 2022); and
- Assessment of vocational profiles and skills development, as well as quantitative and qualitative measurement of labour impacts related to the value chains of green hydrogen projects with a focus on vulnerable groups and local industrial development of value chains.

### **Development of a National Plan for the Promotion of Green Employment**

In partnership with the University of Buenos Aires and the National Council for Scientific and Technical Research, PAGE and the Ministry of Labour developed a National Plan for the Promotion of Green Employment. A report was developed in 2022 summarizing the key elements for the elaboration of this strategy. The key elements of the plan include:

- Setting up a tripartite Climate Change Advisory Board;
- Establishing a monitoring system for green employment, defining priority sectors (construction, tourism, textile and automotive) for employment creation and GHG emissions using a social accounting matrix (SAM);
- Implementing the recommendations from SAM across employment programmes; and
- Developing vocational training strategies and promoting social dialogue.

The programme provided recommendations to the Secretary of Employment in different areas:

- **Monitoring employment and professional training policies:** PAGE (ILO) and the Center for Metropolitan Studies of the Metropolitan University of Labour provided technical assistance to the Ministry of Labour (MoL), Employment and Social Security to develop a system of indicators for monitoring employment and professional training policies from the perspective of just transition and green jobs.
- **Green Job Indicators for active labour market policies:** PAGE collaborated with the Government of Buenos Aires City by providing guidance to the nominated board of experts on developing green jobs indicators, building on the previous work with the Centre for Metropolitan Studies in conducting a [green jobs assessment](#) in the city of Buenos Aires. These activities will enrich the National Observatory on Employment and Enterprise Dynamics of MoL in Argentina.

- **Integration of social economy:** PAGE is conducting an assessment on the potential for formalization and Social Protection at the Social Economy through the Green Jobs approach to analyse the social economy, including cooperatives and informal workers (waste-pickers, urban recyclers among others) in accordance with its tripartite position paper for a just transition.
- **Role of collective bargaining:** PAGE conducted an assessment on the role of collective bargaining for the promotion of green jobs and just transition with the involvement of the tripartite partners. The findings of this assessment will serve to develop an online course for negotiators in 2023, which is directed towards social partners and will be hosted in the MoL job-portal.

In support of developing the National Plan for the Promotion of Green Employment, PAGE (ILO) conducted an “Assessment on green entry points at current Active Labour Market Policies (ALMP) in Argentina” in 2022. This technical assistance allowed the government to adjust the existing professional skills development programmes to promote green jobs in strategic sectors.

### **Development of Labour Adaptation Plans - Construction Sector**

In the context of green employment promotion, PAGE had already supported the development of Labour Adaptation Plans for the tourism, construction and automobile industry in 2021. The labour adaptation plans for Argentina include concrete skills-development strategies. The plans focus on a few specific strategic sectors, identified by the MoL following on a set of criteria related to climate change vulnerability, impact of the pandemic and potential for green jobs creation.

An additional Labour Adaptation Plan for the construction sector was validated in a workshop within the framework of PAGE. Government officials and representatives of the employer and worker sector participated and agreed on a roadmap for the implementation of the plan. In December 2022, the first meeting of the tripartite sectoral working group, coordinated by the Ministry of Labour, was held to implement an agenda of actions for just transition and promotion of green jobs in the construction. The construction sector in Argentina is one of the most dynamic sectors, especially for its potential to promote a recovery in youth employment.

### **Platform for Access Employment Services and Training on Green Employment**

The Ministry of Labour (MoL) has included a set of assessments and instruments developed for green jobs promotion and social dialogue on just transition in the Ministry of Labour, Employment and Social Security (MTESS) National Employment Portal, “Portal Empleo”, a platform dedicated to employment services and training. The documents, developed in a tripartite participatory manner through PAGE and under the supervision of MoL, offer policymakers, public officers and social stakeholders' access to the topics related to sustainability and green recovery.

### **Development of a Roadmap for Power Generation from Sugarcane**

PAGE (UNIDO), together with the Sustainable Industry Directorate at the Industrial and Productive Development Secretariat of the Ministry of Economy, carried out an assessment for the development of a roadmap, including a techno-economic and environmental assessment of sugarcane industry to increase electricity production, entitled “Feasibility Study for Industrial Symbiosis in the Sugarcane Sector”. The main results were presented at the Climate Week in Buenos Aires in October 2022.

### **Labour Impact Scenarios for the NDCs**

PAGE (ILO) developed labour impact scenarios for specific sectors within the national emission reduction plans enclosed within the NDCs. The assessment informed National Emissions Reduction and adaptation policy on the impacts of the nationally determined compromises at the labour market: it aims to identify those sectors that should be unfailingly involved in climate actions and select policies and projects, both from mitigation as well as adaptation, that allow it to be fulfilled thus having positive qualitative and quantitative effects on employment. The results presented emphasize the effects on total employment and by category, and on total emissions and by gases.

### **Development of Financial Instruments for the Industry**

To support the private and public banking sector, as well as national stock exchange authority, PAGE (UNDP) conducted a study on green financial instruments (state of the art) as well as recommendations for indexing assets and credits for promoting green productive development. This assessment has been presented on 1 March in the Province of Tierra del Fuego together with the RCO, the National Stock Exchange Authority and the Government of Tierra del Fuego where industry depends heavily on subsidies and financial support from national development banks.

### **Building institutional and individual capacity (Outcome 3):**

#### **Capacity Building for Municipalities on Green Economy**

PAGE (UNDP) supported the development and implementation of capacity-building courses for local governments throughout the country which are carried out under the Argentina chapter of the Global Compact of Mayors (Red Argentina de Municipios contra el Cambio Climático RAMCC). More specifically, PAGE strengthened the [Local Green Jobs Promotor](#) training for officials and municipal managers, responsible for planning, implementing and evaluating promotion strategies for green economies in municipal structures. The activity was focused on the methodological and content restructuring of the training programme, seeking to optimize training for municipal officials and managers interested in positioning themselves as local promoters. As a result of this collaboration, 60 green employment plans were drafted for municipalities across the country. As a next step, a manual will be developed for the dissemination and replicability of the training.

The RAMCC compact of mayors is integrated by 270 cities and has already developed about 60 draft green employment plans throughout the country. Besides support of PAGE, it is substantially financed through EUROCLIMA+ from the European Union, for which this initiative is an example of good synergies between development partners.

#### **First Certified Cohort of Agroecology Promoters**

Within the framework of the National Green Employment Promotion Plan, the Ministry of Labour certified, with PAGE support, a first cohort of [300 "Agroecology Promoters"](#) in the food sector of the Industrial Matanza-Riachuelo River Basin. Participants were trained in agroecological techniques specific to the basin territories to help promote sustainable local development and food sovereignty.



## Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):

### Communication Campaign on Just Transition

In 2022, PAGE launched a communication campaign to promote a Just Transition to a green economy, emphasizing the potential to create new decent jobs and preserve and restore the environment. Key messages of the [communication strategy](#) were disseminated through social media networks and the national press throughout 2022.

### Presentation of Labour Impact Results in UNFCCC Workshop

PAGE shared the methodology developed for measuring the labour impacts of NDC related policies at the UNFCCC Subsidiary Body (SB) Workshop, in the context of tools and methodologies for modelling and assessing the impacts of response measures. The analysis assessed the costs and benefits of different potential emissions reduction options in diverse sectors, with scenarios for COVID-19 pandemic recovery. The modelling identified the impacts on employment for both men and women, different age groups, and different types of workers in the renewable energy sector. Different best-case scenarios on emissions reduction and employment were also presented.

### Support to Stockholm+50

PAGE Argentina (UNDP) actively participated in the preparation of Stockholm+50 national consultations, collecting perspectives from over 600 participants on the actions needed to strengthen the sustainable development and to facilitate the access to information on environmental issues. In addition, a delegation participated in discussions on inclusive green development and green job opportunities for youth under PAGE umbrella, with high level representation of the government, following countrywide discussions on Green Jobs and Just Transition organized by UNDP and involving government representatives, labour unions, employers, academia, and Civil Society.

## 1.14 Indonesia

### Country context and PAGE portfolio

Indonesia has experienced stable economic growth over the past decade, transforming the country into one of the largest economies in Asia. At the same time, the government recognizes that further action is needed to address poverty, inequality, unemployment, and environmental degradation. Accordingly, the Indonesian Government is working to incorporate sustainability policies and emission reduction activities into its national plans and targets.

In 2017, the government under the leadership of the Ministry of National Development Planning (BAPPENAS) launched the Low Carbon Development Initiative (LCDI). The LCDI offers a non-siloed approach to achieve low-carbon development, sustainable natural resource management and poverty alleviation while maintaining economic growth. It aims to incorporate greenhouse gas (GHG) emission reduction targets into the policy planning exercise, along with other interventions for preserving and restoring natural resources.

In alignment with the LCDI, Indonesia joined PAGE in 2018 to transform its economy into a driver of sustainability and social inclusion and to address development and environmental challenges at the national and sub-national level through multi-stakeholder action. PAGE was launched in October 2018 to support further planning and implementation of LCDI with a focus on the energy, waste management and circular economy, and green industry sectors, in line with the national priority programme outlined in the RPJMN 2020-2024.

Various policy scenarios assessed through the LCDI were mainstreamed in the latest National Medium-Term Development Plan 2020-2024 (RPJMN – from its Indonesian title), launched as the first ‘green’ RPJMN in the beginning of 2020 with clear targets, locations, and priority sectors. The Medium-term Development Plan provides a reference for sector ministries, government bodies and other stakeholders for their policymaking and programmatic planning over the next five years and supports the implementation of the National Long-term Development Plan (RPJPN) 2005-2025, which seeks to establish a country that is developed and self-reliant, just and democratic, and peaceful and united.

With green economy gaining momentum in Indonesia, low carbon development and circular economy, together with blue economy and energy transition have been promoted by the Indonesian Government as priority programmes to accelerate a green economy transition. In this context, apart from assisting the implementation of LCDI at both the national and sub-national level, PAGE provides support to the Indonesian Government to further integrate inclusive green economy into the next RPJMN 2025-2029 as well as the national long-term development plan (RPJPN) 2025-2045, for achieving Indonesia Vision 2045 as well as Net Zero Emission 2060 (or sooner).

**PAGE work in Indonesia is currently aligned with the following SDGs: SDG 7 (Affordable & Clean Energy); SDG 8 (Decent Work and Economic Growth); SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production); SDG 13 (Climate Action) and SDG 17 (Partnership for the Goals).**

In 2020, when Indonesia started to address the impacts of the COVID-19 pandemic, BAPPENAS promoted a green recovery through its ‘Build Back Better with Low Carbon Development (B3-Low Carbon)’ approach. This provided a new entry point for PAGE to support circular economy in Indonesia, aligned with ongoing support in the context of LCDI, focused on energy and resource efficiency, energy transition, green industry, better waste management, green jobs and just transition. In addition, through its rapid sectoral assessment of green stimulus packages in the energy sector, which promotes the instalment of solar PV rooftops, PAGE was able to contribute to Indonesia’s Green Recovery Roadmap 2021-2024, which elevates green economy to one of the major national structural transformation strategies for post-recovery.

In the past two years, green economy has been gaining its momentum in Indonesia. On various occasions, the President of Indonesia referred to green economy and green recovery as the way forward for the development of Indonesia. In 2022, the Government of Indonesia, through BAPPENAS, launched its economic transformation agenda with six grand strategies including green economy. The green economy grand strategy includes low carbon and circular economy, blue economy, and energy transition.

PAGE served as Indonesia’s official knowledge partner during its presidency for the G20 summit in 2022 and helped to facilitate the consultation processes to bring a green, blue and low carbon economy into the summit agenda. Green economy was included in the high-level global discussions of the Development Working Group (DWG) to strengthen recovery from the COVID-19 pandemic and ensuring resilience in developing countries to withstand future crises: green and blue economy through low carbon development. In line with that, the Government of Indonesia launched a green economy index, which represents a significant evolution of the concept and the strong political will to carry it forward.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **National Low Carbon Development and Circular Economy at National and Sub-national Level**

In 2022, PAGE (UNDP) has continued to support the Low Carbon Development Indonesia (LCDI) and Circular Economy Secretariat at the Ministry of National Development Planning, as a national coordination mechanism for integrating and mainstreaming IGE into the national policy agenda and development planning process. PAGE's support included providing two analysts in the energy and waste sectors and three personnel in circular economy.

At subnational level PAGE (UNDP) has completed the technical assistance for the development of the Low Carbon Development Plan of West Java Province (Rencana Pembangunan Rendah Karbon Daerah/RPRKD). The planning document has been officially disseminated and handed over to the West Java Provincial Development Planning Agency in August 2022.

PAGE, together with other development partners, also supported BAPPENAS in delivering different knowledge sharing activities to sub-national governments including a workshop on "low carbon and circular economy as backbone to achieve green economic transformation". A Workshop on Monitoring, Evaluation, and Reporting of Low Carbon Development Actions was held in April in Bandung for West Java (with 47 participants), and Workshops on Low Carbon and Climate Resilience Development as Backbone for Green Economy & Sustainable Development were delivered in the Eastern & Central Indonesia region on 10-12 August 2022 (with 29 participants) and the Western and Central Indonesia Region on 23-25 August 2022 (with 31 participants).

In 2023, PAGE will continue to provide the support the development of a national circular economy roadmap and action plan (involving line ministries, private sector, and other stakeholders), as well as to mainstream and integrate IGE into the next medium-term national planning document (Rencana Pembangunan Jangka Menengah Nasional/RPJMN). 2025-2029 and long-term national planning document (Rencana Pembangunan Jangka Panjang Nasional/RPJPN). 2025-2045.

### Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

#### **Resource Efficiency Scoping Assessment in the Fertilizer Industry**

PAGE (UNIDO) developed in 2021 a resource efficiency scoping assessment report on the fertilizer sector, identifying opportunities for resource savings, emissions reduction, and the creation of green jobs to foster the implementation of the government's low carbon development initiative (LCDI). Based on the report, PAGE developed a policy brief in 2022 that outlines the report's key results and recommended actions, which policymakers can consider for adoption and implementation.

#### **Resource Efficiency and Cleaner Production Assessment in the Iron and Steel Industry**

On 12 October 2022, PAGE and key national stakeholders kicked off a Resource Efficiency Cleaner Production (RECP) Assessment in the iron and steel industry sector, prepared in cooperation with Indonesia's Cleaner Production Centre.

The study identifies opportunities for enterprises to realize savings and become more competitive through RECP measures. It builds on a Green Industry and Trade Assessment completed in 2019 and complements a RECP assessment conducted in 2022 for the fertilizer sector. The study is expected to support the Ministry of Industry in the development and implementation of green industry standards for the iron and steel sector (report forthcoming in mid 2023). The event included representatives from BAPPENAS and the Ministry of Industry as well as companies and associations from the iron and steel industry.

### **Policy Readiness Assessment for Green Jobs and Just Energy Transition**

PAGE (ILO) conducted a policy readiness assessment for green jobs and just energy transition in Indonesia. The study follows the Government of Indonesia's energy transition plan and identifies the relevant policies related to the plan using the ILO Just Transition Guidelines as the framework. The assessment was carried out using an inclusive social dialogue approach, where around 20 interviews and a tripartite consultation were delivered for data collection and result validation. The report is currently being finalized and expected to be published under PAGE by the first half of 2023.

### **Business Model Development for Rooftop Solar**

PAGE (UNDP) Indonesia has completed the development of business models for the installation of solar photovoltaic rooftop at schools and office buildings in West Java, using innovative financing mechanisms. This activity is a continuation of a phase one activity developed in 2021 (by UNDP and UNEP), where PAGE has completed an assessment of the enabling environment for green financing in West Java and identified potential green project pipelines in the province. The report was fine-tuned in early February 2023 and a dissemination event is planned to be organized in the second quarter of 2023. The activity supports the implementation of LCDI at the sub-national level and aims to accelerate the energy transition in the province of West Java.

### **Support to the Development of a National Action Plan on Circular Economy**

PAGE agencies are working collaboratively as part of the green recovery support to provide different inputs to the development of a National Action Plan/Roadmap on Circular Economy led by the government.

### **Assessment on the Green Jobs for Circularity on the Food and Beverages Industry**

PAGE (ILO) is supporting an in-depth assessment on the green jobs and skills needs for circularity on the food and beverages industry in Indonesia. Building on an assessment by UNDP identifying the potential sub-sectors, the palm cooking oil industry is recommended as focus. The study aims to identify the green jobs creation potential from the introduced circularity and the skill needs for the related supply chain. A series of interviews with about 20 stakeholders including palm and cooking oil enterprises, trade unions, employers' organizations, related civil society organizations (CSOs) and the government was conducted. Currently, a tripartite workshop is under preparation to validate the study's result which is expected to be finalized in the first half of 2023.

### **Study on Circular Economy Opportunities with the Principles of Resource Efficiency and Cleaner Production (RECP) in the Food and Beverage Sector**

PAGE (UNIDO) kicked off in April 2022 a study on circular economy opportunities with policy recommendations, in the context of resource efficiency and cleaner production in Indonesia's food and beverage sector. The study focuses on the palm cooking oil industry which, through previous assessment conducted by UNDP, has been identified as one of the most potential food and beverage sub-sectors for circular economy.

Several consultation meetings were organized with the implementing partner (PT ASH Economic Research and Business Consulting - Indonesia) and the Ministry of National Planning, to finalize the study's scope and develop a survey questionnaire. As part of the stakeholders' engagement, different focused group discussions were conducted in October and December 2022 involving palm oil industry associations. A questionnaire was developed to conduct a field survey on plantation, milling, refinery, and packaging and distribution. The field survey has been conducted in early 2023. The final report is expected to be finalized in the second quarter of 2023.

### **Enabling Policy Environment for Private Sector Investment in the Food and Beverage Sector**

Partnering with the Centre of Reform on Economics (CORE Indonesia), PAGE (UNEP) finalized the report on "Enabling Policy Environment to Encourage Private Sector Investment for Circular Economy Practices in Indonesia's Agriculture-Based Food and Beverage Sector". PAGE's support included the review and analysis of the current enabling environment and available incentives that encourage or discourage circular approaches in the food and beverage sector. In addition, it helped identify priority reforms to create fiscal and financial incentives that mobilize private finance and investments, and eventually develop healthy markets for circular economy products and services in the food and beverage sector. PAGE also established key principles and guidelines to transition to successful circular economy market development in the food and beverage sector.

Also, in the context of the food industry, UNEP, following the food loss and waste policy scoping study of 2021 (Policy Brief: Policy Reform to Reduce Food Waste and Support Low Carbon Development in West Java, Indonesia) and related roundtable discussions, a food waste survey was conducted in 2022 to assess the baseline conditions at the household level in three provinces of Indonesia: West Java, Central Java and Bali.

### **Strategic Policy Paper on Key Results as Reference Document for Circular Economy**

PAGE (UNDP) will consolidate the results of four ongoing and previously developed studies by PAGE into one strategic policy paper, starting the second quarter in 2023.

The evidence-based policy paper will be used as reference for the development of Indonesia's National Action Plan on Circular Economy (also called roadmap) in 2023 and as a background paper for integrating circular economy indicators into the next medium-term and long-term planning.

The relevant studies considered are:

- Waste and CO2 reduction potential using life cycle analysis (completed) and development of system dynamics structure model for policy simulation (completed);
- Enabling Policy Environment to Encourage Private Sector Investment for Circular Economy Practices in Indonesia's Agriculture-Based Food and Beverage Sector (completed);
- Study on Circular Economy Opportunities with the Principles of Resource Efficiency and Cleaner Production (RECP) in the food and beverage industry (ongoing); and
- In-depth assessment on green jobs and skills needs for circularity on the food and beverages industry (ongoing).



### **Discussion on Circular Economy for New Capital City**

The Ministry of National Development Planning (BAPPENAS) together with the Institution of Engineers Indonesia and supported by PAGE (UNDP), held a virtual discussion on the development of a circular economy in the new capital city of Indonesia, Nusantara, which is currently under development. The discussion “Welcoming the Circular State Capital” was organized on 28 July 2022.

### **Social Dialogue on Just Transition for the Energy and Textile and Garment Sector**

PAGE, together with the ILO project “Decent Work in the Garment Supply Chain in Asia,” supported a two-day workshop “Achieving a Just Transition through Stronger Collaboration in Indonesia: A Social Dialogue,” held from 24 to 25 October in Jakarta. The event facilitated the social dialogue among stakeholders on the Just Transition planning in the energy and garment and textiles sector. In the energy session, 50 representatives of relevant governmental departments including the Ministries of National Development Planning and of Manpower, employers’ organizations, and workers’ organizations, actively participated in the workshop, sharing their knowledge and experiences and identifying ways to move forward with a Just Transition in the energy and textile sector.

The workshop discussed the Just Transition policies to support coal phase out in Southeast Asia, including Indonesia, and the overview of the global changes and trends on the sustainability practices in the garment and textile sector and implications for a Just Transition. The key findings of the ‘Policy Readiness Assessment on Green Jobs and Just Transition in the Energy Sector in Indonesia’ were presented and discussed, along with the ways to move forward with a Just Transition in the energy and textile sector.

### **PAGE-BIOFIN Collaboration to Advance Innovative Green Finance Solutions**

Synergies between PAGE and BIOFIN (Biodiversity Finance Initiative) as a UNDP special project, continue to be leveraged to advance green finance solutions in Indonesia. UNDP held a series of meetings with the National Board of Zakat for the Republic of Indonesia (BAZNAS), the UNDP Innovative Finance Lab and BAPPENAS to define locations and mechanisms for a capacity building pilot project on Islamic financing for biodiversity in February and November 2022. In addition, a field assessment was conducted in June 2022 to assess key biodiversity issues and gaps, as well as to identify interventions. The pilot project aims to improve cocoa farmer’s agricultural practices, and capacity building for BAZNAS’s staff will be conducted to integrate biodiversity and poverty reduction aspects into its programmes and programmatic impact assessments towards the SDGs and biodiversity. The capacity building will foster further replication and opportunities for scaling up.

### **Building institutional and individual capacity (Outcome 3):**

#### **Higher Education Course on IGE Modelling**

The 2nd edition of the Inclusive Green Economy Modelling (IGEM) course was officially launched at the University of Indonesia on 25 October 2022, in cooperation with the Environment Institute and the Indonesia Expert Network for Climate Change and Forestry (APIK Indonesia). The course aims to build knowledge and skills amongst university students across Indonesia about the role of IGEM in economic transition at the national and sub-national levels. The online kick-off was attended by 263 participants from 20 universities in Indonesia, government representatives from different ministries and institutions, both national and sub-national, and the public. Subsequently, the online course was attended by 77 master and doctoral students from 19 universities in Western, Central, and Eastern Indonesia till December 2022. It involved peer-to-peer learning for course instructors including 25 lecturers from 11 Indonesian universities.

## Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):

### PAGE Support to G20 Indonesia

In 2022, PAGE supported the Indonesian Ministry of National Development Planning in the preparation of the G20 Development Working Groups (DWG) meetings, providing substantive inputs to the “G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, Least Developed Countries, and Small Island Developing States”, as well as the “G20 Chair’s Summary on Multilateralism for Sustainable Development Goals”. The G20 Bali Leaders Declaration issued in November recognized the work of the DWG referring to “focus on MSMEs, adaptive social protection, green economy and blue economy” and reconfirmed commitments to climate targets and climate financing, including phase down of the use of coal. PAGE contributed to key milestones through advisory services, data collection, inputs to scoping papers and discussions:

- The Head of the PAGE Secretariat contributed to a seminar on [“Navigating Challenges and Optimizing Opportunities in Green and Blue Economy Implementation in Developing Countries, LDCs, and SIDS”](#) in February 2022 in which panellists shared strategic suggestions on Green and Blue Economy and for global action supporting countries’ green recovery plans and related resource mobilization. Among the panellists was the ILO’s Senior Specialist in Environment and Decent Work for Asia and the Pacific. The seminar was moderated by UNDP’s Indonesia Senior Advisor for Sustainable Energy Strategic Programme and Policies; and
- The Chair of PAGE Management Board contributed to the third DWG Meeting Side Event [“Towards Implementation and Beyond: Measuring the Progress of Low Carbon and Green Economy”](#) in August 2022 in a panel discussion on the nexus between development, climate change, and biodiversity advocating for the transformation of economies by spending available resources in responsible and innovative ways.

### New Website and Social Media Platforms

PAGE (UNDP) developed PAGE Indonesia’s social media channels (Facebook, YouTube, and a website) to support the communication activities and increase the outreach. PAGE Indonesia will leverage its social media as platform to make the programme’s results and products easily accessible to the public and relevant stakeholders.

## 1.15 Kazakhstan

### Country context and PAGE portfolio

Kazakhstan is an upper to middle income country whose economic growth has largely depended on the exploitation of fossil fuels since independence, making it one of the biggest emitters of CO<sub>2</sub> in the world per capita. With 42.1 per cent of the population residing in rural areas, the country is an important supplier of grains and oilseeds and has an ambitious livestock development programme. However, climate change, environmental degradation and waste pollution present significant threats to the country. Kazakhstan is also flood-prone, exposed to extreme temperatures and impacted by glacier melting and droughts. No integrated waste management system exists, with 86 per cent of solid municipal waste ending up in uncontrolled landfills and waste disposal sites, most of which do not meet sanitary requirements. The resource-rich nation is one of the wealthiest in Central Asia; however, the slow pace of improvements in living condition creates social tensions that threaten progress towards a fairer, greener and more prosperous economy.

The Republic of Kazakhstan has taken progressive steps to promote sustainable development with ambitious targets set out in its National Development Strategy Kazakhstan 2050 and its Green Economy Concept that have served as the strategic vision of the country on inclusive sustainable development since 2013. These targets include sourcing as much as 30 per cent of energy from renewables by 2030, increasing to 50 per cent by 2050. More generally, Kazakhstan seeks to promote economic diversification and inclusive growth through green economy promotion. The Strategy on Achieving Carbon Neutrality by 2060 was adopted by the government in February 2023, and it outlines a comprehensive plan to reduce carbon emissions, promote low-carbon development, and encourage the adoption of renewable energy sources. The goal of the strategy is to balance the amount of carbon dioxide that the country emits with the amount it removes from the atmosphere.

Against this backdrop, Kazakhstan joined PAGE in 2018 with the objective to support the implementation of its National Development Strategy Kazakhstan 2050. In 2019, a scoping mission, led by the Ministry of Ecology, Geology and Natural Resources (MEGNR, previously the Ministry of Energy), a green economy stocktaking and the inauguration of a NSC, comprising representatives of the government and private sector, provided the foundation for support aligned with country priorities.

A strategic planning reform, initiated in the beginning of 2021 under the supervision of the new State Agency for Planning and Reform, provides new opportunities for PAGE to raise the green economy ambition of the country. In this process, some policy documents that PAGE supported in 2019 and 2020 were replaced by new policy initiatives in 2021. PAGE work has been built around the following entry points and avenues for progress:

- 1) The "Concept for the Transition of the Republic of Kazakhstan to a Green Economy (GEC)", implemented since 2013 and to be updated in 2023, provides a long-term pathway towards a green economy and carbon neutrality.
- 2) The country's low carbon development was presented as a "Strategy on Carbon Neutrality until 2060", adopted on 2 February 2023 (earlier framed as the Low Carbon Development Concept - LCDC).
- 3) The development and implementation of the revised Environmental Code, (signed into law on 2 January 2021) and the related introduction of approximately 150 normative legal acts, provided the basis for meeting international obligations, the sustainable use of natural resources as well as climate mitigation and adaptation measures.
- 4) The updated "Strategic Plan for Development of the Republic of Kazakhstan until 2025", mandates the development of 5-year national projects in key sectors and thematic areas.
- 5) The 5-year cross-sectoral National Project "Zhasyl Kazakhstan" (Green Kazakhstan) was approved by the government in October 2021. In line with the strategic planning reform, it replaces the earlier programmatic and sector-focused planning approach (including the formerly developed Waste Management Programme) and provides an entry point for enabling the country's green economic recovery.

Across these different overarching policies and concepts, PAGE's sectoral and thematic support focuses on waste management, green fiscal policy, sustainable public procurement, the introduction of environmental norms, standards, and permissions (including Best Available Techniques, BAT), the use of strategic environmental assessments, the promotion of green businesses and energy efficiency in regions, as well as institutional capacity-building.

**PAGE work in Kazakhstan aims to contribute to the following SDGs: SDG 3 (Good Health and Well-Being), SDG 13 (Climate Action) and SDG 7 (Affordable and Clean Energy) - through a focus on strategic low carbon and green economy policy development and implementation, waste management and fiscal reform; SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Production and Consumption), and SDG 15 (Life on Land) - through improvements in eco-regulation and waste management and redirection of emission payments to support green SMEs.**

At the beginning of 2022, Kazakhstan experienced civil unrest after a sharp increase in fuel prices due to the transition to a market pricing mechanism. The protests moved from economic demands to political ones, including the resignation of the government and the departure from politics of the country's first president. As a result, half of the government was replaced, including the economic and environmental ministers. The new government was assigned to develop an anti-crisis action programme with the focus on socio-economic well-being.

During the course of the year, the National Council for Improving the Investment Climate considered financing obligations under the Climate Pact and the continued strengthening of Kazakhstan's international position in promoting the "green agenda". An Action Programme of the Government of the Republic of Kazakhstan was approved, which aims to ensure comprehensive coverage of quality health services and to improve the environmental situation. Consequently, the government intends to continue implementing measures aimed at reducing emissions and discharges of pollutants, improving waste and water management systems. This was emphasised by a keynote speech of the President of the Republic of Kazakhstan at the World Economic Forum held in Davos, where he noted that "the development of a green economy, energy efficiency and renewable energy sector will be the priority of our Low-Carbon Development Strategy, which will provide an optimal path to zero emissions by 2060".

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### Development of the Carbon Neutrality Strategy until 2060

Following the request of the Ministry of National Economy, PAGE joined forces in June with the Economic Research Institute to finalize the development of the Carbon Neutrality Strategy until 2060. The strategy aims to achieve the goals of the Paris Agreement and will determine the national approaches and strategic course of the state policy for consistent transformation towards decarbonization of the economy. PAGE contributed to drafting six chapters of the strategy and facilitated 22 working group meetings with stakeholders to identify priority issues for achieving carbon neutrality goals, volumes and sources of financing required for the transition, ways of decarbonization and legislative transformation. A report on finalization of the Carbon Neutrality Strategy was released by the government in 2022.

### **Development of the Strategic Vision of the Green Economy Concept**

PAGE (UNITAR and UNDP) provided support for updating the Green Economy Concept (GEC) in early 2022, following the request by the Government of Kazakhstan in 2020. Phase I included developing the strategic vision with the technical support of a team of PAGE national experts from the Economic Research Institute (ERI) assisted by sectoral experts and under the coordination and methodological support of PAGE international experts.

The work was guided by the Ministry of Ecology, Geology and Natural Resources (MEGNR) with the support of national stakeholders represented in eight working groups under the Green Economy Council, bringing together relevant public, private sector, civil society and academic representatives. During the year, 15 meetings were held online with the Department of Environmental Policy and Sustainable Development of MEGNR as well as international and national experts, and two meetings with MEGNR prior to the development and subsequent finalization of the draft vision. This preparatory work was followed by 11 working group meetings covering different topics on air pollution reduction, waste management, energy efficiency, renewable energy, water resource management, ecosystem management, agriculture, education on ecological culture and others.

The draft vision was submitted to MEGNR on 2 December 2022 and the full update of the Green Economy Concept will be completed in the first half of 2023. It will build on modelling results and indicators developed for the Carbon Neutrality Strategy. Co-funding for this activity was received from the Food and Agriculture Organization (FAO).

It was an important milestone for the update of the Green Economy Concept aimed to integrate SDGs and indicators, as well as to align with new strategic documents, regulations and commitments. The vision reinforces the plans of the Green Economy Council, which convenes the Ministries of Economy, Ecology, Industry and Energy under the auspices of the Prime Minister, to reduce the energy intensity of the economy by 30 per cent by 2030. It provides guidance for implementing energy efficiency measures in residential buildings, social facilities, industrial enterprises and transport infrastructure.

### **Analysis on the Impact of Fossil Fuel Subsidies**

PAGE, led by UNEP and UNDP, analysed different aspects of fossil fuel subsidies in Kazakhstan in 2022. UNDP supported an analysis on the impacts of reforming fossil fuel subsidies on the economy, environment and society. The analysis incorporated new subsidies' estimates, an assessment of potential revenue after the liberalisation of domestic prices and the results from modelling exercises conducted to estimate the macroeconomic (GDP, government revenue, jobs) and environmental (GHG emissions reduction) impacts of fossil fuel subsidies reform under three key scenarios.

The adopted methodologies, input data and modelling scenarios were first discussed at the workshop "Developing scenarios for reforming fossil fuel subsidies to stimulate low-carbon development in Kazakhstan", organized by the Ministry of National Economy (MNE) on 13 May, while the modelling results were presented in a subsequent workshop on 14 June. The findings of this analysis served as inputs for the revised Green Economy Concept and the development of the Carbon Neutrality Strategy.

UNEP conducted a modelling and analysis on energy subsidies jointly with the International Institute for Sustainable Development. The study provides an assessment of subsidies for fossil fuel production and consumption, alongside options for fiscal measures.



As such, it provides evidence on how fiscal policy reforms in Kazakhstan can create much needed fiscal space and help reallocate scarce public resources towards a green recovery, while facilitating long-term investments in a low carbon economy. The modelling methodology has been presented to relevant stakeholders to inform the use of fiscal policy to enable and support green economic transitions and shifting away from conventional forms of energy, while also supporting Kazakhstan's economic and environmental goals.

Three documents were released in 2022 based on the findings of this work:

- A report on modelling and analysis on the impacts of reforming energy subsidies on the economy, environment and society;
- An updated policy brief on fossil fuel subsidies in Kazakhstan and options for fiscal measures to stimulate low-carbon development; and
- A policy brief on economic and environmental impacts of the fossil fuel subsidies reform in Kazakhstan.

### **Assessing the impacts of a Carbon Border Adjustment Mechanism**

An Assessment of the practical implications of the Carbon Border Adjustment Mechanism (CBAM) on Kazakhstan's economy was conducted in close coordination with the Ministry of National Economy (MNE) and the Ministry of Ecology, Geology and Natural Resources (MEGNR). The study included an in-depth analysis of the potential direct and indirect benefits and costs associated with the introduction of CBAM. It also proposed several potential designs for an EU-CBAM, by building sectoral models assessing the impact on selected sectors and the overall macroeconomic development.

To evaluate those potential effects, the expert team developed a "tool for CBAM impact assessment," a practical instrument for the analysis of potential direct impacts of introducing CBAM into the sectors of ferrous metallurgy, non-ferrous metallurgy, production of minerals and the chemical industry. The tool is designed in a way that enables the combination of different scenarios with an interactive user interface and graphical representation of results, and a high flexibility in terms of product coverage, expected carbon prices as well as the underlying export and revenue data.

The findings were first presented to the Ministries and a broader audience on 16 June at the 12<sup>th</sup> Congress of Astana Mining and Metallurgy. An in-person training on how to use the tool took place on 22 June. The reports and findings, as well as the modelling tool, will be revised in 2023 with the latest developments in CBAM design that were introduced by the EC in the second half of 2022.

### **Strategic Environmental Assessment for the Astana City Masterplan**

As per the request of the Ministry of Ecology, PAGE piloted the Strategic Environmental Assessment (SEA) for the Master Plan for Development until 2035 of the Kazakhstan's capital Astana. The requirement for the SEA was introduced with Kazakhstan's amendments to the Environmental Code. The draft SEA report assesses the current environmental conditions, target environmental indicators, alternative scenarios, and provides recommendations for mitigation and prevention of environmental risks. The first stage of the SEA pilot was completed in 2022 with a SEA Scoping Report and additional document with "Recommendations for expanding the range of documents subject to SEAs". The full SEA is expected in 2023. It will serve as a blueprint for how to apply SEA to other policy processes, which is mandatory for all national and local documents starting 2024.

## Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

### **Regional Programme to Finance Green SMEs with High Emission Reduction Potential**

In partnership with the Ministry of Ecology, Geology and Natural Resources and the UNDP-GEF Project “Nationally Appropriate Mitigation Actions for Low-Carbon Urban Development”, PAGE has developed a regional pilot programme for redirecting emission payments to finance green SMEs with a high emission reduction potential in the Pavlodar region, a region that generates a quarter of Kazakhstan’s emissions, mainly from industrial facilities. The project’s main objective is to create fiscal incentives that promote green business and create green employment. Ultimately, the project should increase the use of emissions payments to reduce negative environmental impacts, creating favourable conditions for green projects by SMEs and increasing green finance.

As a milestone in 2022 a document was developed providing “Draft rules for project support for the regional SME support programme”. An extensive consultation process followed the submission of the draft regional pilot programme, including discussions and meetings with the Corporate Fund, the departments of entrepreneurship, economy, ecology, energy and housing and communal services, banks, representatives of the Social-Entrepreneurship Corporation and local authorities. Once the regional government of Pavlodar approves the final design of the financial support scheme, the project will begin implementation in 2023.

### **Assessments to Inform a Roadmap for Gradual Coal Phase-out**

Within the context of development of the Carbon Neutrality Strategy until 2060, PAGE is conducting two assessments, one on the risks and opportunities for the gradual phase-out of coal and the second on the risks and opportunities for a just transition, that will form part of a roadmap for gradual coal phase-out. The assessments are conducted in cooperation with the UNDP Country Office, the Resident Coordinator’s Office and PAGE’s Green Team experts.

The assessment of risk and opportunities for coal phase out in Kazakhstan aims to identify the best options for reducing the use of coal capacities and the necessary levels of gas capacities (as an interim energy source) to support the transition to a low-carbon economy in the country. This activity started in 2022 and will be completed by mid-2023.

The assessment of the risk and opportunities for a just transition aims to assess the fair distribution of climate “goods” (such as new decent jobs and living conditions, cleaner air) and climate “bads” (such as higher costs associated with decarbonization and job losses in certain sectors and places) in the Republic of Kazakhstan, focusing on the “how” approach. This activity started in 2022 and will be completed by mid-2023.

### **Reform on Sustainable Public Procurement Guidelines**

Consultations and workshops started in 2022 to support the Government of Kazakhstan with the implementation of a revision of the Sustainable Public Procurement (SPP) guidelines. Upon the request of the Head of UNEP Sub-regional Office for Central Asia, three bilateral meetings were held with the Vice-Ministers of Finance and Ecology as well as with UNRC to discuss cooperation and next steps of the SPP revision. PAGE organized dialogues to provide technical guidance to key stakeholders, including meetings on SPP standards with representatives of the Ministries of Finance, Economy and Ecology. Bilateral consultations were held on 18 May with the Deputy of the Parliament of Kazakhstan, representatives of the Institute of Parliamentarism and the NGO “Ecojer” on the SPP reform in the country.

The consultations revealed some key barriers for the introduction of sustainability criteria according to international standards into the SPP legislation. The first draft of the SPP market readiness assessment and the prioritization report were delivered to the Government of Kazakhstan in July 2022.

### **Building institutional and individual capacity (Outcome 3):**

#### **Green Economy Learning Needs Assessment**

In 2022, PAGE completed a [Green Economy Learning Needs assessment](#) for representatives of local and national governments as part of a larger collaboration with the Academy of Public Administration (APA). Based on its findings, APA plans to build its own capacities to deliver training on IGE more systematically, including integrating IGE into standard training programmes for officials. This should lead to the development and delivery of training for civil servants on sustainable development and green economy in future programming. Based on the results of the needs assessment, the APA distilled short, medium and long-term recommendations to guide the provision of training to civil servants.

#### **Training Workshop on Sustainable Public Procurement**

The first draft of the SPP Market Readiness Assessment and the Prioritization Report were delivered to the Government of Kazakhstan in July 2022. These findings were presented at [a training workshop on the practical application of Sustainable Public Procurement \(SPP\)](#) on 8 November in partnership with UNEP Sub-regional Office for Central Asia, the OSCE Programme Office in Astana and the Kazakhstani Association of Regional Environmental Initiatives. 75 public procurement decision-makers, international and national experts participated in-person and online to learn from the experiences of other countries in Asia and Europe. Participants learned about the criteria for prioritization in SPP and market readiness reports. They also received the preliminary conclusions drawn from a SPP sectoral legal analysis which will inform SPP sectoral legislation, for which the draft legal concept will be developed by the Ministry in 2023. UNEP's PAGE representative was invited to join the Working Group on Public Procurement in Kazakhstan.

#### **Strengthening National Capacities to Assess CBAM Impact**

As part of the collaboration with ERI for the update of the Green Economy Concept and the CBAM impact assessment, a modelling training session took place on 22 June, led by the international experts engaged in the modelling process to develop the institutional capacities at the national level to conduct economic modelling using various techniques. The face-to-face training with 22 participants targeted the EU-CBAM impact on Kazakhstan's economy. During the training, consultants shared the findings of the study and provided training to the participants on how to use the tool specifically developed for CBAM impact assessments. The training workshop was attended by representatives of MEGNR, Ministry of National Economy, research institutions, industrial companies, NGO's and independent experts.

## 1.16 Barbados

### Country context and PAGE portfolio

Barbados ranks among the highest in the Caribbean Small Island Developing States (SIDS) region according to the 2019 Human Development Index. With a diversified, serviced-based economy buttressed by the tourism and international business sectors, Barbados has successfully employed a blend of good governance, social and economic policies for the betterment of its citizens. However, the negative effects of recent global financial and economic crises, its dependency on imported fossil fuels, and constant changes in international development and financial policies, have placed pressure on the country's economy, society and environment. Limited access to natural resources, coupled with its vulnerability to climate change as a Small Island Developing State, underlines the importance of building a resilient economy and achieving an integrated ecological, economic and social wellbeing.

Recognizing these challenges, the Government of Barbados has continued to make strong policies and commitments to sustainable development through social compacts with the private sector and trade unions, and strategic frameworks, such as the National Sustainable Development Policy, the National Strategic Plan (2006-2025) (NSP) and the 2007 Green Economy policy framework. The NSP provides a framework for Barbados to become a fully developed society that is prosperous, socially just and globally competitive. With six strategic goals, the Plan speaks specifically of "Building a Green Economy: Strengthening the Physical Infrastructure and Preserving the Environment" (under the Strategic Plan's Goal 4).

Barbados joined PAGE in 2016 with a focus on the implementation of the NSP and other green economy objectives that build on previous work conducted by UNEP in 2010-2012. After an inception mission in 2017, the commencement of a comprehensive PAGE programme was delayed by several factors beyond the control of the partnership. General elections held in 2018 led to a change in administration and the need to reconfirm national priorities. PAGE's relevance to national objectives was reconfirmed with the request to incorporate blue economy principles. The endorsement for PAGE to start its programme was provided in September 2019, confirming key thematic areas such as green and blue jobs assessment, youth engagement, environmental goods and services, greening/resource efficiency in industry, and individual and institutional capacity building for IGE at the tertiary levels.

**PAGE activities in Barbados are expected to contribute to the achievement of SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 17 (Partnerships).**

In 2020, with the COVID-19 pandemic and related impacts on travel and supply chains, the tourism sector in Barbados was devastated, resulting in high unemployment rates. Against this background, in September 2020, the government announced a one-year USD 40 million COVID-19 relief programme and a USD 300 million stimulus package. Key areas of focus include tourism, agriculture, infrastructure, manufacturing, support to MSMEs and home ownership. In line with this, PAGE developed targeted activities in 202 that focused on boosting the circular economy and promoting green consumption and production practices to support green economic recovery.

Despite changes in the administration, the identification of an IGE as a development priority has remained. Specifically, the current administration has been articulating its commitment to IGE in the context of a “Blue Economy”. Over the course of 2022, PAGE Barbados discussed with the government priorities for supporting its blue-green economy ambitions through partnerships with national institutions, as well as through regional knowledge transfer and capacity building activities.

## Progress in 2022

### Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

#### **Feasibility Study for the Establishment of a SIDS-SIDS Knowledge Transfer Hub**

Under the Green-Blue Economy Learning (G-Bel) Programme, the University of West Indies (UWI Cave Hill) completed a feasibility study for the establishment of a SIDS-SIDS Green Economy Knowledge Hub. The Hub is intended as a long-term delivery mechanism for the G-BEL, to (1) develop and share knowledge on the topic of blue and green economy, (2) provide training for target audiences, and (3) organize SIDS-SIDS country exchanges and thematic workshops. The Global Environment Facility (GEF) approved funding for the UWI Cave Hill’s proposal for the “Demonstration of a Caribbean Mechanism Toward Establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer”.

UWI Cave Hill, in its capacity as the Technical Backstopping Entity for the PAGE Barbados Programme, completed a GEF project proposal “Demonstration of a Caribbean Mechanism Toward Establishment of a SIDS-SIDS Green-Blue Economy Knowledge Transfer Hub” for consideration by GEF. The proposal has been accepted for the development of a medium-sized project, in support of the establishment of the SIDS-SIDS Green-Blue Knowledge Transfer Hub (currently under preparation).

#### **Climate-resilient Development Opportunities of Dayboat Fishery**

PAGE (UNIDO), together with the Ministry of Environment and National Beautification, Green and Blue Economy, Fisheries Division, started a dayboat fishery and value chain analysis to identify climate-resilient livelihood development opportunities for the sector’s future development. The assessment analyses various elements of the dayboat fishery to outline policy reforms in addition to technology and investment needs.

### Building institutional and individual capacity (Outcome 3):

#### **Need for Promotion of Green Economy Learning for Key Stakeholders**

In 2022, PAGE (UNITAR) supported the University of West Indies Cave Hill to complete a Green and Blue Economy Learning Needs Assessment associated with current and emerging priorities for the Green-Blue Economy Learning Programme. A systematic, inclusive and iterative approach assessed demand for green economy learning, existing capacities and gaps to supply training and teaching.



The assessment recommends improving and promoting green economy learning for key stakeholders through:

- Annual professional exchanges for policy officials to discuss emerging contemporary green and blue economy issues;
- “Green Economy Professional Development Seminars”, initiated through the proposed SIDS-SIDS Green Economy Knowledge Transfer Hub;
- Certificate-based short courses for professional postgraduate and non-postgraduate diploma programmes on inclusive green economy topics tailored to the SIDS context;
- A certificate programme for “Professional Policy Skills Development” relevant to SIDS green economic transition; and
- A “Professional Seminar Series for Green and Blue Economy Practitioners in SIDS” to address general upskilling needs in priority areas.

### Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):

#### Youth Climate Action Summit and Expo

Youth advocates and young leaders in Barbados and the Eastern Caribbean are collectively raising their voices to accelerate climate action in the region. PAGE (led by UNEP and through UNDP fund) partnered with the Ministry of Environment, National Beautification, Blue and Green Economy for Barbados and a climate-focused youth organizations (Ashley Lashley Foundation) to host a two-day Youth Climate Action Summit and Expo. This initiative was launched with the aim of meaningfully engaging the youth of Barbados to be part of the climate change dialogue as well as developing a framework for youth-climate action.

The Summit and Expo featured a series of panel discussions and dialogues, which included local youth advocates and activists in a hybrid format to facilitate the participation. It also included an exhibition that highlighted the work of national organizations and international agencies in demonstrating their work to reduce climate impacts and drive the 5R’s climate related technology solutions.

## 1.17 Guatemala

### Country context and PAGE portfolio

Guatemala is the largest economy in Central America. Despite relatively high economic growth during the last decade, progress in inequality or poverty reduction has been limited. The country’s national income depends largely on the agricultural sector, the export of a few commodities and remittances from Guatemalans overseas. It is also vulnerable to climate change and extreme weather conditions and faces persistent challenges around the loss of natural resources, deforestation, increased soil and water pollution, and growing waste levels. These natural environmental challenges also carry significant socio-economic consequences, compounding vulnerability and exclusion.

In recent years, Guatemala took steps to promote the greening of its economy through the deployment of its Environmental Fiscal Strategy the Ministry of Public Finance. The strategy envisages a set of fiscal instruments to improve pricing of environmentally harmful economic activities, thus supporting national climate change and sustainability objectives.

Led by the Ministry of Public Finance and endorsed by other ministries and national stakeholders, Guatemala joined PAGE in 2018 with the objective of reformulating economic policies around sustainability to support social inclusion, green jobs and green growth. However, towards the end of 2018, the Ministry of Public Finance was restructured, which was followed by general elections in 2019, with a new President assuming office in January 2020. While changes in the national government led to an extension of the inception phase for PAGE, efforts in 2021 were focused on completing a national green economy stocktaking study, identifying priorities, and supporting the implementation of the Environmental Fiscal Strategy.

In 2020, the outbreak of the COVID-19 pandemic further delayed the initiation of the PAGE programme in Guatemala which went into a six-month long lockdown. Within this context, Guatemala's Economic Recovery Plan, focused on job creation and strategic investments, was launched at the end of 2020. To promote a green recovery, PAGE developed a proposal to strengthen sustainability objectives within existing policy frameworks such as the Strategy for Strengthening Value Chains, the Low Emissions Development Strategy, the Environmental Fiscal Strategy and the above-mentioned recovery plan.

**PAGE's work in Guatemala aims to contribute towards the achievement of several SDGs, including SDGs 12 (Responsible Consumption and Production), 13 (Climate Action), 15 (Life on Land) and 17 (Partnerships for the Goals).**

Recent tropical storms have highly affected the overall productivity of the country as important public infrastructure was destroyed. Repeated incidence of natural disasters led the government to ratify a State of Public Calamity in June 2022. Within this framework, the National Congress approved an amendment to the national budget to provide an emergency fund to mitigate damages caused by natural disasters. Additionally, the Guatemalan society is facing an increasing cost of living as a collateral impact of the Russia-Ukraine conflict. Elections will be held in 2023, which might slow down policy processes further.

Despite those challenges, PAGE Guatemala was launched in 2022 with the objective to develop green fiscal policies and to support national and international processes, such as the SDGs and the country's Nationally Determined Contribution. Green economy has been recognized by Guatemala as a tool to achieve sustainable development and it is included in the General Policy of the Government. During the inception phase, the partnership focussed on supporting the implementation of sectoral and thematic IGE policies including sustainable public procurement policies and green jobs.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Building the Foundation for Green Economy Support in Guatemala**

PAGE Launch Event: The Ministry of Public Finance, under the framework of the Environmental Fiscal Strategy, officially launched PAGE in Guatemala. The Ministry of Economy, in charge of coordinating the Plan for Economic Recovery, and the Ministry of Environment and Natural Resources will support the implementation of the programme.

The Vice-Minister of Revenue and Fiscal Evaluation highlighted that this alliance will enable the formulation of sustainable economic policies and practices that promote environmentally friendly development, reduce inequality and generate income and employment opportunities in alignment with the SDGs.

PAGE's objectives in the country include developing green fiscal policies, ensuring a just transition that leaves no one behind, and supporting important national and international processes, such as the SDGs and the country's Nationally Determined Contribution. Green economy has been recognized by Guatemala as a tool to achieve sustainable development and it has been included in the General Policy of the Government.

Establishment of National Steering Committee (NSC): A NSC was established in March 2022 when a first meeting was held with the representation of government counterparts, PAGE agencies and UNRC. On 13 December 2022, a second meeting was held in accordance with the mandate of the NSC. A newsletter for PAGE Guatemala was initiated and a first edition was released in 2022.

### **Inputs to the National Determined Commitment (NDC) Updates on Just Transition**

PAGE, led by ILO, has worked on suggestions to incorporate just transition approaches as part of the NDC update. A report "Analysis of opportunities for just transition and green jobs in Guatemala" was prepared, which aims to assess the potential for green jobs and just transition in the economic sectors of Guatemala, according to the country's NDC, proposing entry points that facilitate a just and inclusive transition. The sectors were defined based on the ILO methodology, identifying those where there is a need to guarantee a transition towards environmental sustainability, economic development and social inclusion. A dialogue session with stakeholders was held in October 2022 to discuss and validate the methodology and structure. The report will be presented in 2023.

### **First National Dialogue on Circular Economy and Green Industry**

The [first national dialogue on circular economy and green industry](#) was held on 23 June 2022 in Guatemala with more than 120 participants. The discussion, jointly organized by PAGE (UNIDO) and the Ministries of Finance, of Economy, and of Environment, featured interventions from representatives of the public, private and academic sectors, who shared their perspectives on the progress and challenges of introducing circularity in industrial processes in Guatemala. The dialogue served as input for the upcoming review and update of the National Cleaner Production Policy.

## **Supporting implementation of sectoral and thematic IGE policies (Outcome 2):**

### **Advancing Sustainable Public Procurement Policies in Guatemala**

As part of the Inter-institutional Roundtable of the Fiscal Environmental Strategy, initial consultations were held with government institutions involved in Sustainable Public Procurement (SPP), including the presentation of a roadmap for a national SPP policy.

With the support of PAGE, Guatemala aims to introduce more SPP practices to open the markets for green business. In this context, PAGE (UNEP) is supporting the Ministry of Finance, the Ministry of Natural Resources and other government institutions to identify the most important products procured by government institutions between 2018 and 2022. The products have been prioritized considering environmental, social and economic aspects, leading to a list of actions for advancing SPP policies in Guatemala. The prioritized products were bond paper, light vehicles, single-use plastic and electronic or electrical equipment.

PAGE (UNDP) is also leading the development of terms of references (TORs) in collaboration with the Ministry of Public Finance and the Ministry of Environment and Natural Resources to produce guidance, design fiscal instruments and to deliver technical assistance to municipalities. The intended outcomes of this work include:

- Implementing evidence-based sectoral and thematic reforms in line with national IGE priorities through the development of methodological guidelines to monitor the quality of environmental expenditures;
- Providing technical assistance for municipalities to prioritize environmental investments in their budget formulation based on a budgeting-for-results approach; and
- Developing a set of fiscal instruments to facilitate access to green and climate finance.

The teams responsible for achieving the above outcomes are currently being recruited and the process is expected to be completed in 2023.

### **Analysis of Green Jobs in the Cacao and Tourism Sectors**

In October 2022, PAGE, led by ILO, supported the organization of a national stakeholders' dialogue who discussed the methodology and structure of an analysis of green jobs in the cacao and tourism sectors' value chains. The study aims to explore the employment potential through the promotion of tripartite social dialogue in the two value chains. It is expected to evaluate the potential for growth, profitability and the creation of business opportunities and green jobs, defining a work plan that includes detailed recommendations on possible intervention strategies and responsibilities of each of the actors involved in the implementation of actions for Guatemala's NDC compliance. A report is being prepared and will be discussed in 2023 to support the country in its efforts to green and create jobs in the cacao and tourism sectors.

## **1.18 India**

### **Country context and PAGE portfolio**

With one-sixth of the world population, India is the second most populous country in the world but has less than three per cent of global land surface area and is likely to face significant resource constraints in the near future. India's GDP and per capita income have been increasing for many decades. At the same time, the gap between consumption and supply of resources is also steadily increasing along with exacerbation of environmental challenges such as climate variability, poor air quality, over-exploitation of groundwater, water scarcity, increasing inland and coast salinity and degradation of land.

Against this background, India is taking proactive steps which would contribute to inclusive, green economic growth across different sectors of the economy. The Government of India has already made concerted efforts to support the achievement of the SDGs and its Nationally Determined Contribution (NDC) and has shifted from focusing on select initiatives to embracing large-scale, integrated economy-wide approaches, including resource efficiency, circular economy and sustainable consumption and production. In line with this ambition, India has developed several policies, programmes and action plans, including, among others, a National Resource Efficiency Policy (NREP), sectoral action plans on circular economy, a National Policy on Biofuels, Vehicle Scrapping Policy, national and subnational plans for climate change, and a Smart Cities Mission. At the subnational level, various states are moving towards a low carbon climate resilient pathway.

When India joined PAGE in 2018 under the leadership of the Ministry of Environment, Forest and Climate Change (MoEFCC), a national green economy stocktaking and prioritization exercise helped to define resource efficiency as the main entry point for PAGE support. At the sectoral and thematic level, the focus was set on circular economy, eco-labelling, green manufacturing and sustainable public procurement, working with NITI Aayog (National Institution for Transforming India), MoEFCC, the Ministries of Textiles and Finance respectively. PAGE in India specifically aims to develop replicable models and enhance cooperation on initiatives between national and subnational levels, (States of Madhya Pradesh and Uttarakhand). This is complemented by a comprehensive capacity building effort on green economy, targeting officials of Indian Civil Services and other specialized services, such as the Indian Railways.

In 2020, the COVID-19 pandemic caused GDP to fall by 7.9 per cent, hitting the informal sector particularly hard and leading to a severe socio-economic and health crisis. However, a variety of measures implemented since 2020 to support recovery from COVID-19 under the so called “Atmanirbhar Mission” for a self-reliant India, amounting to investments of 15 per cent of India’s GDP, helped to set back the national economy on a growth trajectory with prospects of double-digit GDP growth rates in the coming years, according to the International Monetary Fund. In line with the earlier policy approach, the country aims to ensure that this economic growth is low carbon, resilient, inclusive, just, green and sustainable. To expedite the transition to a circular economy, the government formed 11 committees that will recommend action points on circular economy in different areas.

India’s G20 presidency in 2023 provides another opportunity to push circular and green economy. For the first time, the G20 has identified sustainable and responsible consumption and production, along with the provision of finance and technology, as critical enablers for achieving the climate goals. Circular economy is one of the priority themes in the Environment and Climate Sustainability Working Group (ECSWG) of the presidency.

**PAGE activities in India are contributing towards the achievement of SDGs 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action) and 17 (Partnerships for the Goals).**

With an increased national impetus on environmental security, sustainable consumption and production, resource efficiency and a circular economy, India is demonstrating its enhancement on advancing towards a green economy and mainstreaming sustainability across sectors. The Government of India has drafted various policies in alignment with the principles of circular economy, such as the Steel Scrap Recycling Policy and the National Automobile Scrappage Policy. The government is preparing action plans on circular economy, focusing on eleven areas that include end-of-life products, recyclable materials and others. The Ministry of Earth Sciences (MoES) has drafted a blue economy policy to enhance blue economy contribution to India’s GDP, improve lives of coastal communities, preserve marine biodiversity and maintain the national security of marine areas and resources. District level initiatives on circular economy are also advancing. For the first time, one of India’s mining districts aims to develop a road map on circular economy at the local level. In October 2022, the Prime Minister of India launched Mission LiFE (Lifestyles for Environment). Mission LiFE is a global movement based on three principles: fostering behaviour towards responsible consumption (demand), enabling markets to respond swiftly to changing needs (supply) and encouraging government and industrial policy to support these initiatives.



## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **Integrating Principles of Inclusive Green Economy in Development Planning**

PAGE established a partnership with the Ministry of Rural Development (MoRD) to develop a policy approach and a timebound strategy to integrate principles of environmental sustainability and IGE in local level development planning. In collaboration with the MoRD, a hybrid stakeholder consultation was organized on 8 December 2022, which resulted in collected inputs on relevant ongoing work and best practices for green and sustainable rural development and suggestions on priority areas to be included in a policy approach for “integrating principles of environmental sustainability and inclusive green economy in rural development planning (Gram Panchayat Development Plans (GPDs), Village Poverty Reduction Plans (VPRs) and e-governance systems (e-gram Swarajya)”.

The consultation was attended by representatives from MoRD, UN agencies (UNEP, ILO, UNDP and UNICEF), UNRCO, bilateral organizations such as GIZ, workers’ associations, think tanks and technical experts.

#### **Integration of IGE Principles into Existing Policies in two States of India**

PAGE (UNDP) has developed a workplan in consultation with the government counterparts in the States of Madhya Pradesh and Uttarakhand to support specific pilot actions for integrating IGE principles in their existing policies and programmes (with a focus on SDG 11 and 13). These workplans have been endorsed by respective government counterparts in both states, and shared with the Ministry of Environment, Forest and Climate Change in November 2022 for Madhya Pradesh and in January 2023 for Uttarakhand.

### Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

#### **Centre of Excellence on Circularity**

PAGE (UNITAR and UNEP) is developing a framework for the Ministry of Environment, Forest and Climate Change to establish a Centre of Excellence on Circularity in India. The centre will provide a range of analytical, policy design, training and advocacy services for establishing and upscaling circular economy models across sectors. The work of the centre is expected to contribute to aligning India’s economic policies and investments with SDG 12 and the country’s 2070 net zero target. Specific services will be defined based on national priorities, market demand and stakeholder consultations.

In 2022, a reference group was established to provide guidance at each stage in the development of the framework, which consists of government representatives, academic institutions, NGOs and international science-based institutions, as well as the EU and GIZ. Stakeholder consultations informed a draft governance framework, financing plan and marketing plan which will be presented to the Ministry of Environment, Forest and Climate Change in 2023.

#### **Roadmap on Circular Economy in Angul District**

To further advance circular economy at local level, UNEP provided advisory support under PAGE as a co-chair of a local task force on circular economy and resource efficiency in India. Thereafter the Angul District, one of the mining Districts of Eastern India, has announced its plans to develop a roadmap on circular economy/resource efficiency.

### **Policy Readiness Assessment to Create Green Jobs and Ensure a Just Transition**

An assessment was conducted by ILO to understand India's policy readiness to create green jobs and ensure a just transition, with a specific focus on the energy sector. The assessment has included extensive secondary research of greening and employment policies in India, followed by a series of 15 virtual and in-person consultations with relevant stakeholders from government agencies, employers' organizations, workers' organizations, and civil society partners. A draft research note has been developed, to be finalized after the tripartite validation with ILO constituents planned in March 2023.

Another assessment is being conducted by ILO to identify green jobs and decent work opportunities in the Textile and Apparel (T&A) sector in Jharkhand state, one of the regions with highest prevalence of coal mining (and which is undergoing large-scale coal mine closures). A detailed desk study has been undertaken on the policies and plans of Jharkhand state, and how they integrate greening into development plans for the T&A sector. Further, a series of about 10 stakeholder interviews has been conducted through a field mission to Jharkhand. A draft research note on the case study in Jharkhand is being developed and will be finalized after the tripartite validation with ILO constituents to be conducted in March 2023 (jointly with the policy readiness assessment).

### **Mobilizing Inclusive Green Economy in the Manufacturing Industry**

In 2022, PAGE (UNIDO) redrafted the 2021 draft Baseline Assessment Report of Inclusive Green Economy in Manufacturing as a "review of policy issues and challenges", following the expansion of the analysis to incorporate industrial statistics, practical experience and further stakeholder input. This revised version provides an assessment of the manufacturing sector in India (in terms of its contributions to the economy, society, environment and the SDGs) and elaborates on key green strategies for manufacturing. It also emphasizes the role of manufacturing companies as agents of IGE transformation. Moreover, it highlights the need for future manufacturing visions and roadmaps with mid to long-term horizons, to drive innovation and investments towards clean technology and business model solutions.

A draft of the report was discussed in a policy dialogue jointly organized by UNIDO and ILO on 10 November upon a request from the NSC and in the presence of participants from employers' and employees' organizations and knowledge institutions. The policy dialogue "[Unlocking inclusive and green manufacturing growth and diversification in India](#)" reflected upon the present status and prospects of inclusive and green manufacturing in India and validate key issues and opportunities that can shape and accelerate the desired transformation. It involved Secretaries from the Ministry of Environment, the Ministry of Industry, the Ministry of Micro, Small, and Medium Enterprises, the Ministry of Labour and Employment, and the Ministry of Textiles.

These assessments will provide the basis for a transformative roadmap to promote inclusive and green manufacturing in India, with a focus on the textiles and garments sector, in alignment with the objectives of the Atmanirbhar Bharat Mission (mission for a self-reliant India), the National Textile Policy, India's Nationally Determined Contribution, and its net zero target by 2070, as well as enabling frameworks such as eco-labelling and Sustainable Public Procurement.

PAGE presented the key findings from an assessment on green manufacturing opportunities in India, a policy readiness assessment on a just green jobs transition (energy as well as textile and apparel sectors), and an analysis on technology and innovation for sustainable and circular textile and apparel value chains in India.

### **Innovation Roadmap for the Textile and Garments Sector**

PAGE (UNIDO) undertook the preparatory work towards the development of a technology and innovation roadmap for the textile and garments sector. It initiated consultations with the Ministry of Textiles and served, amongst others, as a key resource for the Ministry's stakeholders' consultation on sustainability in the textile value chain in India (hosted on World Cotton Day, 7 October 2022). Through subsequent consultations, PAGE prepared a specific proposal for roadmap development, aligned with both climate and sustainability imperatives as well as the objectives for the centenary of the independence of India (India@100 in 2047). The Ministry has endorsed the roadmap development process.

### **Workshop on Sustainable Public Procurement**

The two sectoral market assessment reports on Sustainable Public Procurement (SPP) for Writing and Printing Paper and Green Room Air Conditioners were updated (by UNEP MAU) based on the recommendations of the national task force on SPP. They were then submitted to the Ministry of Finance and presented at a national workshop on SPP, jointly organized by PAGE (UNEP) and the Ministry of Finance on 10 June 2022. The objective of the workshop was to get the industry and experts' perspective on the proposed SPP recommendations and criteria and to identify the way forward for implementation. The UN Resident Coordinator in India and representatives from EU, GIZ and other key stakeholders from the government and industry joined the workshop.

### **Strengthening Ecolabelling for Specific Product Categories**

To support the Ministry of Environment, Forest and Climate Change in strengthening the ecolabelling framework and more specifically the eco-mark scheme, PAGE supported the development of an analytical report covering the review and analysis of global and national ecolabels, including markets drivers, categories and criteria, and review process. The report also enlists the benefits of an ecolabel in the Indian market and its implications on international trade, as well as the recommendations for strengthening the eco-mark scheme based on national and global practices.

An in-depth study of eco-labelling criteria was also conducted, providing recommendations for developing and strengthening ecolabels for specific product categories such as textiles, paper, wood substitutes, electrical and electronic goods, indoor paints, cement, and steel. The findings of the reports were presented to the Ministry of Environment, Forest, and Climate Change and to other key stakeholders in three rounds of consultations. Each consultation was attended by technical experts and government line departments.

### **PAGE-BIOFIN Collaboration to Advance Innovative Green Finance Solutions**

Synergies between PAGE and BIOFIN as a UNDP special project, continue to be leveraged to advance green finance solutions in India. To develop an implementation framework to increase finance allocated through the fair and equitable benefit sharing of revenue from genetic resources, a webinar series on Biodiversity and the Biological Diversity Act was held with leading experts and practitioners. Based on these discussions, the Quality Council of India (QCI) initiated the design of a Voluntary Certification Scheme for Incentivisation of Access and Benefit Sharing (VCS-I-ABS), which was approved in June 2022 by the Ministry of Environment, Forest and Climate Change. Stakeholder consultations were held to explore the role of technologies such as blockchain to improve compliance and to ensure financial flows.

## Building institutional and individual capacity (Outcome 3):

### Green Economy Learning Assessments (GELA) at Local Level

PAGE is supporting two Indian states, Madhya Pradesh and Uttarakhand, for strengthening the actions to mainstream IGE principles in urban sector through capacity building of stakeholders in urban development sector, especially officials of the urban local bodies. In 2022, UNITAR and UNDP finalized a learning needs assessment in for the states focusing on the capacities of municipal local officials. Extensive green economy learning needs assessments were conducted in three cities (Ujjain, Sagar and Satna) in Madhya Pradesh and two cities (Dehradun and Nainital) in Uttarakhand.

The assessment identified key gaps in competencies for different levels of stakeholders, in addition to the learning institutions which could provide trainings to these stakeholders on smart urban management, based on the principles of IGE. Based on the GELA results, a multipronged strategy has been recommended for building capacities on IGE at three broad levels (agenda setting, organizational and operational level). As a next step, a tailored training package for municipal officials was prepared for three different stakeholder groups (high-level officials, urban managers, and technical staff). A training of trainers was also prepared to ensure the package can be delivered to municipalities in both states on a continuous basis. The piloting of the training package will take place in the second quarter of 2023.

## Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):

A National Youth Vote is being designed to provide a unique lens on the country's IGE transition by engaging youth views on the future that they want through an innovative communication tool that measures changing values and consumption patterns/lifestyles choices. The central idea of the vote is aligned with the Global Mission on LiFE (Lifestyles for Environment) launched in November 2022.

## 1.19 Morocco

### Country context and PAGE portfolio

Located in North-western Africa, Morocco is a lower to middle income country with an important service and manufacturing sector and a high share of the population engaged in agricultural activities. Situated in one of the most arid areas of the world, the country is vulnerable to climate change and recent weather patterns, with highly variable rainfall and recurrent droughts, producing severe environmental, social and economic consequences. Faced with several challenges, including increases in energy and food prices, depletion of natural resources, high youth unemployment, growing social inequality and slowing GDP growth, Morocco recognized the importance of reframing economic policies around sustainable development.

Morocco's overall commitment to inclusive green economy transition is outlined in its 2017 National Strategy for Sustainable Development (SNDD) that aims to reconcile economic growth and promote social inclusion, protection and enhancement of the environment by 2030, as well as the New Development Model in 2021, that puts social equity and sustainability at the heart of all future government policies. Prior to PAGE, the Moroccan Government had already started to roll out several green economy activities that achieved significant results in the areas of renewable energy, energy efficiency, water and waste management, sustainable agriculture and aquaculture, and eco-tourism.

With Morocco officially joining PAGE in 2020 - initially with the Ministry of Industry, Trade and Green and Digital Economy, but then with the newly formed Ministry of Energy Transition and Sustainable Development as the government focal point - the launch of the programme coincided with the outbreak of the COVID-19 pandemic.

Morocco reacted quickly to the crisis, securing USD 12 billion for recovery to boost the economy with a focus on building national industry. In this context, the Economic Watch Committee (CVE) of Morocco formulated several recovery strategies with significant green potential. These include i) the industrial recovery plan 2021-2023, whose third pillar in particular aims to position Morocco as a low-carbon and circular industrial base, ii) the Pact for Economic Recovery and Employment, and iii) a set of sectoral recovery plans. These recovery plans complement other sectoral approaches with strong green economy dimensions, for example, the Industrial Acceleration Plan 2021-2025 (Plan d'Accélération Industrielle 2021-2025). PAGE's targeted green recovery efforts are in line with these policy documents and emphasize green recovery of key industries.

At the same time, the country has been undergoing a deep rethinking in its development approach. The New Development Model - a set of guiding frameworks for economic, social and environmental growth - initiated a national consultation process in 2019 that was completed in 2021. Additionally, after general elections in 2021, several ministries and agencies were reshaped to tackle new and emerging priorities, with a new Ministry for Energy Transition and Sustainable Development tasked with leading the development of green economy in Morocco and acting as the focal Ministry for PAGE. PAGE was therefore launched at an opportune time in Morocco, with green economy among the highest priorities. As such, PAGE is benefitting from an administrative "clean slate" that will encourage further cooperation, synergies and partnerships among PAGE partners and multiple national and international stakeholders.

A National Charter and a Framework Law on the Environment and Sustainable Development have been adopted to place all public policies within the framework of a national sustainable development strategy. In 2022, the new administration has set upon developing a set of specific measures for a transition of its economy towards a green economy in the context of sustainable development and to reinforce actions to be taken at the economic, social and environmental level. The scope of the Ministry of Energy Transition and Sustainable Development is transversal, thus centralizing efforts to effectively monitor and coordinate the green economy transition across all relevant sectors.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### Scoping Study on Inclusive Green Economy

PAGE supported the development of an IGE scoping study (Transition du Maroc vers une économie verte: état des lieux et inventaire), which identified five key sectors for a green economic transition, including sustainable agriculture and industry, renewable energy, water and sustainable waste management, as well as governance and green finance as cross-cutting themes, and launched a debate on the green transition among national stakeholders.



As part of the PAGE Morocco Green Scoping Study, a comprehensive evaluation of fundraising for green recovery was carried out. It included an analysis of past fundraising experiences in Morocco and abroad with a benchmarking of existing green financing initiatives, a mapping of donor interests and identification of priority areas and projects with funding opportunities. The preliminary findings of the study were discussed during a national stakeholder workshop in July 2022 and the study finalized in September 2022. It was presented during the first edition of the PAGE Green Crossroads Conference in November.

### **Green Crossroads Conference**

PAGE Morocco held the first edition of the Green Crossroads on 22-24 November in collaboration with the Ministry of Energy Transition and Sustainable Development, a 3-day national conference with over 300 participants taking part in workshops, roundtables, and presentations. The event was built around the results of the IGE scoping study to launch a debate with national stakeholders on the green transition. Under the theme “Green Economy in Morocco: Challenges and Opportunities”, the event brought together the main national partners, including members of the PAGE steering committee in Morocco, green economy actors from the institutional fields, the private sector, civil society, academia, as well as international technical and financial partners. The three-day event allowed to collect the suggestions of the different actors, disseminate the available data and analysis and foster synergies with other initiatives active in Morocco.

The conference included different thematic sessions focused on policy priorities (energy transition, waste and water management, plastic pollution, biodiversity and taxation and finance). The event succeeded in establishing a cross-sectoral platform for a national dialogue on green economy, the PAGE steering committee indicated that the conference was to be an annual event held by PAGE, that would gradually be taken over by the Ministry of Energy Transition and Sustainable Development as part of PAGE’s sustainability plan. As part of the event, PAGE organized two roundtables:

- **Roundtable on Sustainable Waste Management at Green Crossroads Conference:** PAGE (UNITAR together with UNIDO) organized a roundtable discussion on sustainable waste management on the development of a waste management capacity building programme, which is expected to commence in 2023. The session was attended by 66 participants and resulted in public, private and civil society stakeholders identifying priority sub-sectors for PAGE engagement and related capacity-building needs. The main recommendations focus on:
  - o Creating a steering entity to support the development of the waste sector by conducting a study presenting its potential functions, business model and financial structure, and a review of the institutional, regulatory and legal impacts;
  - o Conducting a study on the declination of the “Stratégie Nationale de Réduction et de Valorisation des Déchets” at the level of the principal regions of Morocco;
  - o Providing technical assistance to local authorities in terms of training and developing waste recovery projects;
  - o Supporting the analysis of the regulatory and normative framework (standardization of recycled products and waste recovery approaches);
  - o Supporting waste recovery projects through a study on the optimization of waste collection and treatment logistics in Morocco; and
  - o Supporting the establishment of an open dialogue with key stakeholders to identify barriers, opportunities and mechanisms for structuring and reducing informal activity in the waste sector, facilitated by PAGE.

- **Roundtable on Sustainable Water Management at Green Crossroads Conference:** PAGE (UNIDO) hosted a roundtable with the Morocco Coalition for Water and the Ministry of Equipment and Water on the importance of water governance, presenting the framework of a study to conduct a sectoral diagnostic and policy analysis on the improvement of inland waters and coastline governance for sustainable water resource management. The main recommendations are:
  - o To support the development of the water sector in Morocco by strengthening its governance;
  - o Support the revision of the texts governing the water sector to strengthen the position of the state in terms of control and supervision;
  - o Supporting the water sector through a feasibility study on the establishment of sectoral quotas and the design of new mechanisms for the valuation and pricing of water resources;
  - o Provide technical assistance and support for projects to strengthen sector transparency; and
  - o Support the Water Department staff in the definition and deployment of key training curricula.

### Supporting implementation of sectoral and thematic IGE policies (Outcome 2):

#### **Benchmarking Study on Clean Energy Production**

In collaboration with the Moroccan Agency for Solar Renewable Energies (MASEN), PAGE (UNDP) conducted stakeholder consultations and initiated a benchmarking study to support the institutionalization and operationalization of the Coalition for Sustainable Energy Access (CSEA), an initiative that aims to facilitate exchange of models and best practices on clean energy production and access, co-chaired by Morocco and Ethiopia and announced at UNFCCC Conference of the Parties (COP) 26.

The coalition will focus capacity building through an Expertise Programme and South-South Cooperation, by assisting in the development of bankable projects and of local industry, as well as by increasing exchanges between countries and different institutions/initiatives through matchmaking events. The approach for the establishment of CSEA was presented by MASEN during the PAGE supported Green Crossroads Conference in November 2022, alongside other new government strategies on renewable energy.

#### **Support for Green Fiscal Reform**

As part of the series of inter-agency training workshops on green finance and fiscal reform, a presentation on green fiscal reform was delivered by PAGE (UNEP) in Morocco on 18-19 January 2022. The presentation provided an overview of the role and tools of fiscal policies in the transition to the green economy, including green budgeting and reform of harmful subsidies, which served as a base for discussion during a working group session. In addition, during the Green Crossroads Conference, a half-day session was dedicated to green fiscal policies with a particular focus on sustainable budgeting.

#### **Study on Green Employment Creation and Entrepreneurship in the Organics and Agroecology Sectors**

In collaboration with the Ministry of Agriculture, the Ministry of Employment, bio-professionals, and the association of biological agriculture of the Rabat-Salé-Kenitra region, PAGE (ILO) developed [a study on green employment creation and entrepreneurship in the organics and agroecology sectors](#). The study analyses the economic growth and job creation potential of the sectors and the engagement of women and youth and helped define the required skills and gaps.

The expert team provided the common characteristics and differences between both sectors, including the impact on working conditions and companies, following an international benchmark. It also identified the needs for strengthening the skills of sector actors and provided practical recommendations for supporting the technical and vocational education and training system (TVET). The study, completed in May 2022, assists the government and the private sector in building individual and institutional capacities and reforming the sectors in line with national inclusive green economy priorities.

### **Inception Workshop on Green Hydrogen**

In 2022, PAGE (UNIDO) contributed to an inception workshop, hosted by the Ministry of Industry and Trade, to frame an upcoming green hydrogen feasibility study for Morocco supported by PAGE and assess the capacity and production needs of green hydrogen in the industrial sector. This follows the signing of a framework agreement between the Ministry of Energy Transition and Sustainable Development, the Ministry of Industry and Trade, and UNIDO in November 2022.

### **Building institutional and individual capacity (Outcome 3):**

#### **Foundational Training on Green Economy Response to COVID-19**

PAGE (UNITAR and UNIDO) conducted a two-day foundational training on Inclusive IGE in January 2022, with a focus on effective green economy responses to COVID-19. The training targeted representatives from the government, civil society and key industries, and provided participants with an understanding of the fundamental principles of IGE through discussions on the opportunities and challenges for a green economic recovery in Morocco and examples from other PAGE countries. 35 participants from national institutions participated in the training. PAGE is currently exploring partnerships with major training institutions to organize further training and policy dialogues.

#### **Promotion of Green Business Skills in Entrepreneurship Training Networks**

In line with Morocco's Generation Green 2020-2030 Strategy, which aims to create jobs through the promotion of sustainable agriculture and ecotourism, PAGE partnered with the ILO ProAgro project to promote green business skills in entrepreneurship training networks. A training of trainers (ToT) applying ILO's Start and Improve Your Business Programme (SIYB) took place from 14 to 25 February in Rabat and from 28 February to 11 March in Kenitra, targeting 35 participants from the National Agency for the Promotion of Employment and Skills and the Regional Center for Young Agricultural and Agro-Food Entrepreneurs. Since then, the newly trained SIYB trainers supported over 700 entrepreneurs and students in the Rabat-Sale-Kénitra region to develop their business ideas, to write create a business plan and to start a business, as well as in improving their skills in marketing, accounting, inventory management and human resources. The main beneficiaries were from the National Agency for the Promotion of Employment and Skills (ANAPEC) and the Regional Center for Young Agricultural and Food Entrepreneurs (CRJEA) of RSK.

### **Improving Access and Application of Knowledge for Advancing IGE (Outcome 4):**

#### **Sensitization for the Decarbonization of Agriculture and Agribusiness**

A 12-month programme on decarbonization of agriculture and agribusiness was launched in October 2022 by the ILO supported project "ProAgro", co-funded by PAGE and Morocco's University Mohammed VI Polytechnic (UM6P).

The programme combines a series of interventions on sensitization (seminars, workshops, podcasts), entrepreneurship and innovation, skills development (executive training and MOOC) and support to enterprises (development of a digital tool to assist enterprises in CO2 estimation and reduction). The first event, called "Agri Carbon Day", was organized on 22 November 2022 in Rabat, where 12 experts and companies shared their technical expertise and experiences with over 150 participants from policymakers, companies, researchers, think tanks and international organizations. This event was the first one of its kind in Morocco, focusing the discussion on the challenges and opportunities of decarbonization for the agriculture and agribusiness sector. A podcast on "Carbon et Agro-industrie" will be published on YouTube in early 2023.

### **Communication Strategy**

PAGE (UNIDO and UNDP) developed a communication strategy and plan for PAGE in Morocco. The strategy will help to ensure that PAGE Morocco meets and maintains a good audience at the national level, while also systematically informing stakeholders and the public on IGE concepts. A communication consultant was hired and a communication company was subcontracted to develop specific communication products that are aligned with PAGE's communication strategy. One of the main outcomes of the communication strategy, that identified poor communication between key institutions and lack of cross-sectoral platforms discussing green economy issues at a macro level, was to develop the PAGE Green Crossroads conference concept, which proved successful in its first deployment.

## **1.20 Thailand**

### **Country context and PAGE portfolio**

As a dynamic and emerging market economy, Thailand has recorded robust growth in recent decades, but this has come at a high environmental cost. The country's natural resources and environmental quality are deteriorating, including the depletion of forests, reduction of soil fertility, and loss of biodiversity. High plastic and air pollution, inadequate treatment of hazardous and non-hazardous waste, and water pollution are also affecting the quality of life and resulting in economic costs. Unsustainable production and consumption patterns from the industrial sector, which accounts for almost 40 per cent of the country's GDP, is a key source of many of these environmental issues.

Simultaneously, the implementation of the Sustainable Development Goals is a priority focus of Thailand. The country has embraced green economy principles under its "Sufficiency Economy Philosophy", which incorporates a green growth development model. This model is deep-rooted in the National Strategy (2018-2037) that acts as an overarching guide for national development and a framework for international cooperation. Green economy and green growth lie at the cornerstone of the strategy to reach high-income status within 20 years, while keeping environmental considerations at the forefront. The 12th National Economic and Social Development Plan (NESDP) 2017-2021 envisions prosperity, sustainability, and happiness while simultaneously promoting the SDGs' implementation and climate change commitments under the NDC. This provided the initial entry point for PAGE when Thailand joined PAGE in 2020. In addition, the government put forward the Bio-Circular-Green Economy (B-C-G model) business model to promote sustainable growth that is environmentally friendly and socially inclusive.

**Thailand plans to contribute towards the Bio-Circular-Green economic model, green jobs, capacity for green economy, energy transition, digitalization and financing the green economy transition, with a focus on SDGs 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production) and 13 (Climate Action).**

The government is committed to “build back better” after the COVID-19 pandemic. In support of this commitment, PAGE is evaluating key projects of the government's 400-Billion-Baht Economic and Social Rehabilitation Fund for developing a policy strategy to guide their greening, using insights from the most affected sectors of the economy.

Additionally, with the current NESDP ending in 2021, the National Economic and Social Development Council (NESDC) developed the 13th NESDP implemented in 2022-2026. PAGE’s work on conducting a green economy stocktaking study supported the NESDC, as a focal point of the PAGE programme in Thailand, in this process by exploring the gaps and necessary drivers to expedite the implementation of Thailand’s existing green economy principles.

PAGE Thailand was officially launched in 2022. The Deputy Prime Minister and Minister of Energy presided over the opening ceremony, which was hosted by the Office of the National Economic and Social Development Council and UNIDO. The programme will target five areas contributing to an inclusive green economy: 1) reduction of carbon emissions and pollution, 2) promotion of energy and resource efficiency, 3) biodiversity and ecosystem conservation, 4) decent job creation, and 5) a just transition creating prosperity for all. These actions are critical for addressing poverty, social inequality and environmental degradation while promoting economic growth that is environmentally-friendly and socially just.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### **PAGE Launch Event**

The PAGE programme in Thailand was officially launched in November 2022. The Deputy Prime Minister and Minister of Energy presided over the opening ceremony, which was hosted by the Office of the National Economic and Social Development Council and UNIDO. The event brought together more than 300 stakeholders, both in person and online, including policymakers, researchers, investors and other key actors from the government, private sector, academia, think-tanks, social organizations, press and media.

A Green Economy Stocktaking study was finalized in 2022 analysing major gaps for a green economic transformation and identifying entry points and recommendations for the PAGE programme Thailand (study still undergoing final English editing).

The NSC was established on 8 March 2022 and the first NSC meeting was held online on 8 April 2022. The PAGE workplan 2022 was officially approved and the 3 sub-committees to support the workplan 2022 were agreed upon. The second NSC meeting was held online in October 2022.



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### **Impact Evaluation of Thailand's Economic and Social Recovery Projects**

To support a green recovery, PAGE (UNIDO and UNDP) conducted an impact evaluation of Thailand's economic and social recovery projects funded under the government's 400 billion Baht Rehabilitation Fund, linking to SDGs, Thailand's NDCs, and the bio-circular green economic model, in collaboration with the National Institute of Development Administration. Both qualitative and quantitative approaches were used in the data analysis, following five dimensions of criteria addressing the project cycle process, outputs/outcomes, and impacts: (1) relevance/coherence, (2) efficiency, (3) effectiveness, (4) Impacts, and (5) sustainability.

Onsite surveys and interviews at the six-project locations were conducted from August to October 2022, where an evaluation report with technical guidance and policy recommendations was prepared based on the site survey and quantitative data analysis using multiple criteria decision analysis and cost benefit evaluation. The report was shared with the relevant government agencies and stakeholders during a national consultation workshop and a public discourse held on 28 November 2022. The consultation workshop was attended by national and local governments, education organizations, research institutions, farmers, enterprises, community groups, project beneficiaries, craftsmen and weavers, NGOs and the media.

### **Policy briefs on Green Recovery and SCP Hotspot Analysis**

To complement the work on evaluating the government's economic and social recovery projects along economic, social and environmental dimensions. A policy brief of the state of green recovery was completed in 2022 to evaluate priorities for policy efforts for a green recovery.

## **Supporting the implementation of sectoral and thematic IGE policies (Outcome 2):**

### **Macroeconomic Analysis of Decarbonization Policies**

Supported by the experts of the Green TEAM, PAGE is collaborating with UNESCAP and the UNRCO-Thailand in a macro economic analysis focusing on decarbonization policies including a potential carbon cap and trade mechanism and a potential carbon tax. The findings will be presented to key government agencies to inform the development of planned policy tools supporting decarbonizing.

While UNESCAP will finance the modelling exercise, PAGE will contribute by organizing capacity building for modelers and policy makers as well as a policy consultation workshop to discuss the modelling results and policy recommendation, both planned for the second quarter of 2023.

### **Green Jobs and Just Transition Analysis in the Agriculture Sector**

PAGE (ILO) conducted a Green Jobs and Just Transition Readiness Assessment, analysing the green and decent jobs creation potential and existing policy settings for a just transition, particularly in agriculture.

Related to the study, PAGE worked with local government's representatives and stakeholders in Chiang Mai to enhance their awareness and understanding of green jobs and just transition through an on-site capacity building and knowledge tour, with a focus on transition toward sustainable agriculture and potential link to eco-tourism development, in partnership with the National Economic and Social Development Council and the Ministry of Labour, SMEs and farmer communities. The three-day event started with a capacity building workshop organized on 24 November in Muang District, Chiang Mai, followed by an on-site knowledge tour to Mae Chaem District on 25-26 November 2022.

### **Building institutional and individual capacity (Outcome 3):**

#### **Curriculum Development and Trainings on Applying IGE in COVID-19 Recovery Policies**

In support of the Green Recovery in Thailand, UNITAR worked with Thammasat University/ Policy Research Centre on Green Economy (Pro-Green Centre) to develop a curriculum for capacity building for relevant ministries and agencies.

As part of this exercise, a Green Economy Learning Needs Assessment was carried out with relevant government ministries as well as workers and employers of other organizations regarding the advancement of a green economy. The assessment was finalized in March 2022. Thereafter, a curriculum was developed for a blended training programme on "Integrating Green Economic Principles into Thailand's COVID-19 Recovery Plan" which consists of a syllabus and comprehensive facilitators guide. The curriculum targeted to strengthen the capacities of relevant ministries and agencies to apply inclusive and green economy principles in COVID-19 recovery policies across three thematic areas: green industrialization, circular economy, and green jobs and just transition.

#### **Capacity development on designing and delivering green and inclusive development**

Drawing lessons from projects in the government's stimulus package during the pandemic, a training programme is under development to enhance capacity of national and subnational governmental agencies in formulating and implementing policies to support green and inclusive development. UNDP and UNIDO commissioned the development of case studies and training materials on green and inclusive recovery in Thailand. This will feed into the overall PAGE training programme, which will be carried out through self-paced online training and a face-to-face workshop to be available by the end of 2023.

## **1.21 Cambodia**

### **Country context and PAGE portfolio**

Over the past twenty years, Cambodia has experienced a remarkable economic growth with an annual growth rate of seven per cent. The country made significant progress and became a lower-middle-income country in 2015. In 2021, it fulfilled the necessary requirements to graduate from its status as a least developed country (LDC) for the first time.

Cambodia has been adopting green economy principles for many years, as demonstrated by the National Strategic Plan on Green Growth 2013-2030. The country embraced green economy principles under the National Strategic Plan on Green Growth 2013-2030.

In addition, the Royal Government of Cambodia has laid out the Cambodia Vision 2050, the Rectangular Strategy Phase IV, the National Strategic Development Plan 2019-2023, and the Cambodian Sustainable Development Goals Framework 2016-2030 with the aim of achieving upper-middle income status by 2030 while addressing social inclusion and environmental sustainability. In 2021, the country submitted its Long-term Strategy for Carbon Neutrality (LTS4CN) to the UNFCCC, making it the third least developed country to do so and reaffirming its commitment to achieving a carbon neutral economy by 2050.

Against this background, the RGC is striving to maintain this growth in an environmentally sustainable and socially inclusive manner. To contribute to advance this aspiration further, Cambodia submitted an application to join PAGE in 2021. The application was signed by the Minister of Environment in his capacity as the Chair of the National Council for Sustainable Development (NCSD). It received support from various government ministries, including the Ministry of Economy and Finance, the Ministry of Mines and Energy, the Ministry of Industry, Science, Technology and Innovation, the Ministry of Labor and Vocational Training, and the Council for Development of Cambodia. Additionally, the private sector, research institutions and academia also expressed their support as relevant stakeholders.

Cambodia joined PAGE as a new partner country in 2022 under the leadership of the Department for Green Economy at the Ministry of Environment. PAGE support comes at a critical time as the government is developing its post-Covid-19 economic recovery strategy, including a pillar dedicated to promoting a more resilient and sustainable economy.

## Progress in 2022

### Supporting further integration of green economy into policy actions (Outcome 1):

#### Building the foundation for PAGE support in Cambodia

**PAGE Inception Mission:** An [inception mission](#), took place from 17-21 October 2022, during which the five PAGE agencies met with representatives from the government, the UN Resident Coordinator's Office, development and funding partners, as well as private sector associations to discuss challenges and opportunities for a green economic transformation and secure national engagement and ownership. The mission also included a dedicated briefing session with the Minister of Environment.

A Green TEAM international economist from Thailand took part in the PAGE inception mission to Cambodia providing substantive inputs during high-level meetings, as well as recommendations for the design of the country's policy scoping study, which is a key document to guide the countries' green economic transition.

**Policy Scoping Study:** To identify critical policy areas for a green economic transformation, PAGE initiated a policy scoping study in partnership with the Cambodia Development Resource Institute (CDRI), building on recommendations provided by an expert from the PAGE Green Transformation Economic Advisory Mechanism. The scoping study will cover high impact sectors identified as a priority in the Government's Economic Recovery Plan, including garment, tourism and agriculture, and analyse cross-cutting theme such as green investment and finance, green technology, green industry and SME development, resource efficiency and green jobs.

**Memorandum of Understanding with the Government:** To frame the 5-year partnership between PAGE and the Government of Cambodia, UNITAR and the Ministry of Environment developed a framework Memorandum of Understanding in 2022, setting out the main objectives, milestones and governance arrangements.

## 1.22 Rwanda

### Country context and PAGE portfolio

Rwanda's economy highly depends on the health of its natural resources and ecosystems. As indicated in the National Strategy for Transformation (2017-2024), 70 per cent of the total labour force is employed in the agricultural sector, which is the third highest contributor to Rwanda's GDP. For this reason, Rwanda decided to invest in the efficient use of natural resources including efforts to combat climate change effects to guide its economic growth and development.

Despite remarkable progress, Rwanda is facing enormous challenges related to climate change which has worsened during the COVID-19 pandemic where every sector's production has drastically reduced. As a result, Rwanda developed a National Economic Recovery Plan (ERP) that prioritizes key sectors which were most hit by the pandemic. The ongoing interventions to promote an inclusive and green recovery include a need to revisit national policies and strategies to match them with the required interventions to deal with climate change issues. This will be coupled with support to strengthen mainstreaming capacities in different government institutions, private sector and civil society organizations through developing environment and climate change tools for effective and inclusive economic growth support, including the implementation of interventions proposed under the ERP. Resource mobilization will also be at the forefront of the country's agenda to bridge the financing gap currently existing to implement the green growth and climate resilient interventions.

As outlined in its vision 2050 "The Rwanda we want", the country aims to become an upper middle-income country by 2035 and a low carbon and high-income country by 2050. In 2011, Rwanda adopted the National Green Growth and Climate Resilience Strategy (GGCRS) and in 2020 submitted its revised Nationally Determined Contribution (NDC) under the Paris Agreement to the UNFCCC. Rwanda's partnership with PAGE will enable the country to accelerate the implementation of the national vision-2050, the next generation of National Strategy for Transformation (NST), Green Growth and Climate Resilience Strategy, NDC, as well as National ERP after the COVID19 pandemic. Against this background, Rwanda joined PAGE as a new partner country in 2022.

### Progress in 2022

#### Supporting further integration of green economy into policy actions (Outcome 1):

##### Inception Phase Action Plan

UNDP, as lead agency for Rwanda, has developed jointly with the other agencies an action plan for the inception phase and meetings were held with the Ministers of Environment and of Finance, representatives of the banking sector and development partners, including the German Embassy and GIZ.

Consultations and working meetings were also held with the UN Country Team and UN Resident Coordinators Office, including discussions with RCO and UNDP economists, which led to the development of the terms of reference of a green economy stocktaking study.

### **PAGE Preparatory Mission**

The Head of the PAGE Secretariat met with partner ministries, UN resident agencies, private sector stakeholders and major bilateral development partners in Kigali in December to set the strategic vision for PAGE support. The visit to Kigali was combined with attendance at the World Circular Economy Forum (WCEF) 2022 which was hosted by the Government of Rwanda from 6-8 December. The mission increased awareness among national stakeholders on the role conducive macroeconomic policies, including finance, and investments can play in accelerating the transition to a circular and green economy. PAGE enhanced its understanding of key government priorities for greening the economy, as well as critical knowledge and capacity gaps. As a next step, PAGE will conduct the green economy stock taking study.



## 2. OUTCOME 3 - BUILDING INDIVIDUAL AND INSTITUTIONAL CAPACITY AT GLOBAL LEVEL

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By providing global and regional training and learning programmes, PAGE strengthens the capacity of individuals, government and institutions – developing expertise and enabling them to put inclusive green economy principles into practice.

### Summer School on Green Industry for Inclusive and Sustainable Industrial Development

PAGE, led by UNIDO, organized the [2<sup>nd</sup> PAGE Green Industry Summer School](#) in July 2022 to provide knowledge and guidance on green industrial transformation to a mixed group of participants, including policymakers from ministries, university faculty members, Ph.D. students, researchers, trainers from public or private training institutes, NGOs and SMEs. First, a self-paced online training increased the basic understanding of terminologies and concepts of the green industry of 179 participants from 60 PAGE and non-PAGE countries, out of which 40 qualified for more in-depths training. The second moderated training session covered the topic of food security in the advent of the Ukraine war, circular economy, green recovery for SMEs, industry decarbonization, NDC, green fiscal policies and green jobs. Experts from different institutions contributed to the sessions including from PAGE agencies, the Global Green Growth Knowledge Platform, Royal Institute of International Affairs, Chatham House, Environmental Management Centre from India, Austrian Institute of Technology, and Green Industry Specialists, a think tank from South Africa.

PAGE Summer School provides participants with an understanding of green industrial policy as a tool for accelerating a green economic transformation, together with an opportunity to learn and discuss how industries, and specifically SMEs, can overcome key challenges that prevent them from adopting green industry-related products and services.

### Training on Advancing a Green and Fair Economic Transformation in a Crisis-driven World: the Role of Macro-economic Modelling

Led by UNITAR and in partnership with the UN Development Coordination Office, PAGE delivered in December a two-day introductory training to Economists from UN Resident Coordinator Offices (RCOs) on [“Advancing a green and fair economic transformation in a crisis-driven World: The Role of Macro Economic Modelling”](#). The training provided 32 RCO economists with a general understanding on how to use macro-economic modelling in the context of green and fair economic transformation. It touched upon diverse types of models currently being used, their strengths and shortcomings and provided space to share experiences with the application of models by RCO economists and from PAGE countries, including insights from Kyrgyz Republic, Peru, Indonesia and South Africa.

The training helped identify some of the key challenges being faced by RCO economists with respect to using modelling at a macroeconomic level for a green economic transformation. These included lack of availability of data, lack of awareness and interest on the part of national governments to use modelling, lack of capacity for modelling at both RCO and national government levels, the need for a customized model to meet a country's needs, and the unavailability of adequate modelling software. The training also included innovative group exercises on qualitative modelling with sessions focused on the selection and use of a model and how to build capacity for modelling at the national level.

RCO economists expressed the importance of using modelling as a tool to guide evidence-based policy formulation and decision making in their respective countries and encouraged follow-up with more detailed training. The inputs and feedback gathered during this training session helped feed into a broader full-fledged training session being planned for 2023, targeting key thematic areas.

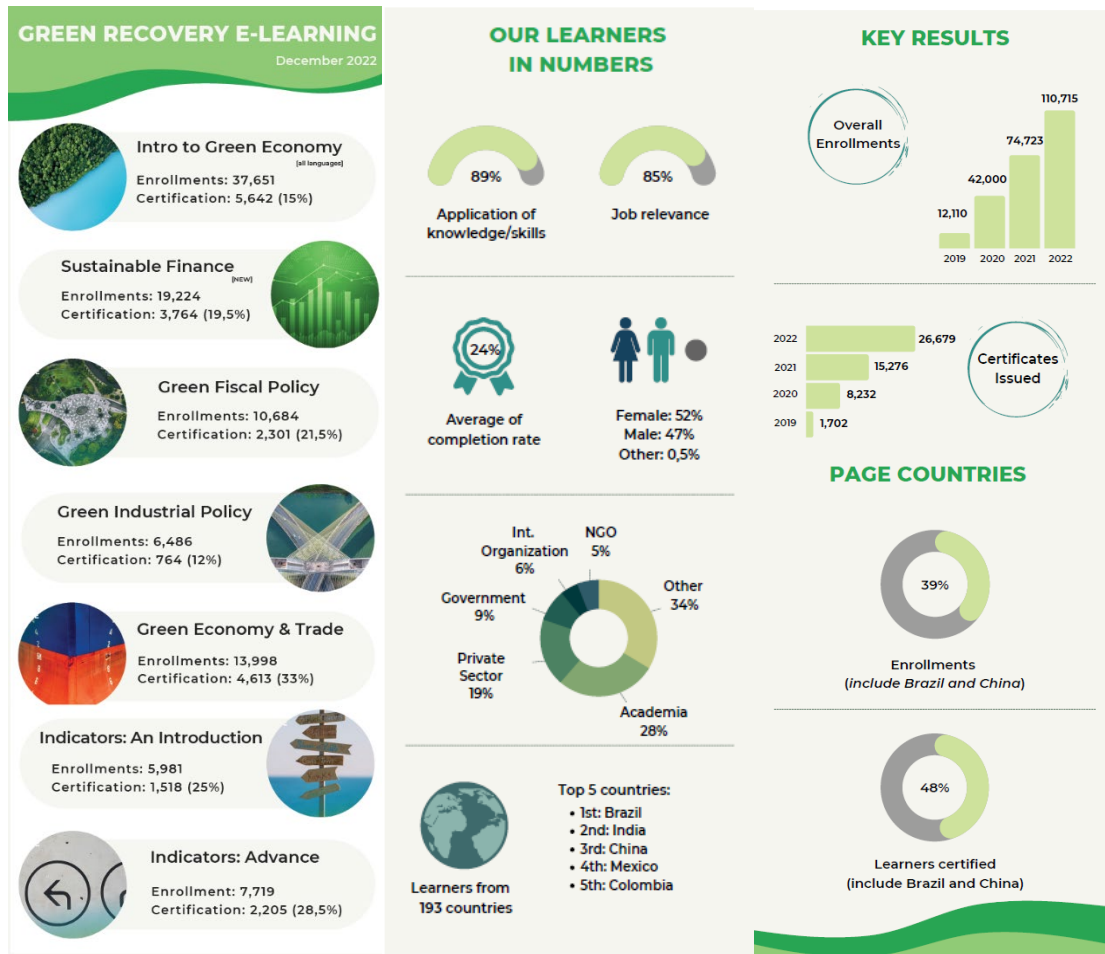
## 2022 Impact Evaluation of PAGE Capacity-building and Training

In 2022, UNITAR conducted an impact survey to understand how learners have been applying the knowledge and skills acquired through PAGE capacity building and training packages. The survey included the participants of e-learning courses (who took at least one course) and learners that attended the Global Academy on Green Economy and the 2<sup>nd</sup> Summer School on Green Industry. The survey highlighted the positive impacts of PAGE global capacity building services, including mention of improved job performance as well as knowledge and skills, for example in drafting national policies, coaching entrepreneurs, writing policy briefs, and developing or delivering lectures. Among 517 responses from 105 countries, of which 42 per cent came from PAGE partner countries, 92 per cent of respondents have increased their capacity, built on opportunities for the promotion IGE, and 94.5 per cent have become more confident to advocate for IGE. Furthermore, 29 per cent improved their job performance and 11 per cent received a promotion or a new responsibility from their employer.

In parallel UNITAR has also conducted an impact survey for professionals who attended national trainings delivered in the following countries: Burkina Faso, Morocco, Brazil, Uruguay, Kyrgyz Republic, Kazakhstan, and Senegal. The survey received 19 responses of which 95 per cent of respondents have applied the knowledge and skills acquired through the trainings, for instance strengthening connections among local and national stakeholders to advance national policies on green economy, using tools provided by the trainings and creating a working group to identify and promote green economy initiatives at national level. In addition, 31 per cent of respondents improved their job performance after completing the trainings, and 94 per cent became better at identifying and building opportunities for IGE.

The PAGE e-learning portfolio on the UN Climate Change Learning Partnership (CC:Learn) attracted over 110,000 learners with 26,000 certificates of completion as of December 2022. The e-learning portfolio includes the following courses:

- [Green Industrial Policy](#)
- [Green Fiscal Policy](#)
- [Green Economy and Trade](#)
- [Indicators for an Inclusive Green Economy](#) (Introductory)
- [Indicators for an Inclusive Green Economy](#) (Advance)
- [Introduction to Sustainable Finance](#)
- [Introduction to Green Economy](#)



## Green Renaissance Podcast Featuring Youth in Climate action

In February 2022, the 11<sup>th</sup> episode of [PAGE Green Renaissance podcast series](#) entitled “[Pacts, Protest and the Legacy of COP26](#)” featured speakers from UNITAR, University of Massachusetts Amherst and YOUNGO - the official children and youth constituency of the United Nations Framework Convention on Climate Change. It highlighted the importance of youth voices around the world in driving climate action, the power of local governments in fighting climate change, and the urgent need to implement policies and regulations to tackle inequality which prevents governments from effectively addressing climatic and environmental challenges. The PAGE Green Renaissance [podcast series](#) was launched in 2021. It helped unpacking complex policy questions related to the rebuilding economies after the COVID-19 pandemic and featuring voices from government, business, civil society and youth groups, the podcast series was an essential contribution to the global green recovery debate.

## 3. OUTCOME 4 - IMPROVING ACCESS AND APPLICATION OF KNOWLEDGE FOR ADVANCING IGE

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### 3.1 NEW KNOWLEDGE PRODUCTS

#### Study and Toolkit for MSMEs on Green Recovery

PAGE, led by UNIDO and in collaboration with ILO, developed a green recovery policy guidance for MSMEs taking India, Ghana and Uruguay as case studies (publication upcoming in 2023: "Impact of COVID-19 on green enterprises: Policy guidance towards inclusive, resilient, and sustainable recovery"). The study analyses the impact of COVID-19 on MSMEs, the measures taken by enterprises, the support schemes adopted by governments as well as business and job creation opportunities, providing sustainable mechanism for MSMEs to recover and transform.

An online questionnaire survey was launched in the three piloted countries in addition to nine Focus Group Discussions with representatives from 20+ Green SMEs, NGOs, business support associations, business associations, financial institutions and government institutions from Ghana, India and Uruguay, to collect data on the scope of the report during the first and second quarter of 2022.

The findings showed that most of the firms have faced major challenges related to disruption in the supply chain and low working capital. However, the pandemic has also helped accelerate the digital transformation of MSMEs. The focus of digitization and industrialization has shifted from cost and productivity optimization to maintaining the continuity of supply chains and enhancing business and societal resilience against unforeseen shocks. On the policy aspects, it was observed that government policies are gradually shifting from liquidity support focus to recovery support.

Based on the study, a recovery toolkit was designed to provide knowledge and resources to MSMEs on how to recover from shocks and increase resilience. It also guides on new growth opportunities, risk management and communication with potential investors and clients. The toolkit has four sections related to internal and external scenario analysis, strategies for recovery and growth, becoming investor ready, and resources for supporting recovery and building resilience. Both, the study and the recovery toolkit are under final review and will be published in 2023.

### 3.2 UPDATES ON EXISTING KNOWLEDGE PRODUCTS

#### Global Recovery Observatory: New Methodologies for Jobs and Risks

[The Global Recovery Observatory \(GRO\)](#) is a live database that tracks and assesses the potential impacts of COVID-19 spending policies on the environment and selected social and economic indicators - highlighting shortcomings in green recovery spending. GRO was developed by UNEP and the University of Oxford in 2020, and since 2021, PAGE invested in linking GRO data to actionable policy support.

In 2022, PAGE has helped to showcase exemplary policy solutions to catalyse a green transformation, identify lost opportunities, and to direct governments towards more impactful and durable green and inclusive investments. The policy analysis generated by GRO has been cited in numerous high-level policy research efforts, including at the International Monetary Fund (IMF), UNEP's Emission Gap Report and Adaptation Gap Report, World Bank (WB) and OECD. Catalytic PAGE support since 2021, bringing together five UN agencies, resulted in:

- Enhanced visualization and data analysis capability led by UNDP, further improving the usability of the rich GRO database covering data on more than 8.500 individual policies from 89 countries for policymakers and academic researchers;
- An updated methodology for more precise natural capital policy impact assessments led by UNEP and UNEP World Conservation Monitoring Center, providing a valuable research tool for policymakers and practitioners to assess ex-ante effects of policies on natural capital;
- A new methodology for assessing the [potential impact of COVID-19 response policies on jobs and high-level modelling of employment outcomes of country-based policies](#) led by ILO, giving policymakers and practitioners use of a more granular and easier-to-use framework to screen policy choices and design based on employment generation potential; and
- A [video-based primer](#) to communicate the value-added and relevance of GRO to a diverse audience, led by UNITAR, to raise awareness and contextualize the value-added of GRO to a diverse set of audience.

PAGE support has also seeded the development of the Sustainable Budgeting Approach (SBA) - a novel and easy-to-use framework to help policymakers to align public finance and budgets with integrated national development and environmental objectives. The SBA that builds on the GRO methodology enhancements supported by PAGE, has been [endorsed at the International Cooperation Forum and Meeting of African Ministers of Finance, Economy and Environment in September 2022](#) as a key subject for capacity development and institutional support, and is currently being included in national country programming across PAGE and non-PAGE countries and as an area for collaboration with [the Coalition of Finance Ministers for Climate Action](#).

### 3.3 KNOWLEDGE PRODUCTS UNDER DEVELOPMENT

#### Dialogues on New Frontiers for a Fair and Green Economic Transformation

While until 2020 PAGE has been operating in a context of relative steady growth, the implications of the COVID-19 pandemic and the armed conflict in Ukraine have fundamentally changed the circumstances in which partner countries take decisions on economic policy. In this context, PAGE developed a concept note for a series of participatory dialogues and written outputs with the aim to reflect on the challenges that a crisis-driven world presents to advancing a fair and green economic transformation, and to identify policy levers that can link the need for urgency and long-term sustainable development.



The dialogues kickstarted with an inspirational session co-organized by UNITAR and the PAGE Secretariat at the PAGE Management Board meeting in November, focusing on global and regional perspectives. Guest speakers were from UNDCO, a former representative of a funding partner, the University of Oxford, the University of Pretoria in South Africa, Thailand Development Research Institute, Cambridge Econometrics and the Institute for Global Environmental Strategies in Japan. PAGE Green TEAM and UNDCO joined to reflect on critical themes such as building resilience to shocks, driving circularity and technological innovation through targeted policy, deepening collaboration with international finance institutions and non-UN entities, and reinforcing the energy transition. Participants emphasized the utility of such an open discussion space, enabling critical reflections on big picture issues like the triple planetary crisis or the threat of a prolonged stagflation.

Based on the results and suggestions coming out of the session, UNITAR proposed a timeline of activities for 2023, including further dialogues at global and regional levels.

### **The Green Economy Progress Measurement Framework (Third Edition)**

PAGE is producing the third edition of the Green Economy Progress Measurement Framework (GEPMF), forthcoming in 2023, which will aim at capturing the impact of the series of severe economic and climate shocks that are inflicting massive economic damages and will provide insights on pathways to accelerate the net-zero carbon transition through a quantitative assessment of green policy and investment options.

It builds on the two earlier editions of the [GEPME](#), which provided a tool for policymakers, analysts and other stakeholders for evaluating countries' overall progress towards an IGE. The framework is composed of a GEP Index (GEPI) and a companion Dashboard of Sustainability Indicators. The [First Edition](#) (2017) was applied to a sample of 105 countries. The [Second Edition](#), released in 2021, further incorporated the concept of environmental footprints to capture national consumptions and production effects and it was applied to a sample of 110 countries

For the 3<sup>rd</sup> edition, the methodology behind the framework is being upgraded by linking the Green Economy Progress Index with a Macro-Econometric model, the E3ME model, developed by Cambridge Econometrics. The E3ME model integrates the economy, energy systems and the environment, with two-way linkages between each component. The model provides a detailed sectoral disaggregation, global coverage and is suitable for both, short and medium-term assessment, as well as longer-term trends, which makes it ideal for capturing the implications of recent global shocks. A consultation workshop is planned to be held 26 April 2023 to receive feedback on the narrative and context, scenario analysis, methodology and preliminary results from PAGE agencies, experts and funding partners.

Among the achievements of 2022, the Government of Indonesia launched its Green Economy Index at the third G20 Development Working Group side event based on the GEPI methodology, showing an example of the use and application of PAGE global knowledge products at the national level to inform the green economy transition.

## 3.4 KNOWLEDGE PLATFORMS AND KNOWLEDGE NETWORKS

### Green Economy Learning Network

The Green Economy Learning Network (GLN) was launched in November 2020 with the support of PAGE and has been running since 2021 by a coalition of youth and higher education networks that includes the UN Higher Education Sustainability Initiative, UNEP Youth and Education Alliance (YEA), the US Partnership for Education for Sustainable Development, Change the Chamber Lobby for Climate and the US National Clean Energy Workforce Alliance. GLN has grown from 95 to 268 members, including many employers, career advisors, NGOs and educators, making it the second-largest group on the [Green Forum](#).

In 2022, [the Green Economy Learning Network \(GLN\)](#) organized two global virtual solution summits in 2022:

- **The “Green Jobs Solution Summit”** took place on 1 June in partnership with the International Association of Universities and REN21. As a global renewable energy community, it brought together 245 employers, career advisors and educators to discuss the staffing and skilling needs of employers.
- **A “Research alignment to the SDGs”** solution summit took place on 2 November in partnership with the SDG Publishers Compact Fellows in the presence of 140 participants from academic journal editors, editorial directors and publishers. The summit focused on the alignment of academic journals to SDGs and the need to promote more applied research with linkages to industry and policymaking.

In addition, GLN supported five events organized by the US-based National Clean Energy Workforce Alliance focused on career advice, curricula change, job placement and retention and initiated the collaboration with two international youth organizations: Youth for Climate Education and the Climate Education Coalition. GLN includes now 7 new knowledge items shared with GLN members, six sub-communities and 19 fellows recruited to support GLN facilitation.

### Green Industry Platform, Green Finance Platform and Green Forum

The Platforms of the [Green Growth Knowledge Partnership](#), developed in collaboration with PAGE, have further customized and expanded their offer in 2022.

The [Green Industry Platform](#) launched the [I-GO Assistant](#) in March 2022, a tool that empowers SMEs by providing customized advice and simplified access to tailored knowledge and support services. For the growing number of organizations joining, an interactive online community space for SME stakeholders was created on the [Green Forum](#). The [I-GO Community Space](#) is engaging networks on key topics such as circular economy, water security and green growth, attracting more than 3,500 members.

The [Green Finance Platform](#), together with UNDP Financial Centers for Sustainability launched the [Sustainable Finance Diagnostic Toolkit](#) in September 2022. The toolkit provides practical guidance for policymakers to enhance sustainable finance mobilization, aiming at unlocking sustainable finance in countries and eventually developing national, or potentially regional, sustainable finance roadmaps.

## 3.5 GREEN TRANSFORMATION ECONOMIC ADVISORY MECHANISM

### Uniting Economic Expertise for Joint Delivery

The Green Transformation Economic Advisory Mechanism (Green TEAM) leverages economic expertise of PAGE agencies, UN Resident Coordinator Offices (UNRCOs), Regional Commissions, local research institutions and international think tanks to guide countries in their green economic transformation. The partnership with UNRCOs and the UN Development Cooperation Office (UN DCO) catalyses systemic change, allowing PAGE to embed its offer within countries' broader reform agendas and strengthen the focus on inclusive green economy in UN joint support. A 2022 highlight was the mobilization of economic expertise in support Indonesia's ambition for its G20 Presidency to place blue and green economy at the centre of the Development Working Group, leading to a reflection of the concepts in the G20 Bali Leaders Declaration.

In 2022, UNRCOs, UN DCO and PAGE scaled up their cooperation to tackle the economic, social and the triple planetary crisis, expanding the work to five additional PAGE countries (Cambodia, Guyana, Mauritius, Peru and Rwanda), offering targeted capacity building and opening its global policy dialogue "One UN for Accelerating a Fair and Green Economic Transformation" to all UNRCO economists, UN Country Teams and key stakeholders, specifically interest in targeted support for green macroeconomic modelling, green public finance and green economy indicators.

PAGE participated as well in two DCO retreats for Europe and Central Asia and Asia and Pacific to share its analytical and capacity building portfolio, to exchange on capacity gaps, good practices and lessons learned, and participated in a structured discussion with UNRCs in January to identify concrete opportunities to support countries in a green and fair economic transformation through carbon markets, carbon taxation, sustainable agriculture, as well as South-South Cooperation.

The Economic expertise of the Green TEAM also shapes global analytical products, with a third application of the Green Economy Progress Measurement Framework under development and delivered a targeted training on green economic modelling to UNRCOs in December 2022.

With this Green TEAM mechanism, PAGE is creating a template for joint planning and delivery by both country resident and non-resident UN agencies - an essential element of the UN Reforms. It also aims to contribute to "greening" the UN System's approach to socio-economic development. The reformed UN System that now includes an economist in each UNRC Office, a UN Chief Economist in Headquarters and increased capacity of UN agencies on macroeconomics, offers a unique opportunity to bring together the specialized expertise on economic policy and provide a coherent package of support to PAGE partner countries.

## Targeted Country-level Support

In 2022, the advisory services of the Green TEAM were expanded to five additional PAGE countries, a total of 10, taking up immediate demand through green economic transformation analysis, macroeconomic modelling, as well as inputs to Common Country Analysis (CCA), UN Sustainable Development Cooperation Frameworks (UNSDCF), national policies and strategic policy dialogues. Some of the major activities are presented below:

- **Argentina:** Economic specialists mobilized by the Green TEAM supported the Social and Economic Council of the Presidency in developing a study on the labour impacts of green hydrogen projects across the country, feeding into the National Sustainable Hydrogen Promotion Law to be presented at the Parliament in March 2023.
- **Cambodia:** A Green TEAM international economist took part in the PAGE inception mission to Cambodia, providing substantive inputs during high-level meetings as well as recommendations for the design of the country's Policy Scoping Study - a key document to guide the country's green economic transition.
- **Indonesia:** Expert economists from the Green TEAM guided the development of an Economic Transformation Analysis to lay the ground for the country's green economy transition. The analysis is feeding into the CCA update and will shape the drafting of upcoming medium and long-term national planning documents.
- **Kazakhstan:** Following a request of the Ministry of National Economy, PAGE Kazakhstan partnered with the Economic Research Institute to finalize the development of the Carbon Neutrality Strategy until 2060. A Green TEAM international expert strengthened the strategy by providing recommendations at the conceptual, methodological and thematic levels.
- **Morocco:** Green TEAM international experts shaped the 2022 Economic Transformation Pathways Analysis and Policy Scoping Study by strengthening the macroeconomic dimension and leveraging the interlinkages between national development plans and the green economy transition, in addition to substantive inputs to the update of the country's UNSDCF 2023-2027.
- **Peru:** In Peru, as part of an ongoing collaboration between the UNRCO, the Universidad del Pacífico (Lima) and PAGE, experts mobilized by the Green TEAM shaped the design of a modelling study on the social and economic benefits of environmental sustainability policies.
- **Thailand:** In Thailand, experts engaged by the Green TEAM helped run a policy scenarios assessment using a macroeconomic model from the UN Economic and Social Commission for Asia and the Pacific (ESCAP) as part of a collaboration between ESCAP, UNRCO and PAGE.

In 2023, the Green TEAM is planning to resume the global dialogues with the network of UNRCO's economists on key thematic areas and continue the targeted support to economists across UNCT as well as national economic think tanks. In addition, it will work on improving the effectiveness of deep-dive country support and expanding the network of international economists by bringing on board additional expertise with a strong background and focus on key priority topics.

## 3.6 ADVOCACY, OUTREACH AND COMMUNICATIONS

In 2022, as the world gradually returns to normalcy, PAGE pushed more towards hybrid events, which helped promoting networking and socializing at the national and global level, while maintaining the global outreach. In 2022, PAGE placed the focus on strengthening its economic advice, capitalizing on results and achievements, while also conducting thematically focused outreach aligned with new realities and priorities in the context of a resilient post-pandemic recovery and the severe socio-economic crises which battered the world economy in 2022. While continuing communication through its established channels, PAGE outreach and visibility focused on optimizing the user experience by improving the website interface and functionality, increase the engagement on social media, and consistently delivering newsletters with value-packed content.

### Production of Video Materials

In 2022, PAGE expanded available video material with the aim to raise the visibility of PAGE global knowledge products. Together with Oxford University's Smith School of Enterprise and the Environment and PAGE agencies, in early 2022, UNITAR finalized the production of a [video-based primer](#) to explain the purpose and functionalities of the Global Recovery Observatory in a succinct and captivating manner. The primer was released in the second half of the year and circulated via PAGE's and Oxford University's social media. In addition, going forward PAGE plans to promote the primer on major occasions, such as the UN HLPF.

Based on the video released in 2021 on PAGE achievements in South Africa, another shorter version of the video was produced featured this year in the transition ceremony, summarizing the engagement with PAGE throughout the past seven years. Also, in Burkina Faso following the launch of a video in 2021 on PAGE achievements and challenges, another video was released, describing the impact of the programme since inception, including various interviews by national partners involved.

### 2021 Online Annual Report

The Online Annual Reports provide the most comprehensive communication tool on the partnership's achievements and on-going work. The 2021 version of the report was officially launched during PAGE side event at UNEA 5.2 on 1 March 2022, in the presence of members of the PAGE community including partner agencies, funding partners, expert ministries, as well as national implementing partners to celebrate the achievements of the programme over the past challenging year.

### PAGE New Website and Bulletin

PAGE launched in September 2022 its new website, allowing for improved user experience and better access to knowledge and countries' experiences in their green economic transition. The website presents the [tools and advisory services](#) available to advance inclusive green economies and [key focus areas](#), in addition to a compilation of results and experiences of its 22 partner countries. Amongst the new features, the site contains a powerful search function to browse the information and resources, and a sorting option for the news and events, providing results by focus area, geographic scale and country. In 2023, PAGE will launch a Knowledge Hub section on the website, enabling a wider outreach and easier access to information and resources.



PAGE also continued to communicate recent achievements at the country and global level to partners through its monthly bulletin, reaching approximately 2,642 subscribers by December 2022. In addition to its website, PAGE enjoyed an online presence through Instagram, Twitter (more than 3,000 followers) and LinkedIn (followers almost doubled since 2021). In 2022, PAGE YouTube channel hosted three livestreams: Stockholm+50 and the Senegal and Burkina Faso transition ceremonies.

## Recognition in Events and Processes

In 2022, PAGE was recognized in several events and transition ceremonies of partner countries for its focus on transformational change and its joint delivery model towards an inclusive green economy.

During the PAGE launching event in Thailand, the United Nations Resident Coordinator in Thailand referred to PAGE as a crucial joint initiative that brings together the technical expertise of five UN agencies to accelerate the green transition and to contribute to advancing the SDGs. From this perspective, the Chief of Policy at UN DCO mentioned during a training on macroeconomic modelling organized by UNDCO and PAGE, that the mission of PAGE goes to the heart of the rationale of the UN development system reforms.

During the transition ceremony of South Africa, the ILO Officer in Charge highlighted the achievements of the country in the framework of PAGE and described them as “impressive,” hoping for the established PAGE mechanism in South Africa to continue shaping a just transition to meet the 2030 Agenda and the commitments of the Paris Agreement.

In Uruguay, the Minister of Environment highlighted in his opening speech at the transition ceremony, the contribution and the great value of the PAGE programme in supporting Uruguay in the transition to a circular economy. UNIDO’s regional representative for the Southern Cone had also explained that “PAGE opens up a range of opportunities to seed other IGE projects”.

In Senegal, the member of the Ministry of Environment and Sustainable Development who was present at the transition ceremony, underlined that PAGE has allowed Senegal to take important steps in green economy and that there is a need to consolidate the achievements.

During the transition ceremony of Mauritius, the Minister of Environment, Solid Waste Management and Climate Change stressed that the work carried out by PAGE will serve as a lever to build on and scale-up action integrating sustainability in key sectors and facilitate the transition to a green and circular development paradigm.

## PAGE Visibility through Engagement in International and National Events

Throughout 2022, PAGE colleagues were engaged in a wide range of technical and policy-oriented meetings, which allowed PAGE agencies and the PAGE Secretariat to share information on the partnership, its tools, services and achievements.

A few examples are provided below:

- The Chair of the PAGE Management Board contributed to the **second panel of the Life Cycle Initiative's webinar** on June 23, which discussed how the wider life cycle community could improve the application of the knowledge and tools to speed up the sustainable transition. The initiative is hosted by UNEP and promotes life cycle knowledge, revealing the unintended trade-offs between circular approaches' social, environmental and economic impacts.
- The Head of the PAGE Secretariat contributed to the third session in the [GGKP's Stockholm+50 series](#) on 26 April, aligning with the theme of [Leadership Dialogue 3](#): "Accelerating the implementation of the environmental dimension of Sustainable Development in the context of the Decade of Action.
- ILO and UNIDO joined a **virtual high-level panel discussion on 6 September titled "Implementing a Green Transformation in Africa"** as part of the Inclusive Green Recovery course organized by the Environment for Development Initiative (EfD), a global environmental economics research network based in Sweden. PAGE's intervention focused on just transition, green jobs and policy making in Africa, while bringing international and country-specific perspectives.
- **The Asia-Pacific Green Jobs Network held its first in-person meeting** in 2022, organized by the ILO Asia-Pacific Regional Green Jobs Team based in Bangkok, to share knowledge and to facilitate networking on the agenda for greening the world of work. The discussions covered ILO's work related to green recovery and green jobs and stressed on the importance of climate change action commitments in this context. The discussants shared different practices on green jobs and just transition from programmes and initiatives in Asia and the Pacific region, including PAGE.

### 3.7 PROMOTING DIALOGUE AND DEBATE ON IGE

#### PAGE Support to G20 Indonesia Presidency

In 2022, PAGE supported the Indonesian Ministry of National Development Planning in the preparation of the G20 Development Working Groups (DWG) meetings providing substantive inputs to the "G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, Least Developed Countries, and Small Island Developing States", as well as the "G20 Chair's Summary on Multilateralism for Sustainable Development Goals".

The G20 Bali Leaders Declaration issued in November recognized the work of the DWG referring to "focus on MSMEs, adaptive social protection, green economy and blue economy", and reconfirmed commitments to climate targets and climate financing, including phase down of the use of coal.

PAGE contributed to key milestones through advisory services, data collection, and inputs to scoping papers and discussions:

- The Head of PAGE Secretariat contributed to a seminar on [“Navigating Challenges and Optimizing Opportunities in Green and Blue Economy Implementation in Developing Countries, LDCs, and SIDS”](#) in February 2022 in which panellists shared strategic suggestions on Green and Blue Economy and for global action supporting countries’ green recovery plans and related resource mobilization.
- The Chair of PAGE Management Board contributed to the third DWG Meeting Side Event [“Towards Implementation and Beyond: Measuring the Progress of Low Carbon and Green Economy”](#) in August 2022 in a panel discussion on the nexus between development, climate change and biodiversity advocating for the transformation of economies by spending available resources in responsible and innovative ways.

## Stockholm+50 - Revisiting Economics and Finance for People and Planet

The Stockholm+50 Conference in Sweden offered a catalytic forum for actions on sustainability, inclusivity, recovery and nature-positive global economy. Against this background, PAGE facilitated, through ILO and the International Training Center, a [high-level panel discussion](#) on 2 June 2022 focused on revisiting economics and finance to accelerate action for people and planet.

A Ministerial Breakfast meeting the following day, attended by Ministers and Heads of Delegations of PAGE countries, UN agencies and funding partners, explored pathways for making economies low carbon, circular, nature positive and pro-poor including the role of partnerships like PAGE.

Discussions aligned with the theme of Stockholm+50’s leadership dialogue three on [“Accelerating the implementation of the environmental dimension of Sustainable Development in the context of the Decade of Action”](#), which PAGE helped to shape. Prior to the Conference, UNDP supported Stockholm+50 national consultations across 56 countries reaching out to over 50,000 national stakeholders.

## Enabling Circularity at COP27 and World Circular Economy Forum

A United Nations [high-level side event at the Climate COP27](#) co-organized by PAGE, discussed how circular economy principles and practices can serve as a catalyst to promote human well-being, preserve nature, cut pollution and make economies more competitive. Bringing together government representatives, heads of UN agencies, the Ellen MacArthur Foundation, the International Organization of Employers, AEON Collective - a non-profit endowment fund, and YOUNGO - UNFCCC’s official children and youth constituency - the event explored the coordinated effort and collaboration needed across the government, the private sector and civil society, in the transition, including the integration of circular economy into educational curricula and the support to young innovators. UN partners in this event included GGKP, UNECE, ESCWA and UN-OHRLS.

At the WCEF 2022, 6-8 December in Kigali, Rwanda, the Head of PAGE Secretariat contributed to a panel discussion on [“Small green enterprise in East Africa, powering a circular economy transition”](#) organized by the Green Economy Coalition. The session discussed how citizen-led approaches are complementing policy initiatives, such as PAGE, presenting practical solutions from MSMEs enabling circular and green production of goods and services.

## UNEA 5.2 - From Green Recovery to Transformation

On 1 March 2022, PAGE’s high-level side event at the United Nations Environmental Assembly (UNEA 5.2), [“From recovery to transformation: greening economies for people and planet”](#), brought together youth leaders and experts from ministries, the European Investment Bank, Cambridge Econometrics, the University of Pretoria and UN agencies to discuss the response of countries to the impacts of COVID-19 for a green economic recovery. The discussions highlighted the shifts needed in policy and investment for stimulating an economic transformation that overcomes the root causes of climate change, nature loss and pollution. Country representatives confirmed PAGE’s catalytic and enabling role in the green socio-economic transition and multi-stakeholder delivery.

## Third Dialogue on Accelerating a Fair and Green Economic Transformation

Following the successful [first](#) and [second](#) dialogues in 2021, PAGE held the third dialogue on “One UN for Accelerating a Fair and Green Economic Transformation” back-to-back with the “Third UN DCO Global Peer Exchange for UNRCO Economists” on 7 June 2022 to exchange ideas on how PAGE supports partner countries in accelerating a fair and green economic transformation. Around 70 participants engaged in the discussions including representatives of the UN DCO and economists from UNRCOs and PAGE agencies.

The dialogue was a unique opportunity to emphasise the vital role of the UN system and UNRCO’s economists in providing sound economic advice to partner countries, which aligns with the 2030 Agenda for Sustainable Development and unpack the concept of green economic transformation into key country strategic documents. The discussions featured examples of the ongoing collaboration between PAGE and UNRCO’s economists in Morocco and Indonesia, where PAGE is bringing multidisciplinary expertise to support UNRCOs processes such as Common Country Assessments and Cooperation Frameworks. The dialogue also explored the knowledge needs of UNRCO’s economists, UNCTs and key stakeholders, highlighting the growing interest in green macroeconomic modelling, green fiscal/public finance and indicators for green economy policymaking, among others. Based on these needs, PAGE and UN DCO are implementing a pilot training programme tailored to UN RCO’s economists, UNCTs and key stakeholders.

“One UN for Accelerating a Fair and Green Economic Transformation” is a Dialogue Series launched in 2021 with the aim to provide a platform for UNRCOs and PAGE agencies to identify challenges and opportunities for inclusive and sustainable economic development.

## 3.8 PAGE UNDP-LED REGIONAL KNOWLEDGE SHARING IN LATIN AMERICA

### Latin America and Caribbean Green Awards 2022 Edition

For the fifth year, Latin America and Caribbean Green Awards (LAC Green Awards) and PAGE worked as strategic partners to promote local actions towards sustainable development in the region. LAC Green Awards or Premios Latinoamérica Verdes (PLV) is an annual event organized by Fundación Latinoamérica Verde to award the best socio-environmental projects in Latin America.

Throughout 2022 PAGE contributed to the process of the SDG Awards which rewards the projects which have strongest potential to contribute to the achievement of SDGs and strengthen partnerships. The 10<sup>th</sup> edition of the award will close in April 2023 with an Award Celebration.

Another element under the LAC Green Awards that PAGE supported throughout 2022 was the Skills Strengthening Programme - an educational platform designed specifically for green transition projects in Latin America and the Caribbean. A methodology and contents were developed in line with the needs of the region's entrepreneurs to strengthen the quality of the projects submitted under the Green LAC Awards. All 3,026 registered project proponents/participants have access to the platform modules, including, four modules: 1) Strengthen your project; 2) Your project on a single page and finance for sustainable projects; 3) Connect and seal; and 4) Mentoring.

Additional activities supported in 2022 to strength the programme include:

- A series of Masterclasses to consolidate the path towards a green economy in the region. The main topics range from entrepreneurship and economic growth to responsible consumption, gender and social inclusion;
- A workshop to inspire and promote youth leadership in the development of sustainable initiatives and activism. The workshop themes included education for sustainability, industry, conservation and sustainable lifestyles;
- Lessons learned analysis to better understand the needs of the participants and improved the programme delivery;
- English translations of the entire programme along with the videos and other materials included in the programme; and
- Spaces to consolidate the Skills Strengthening Programme learning content with MeetUps, where experts could assist the participants to address their questions.

### Targeted Scenario Analysis to Inform Greener and More Inclusive Investments

In 2021, PAGE funded the development of four studies in Colombia (livestock), Ecuador (artisanal and small-scale mining) and Peru (cacao and palm oil - described in further detail in the Peru country section), utilising the Targeted Scenario Analysis (TSA) methodology developed by UNDP.

TSA is an innovative economic valuation approach designed to provide sector-focused economic information to decision-makers from the public and/or private sector, with the mandate to design and implement policies, development plans, and investment strategies at national and sub-national levels.

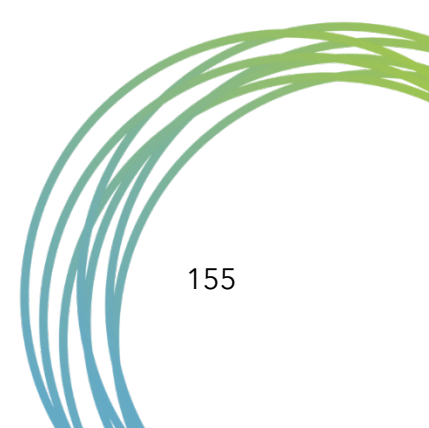


TSA recommendations are used to inform decisions that will result in more sustainable policies and better-funded implementation plans and they are linked to on-going national policy revision processes and related Global Environment Facility projects in each country.

During 2022, the recommendations of the PAGE-supported TSA continued to be used to advancing policy reform. TSA-supported policies in the targeted countries are presented in the table below. These policies help improve sustainable sectorial development and reduce the pressure on forests, ecosystems, and biodiversity.

Country/TSA sector	TSA-supported policy under government revision
<b>Colombia: Deforestation-free Livestock</b>	<ul style="list-style-type: none"> <li>- Approved Municipal Guidelines for Sustainable, Climate Friendly Livestock Production in the Municipality of La Macarena.</li> <li>- Conservation Agreements Policy (under Executive Decree 1076 de 2015)</li> <li>- Legal Framework of Autonomous Development Corporations</li> <li>- Establish a Nacional Livestock Fund under Law 89 of 1993</li> </ul>
<b>Ecuador: Artesian and Small-scale Gold Mining (ASGM)</b>	<ul style="list-style-type: none"> <li>- National Mining Strategy and ASGM Law</li> <li>- Central Bank’s Investment Policy (Gold purchasing regulations and ceiling)</li> <li>- Corporate Investment Policy (private raw material processing plants)</li> </ul>
<b>Peru: Deforestation-free Cacao</b>	<ul style="list-style-type: none"> <li>- National Plan for Developing the Cocoa-Chocolate Value Chain 2020-2030 (final draft under revision at the Ministry of Agriculture)</li> <li>- Municipal Policy to Promote Agricultural Competitiveness</li> <li>- Investment policy: green credits</li> <li>- Regulatory Framework for Sustainable Cocoa Production and Marketing</li> </ul>
<b>Peru: Deforestation-free Palm Oil</b>	<ul style="list-style-type: none"> <li>- National Oil Palm Value Chain Plan/ National Competitiveness and Productivity Policy.</li> <li>- Standards for RSPO or ISCC certifications, including zero-deforestation</li> <li>- Corporate Investment Policy and AGROBANCO’s Credit System</li> </ul>

In the case of Peru, the PAGE-supported TSA inspired two additional TSA in the livestock and coffee sectors. The former is under development and the latter is planned for 2023. The PAGE-supported mining study inspired other similar mining studies, one in Colombia and one in Suriname. Both are under development.



## 4. PAGE SECRETARIAT AND GOVERNANCE BODIES

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The PAGE Secretariat has continuously provided its services to the Partnership for Action on Green Economy, including key functions such as programme planning, coordination and monitoring, communication, and outreach, fundraising and donor relations, and organizing governance meetings.

The PAGE Secretariat, serving as the central point of liaison between the PAGE partners, provided services to the Technical Team, the Management Board and the Steering Committee. This included organization of:

- A hybrid Steering Committee meeting on 17 June 2022;
- Monthly Technical Team Calls; and
- Regular Management Board meetings, including a joint Technical Team and Management Board face-to-face meeting on 22-23 November 2022 hosted at the ILO headquarter.

Under the direction of the Technical Team, the Secretariat ensured smooth inter-agency cooperation in planning, implementing, and monitoring PAGE activities. In 2022, for the implementation of the 2021-2030 [PAGE Strategy](#) and the work related to Green Economic Recovery, the PAGE Secretariat:

- Coordinated the development of country work plans for 2021-2023 and related monitoring of activities in the 22 partner countries;
- Supported the initiation and launch of PAGE work in two new PAGE countries, Rwanda and Cambodia;
- Continued to coordinate the additional support to countries for a green economic recovery, which complements the regular PAGE support;
- Organized three virtual gatherings to facilitate exchange among national coordinators and agencies on emerging challenges and opportunities resulting from different economic and social crises;
- Facilitated discussions among agencies on developing a global workplan 2021-2022 and related approval by PAGE Management Board; and
- Coordinated the finalization and release of the 2021 PAGE Annual Report, both in online and in written format.

The PAGE Secretariat provided continuous support to the interagency evaluation of PAGE's earlier Operational Strategy for 2016-2020 started by UNEP's Evaluation Office in March 2022 and delivered by three external consultants, including the following tasks:

- Prepared background documents and provided briefings for consultants;
- Reviewed and provided comments on inception report and draft evaluation report;
- Helped with contact lists and interviews; and
- In communications, the PAGE Secretariat led the development of a [new website](#), with a new look and better integration of the yearly on-line annual reports, as well as the release of the monthly newsletters continuously reporting achievements at country and global level.

In addition, PAGE Secretariat facilitated two important outreach events in 2022:

- An official high-level side event at the United Nations Environment Assembly (UNEA 5.2) which brought together youth leaders and experts from ministries, the European Investment Bank, Cambridge Econometrics, the University of Pretoria and UN agencies to discuss the response of countries to the impacts of COVID-19 for a green economic recovery; and
- A high-level side event focused on revisiting economics and finance to accelerate action for people and planet at the Stockholm +50 conference in June 2022 complemented by a Ministerial breakfast which was attended by Ministers and Heads of Delegations of PAGE countries, UN agencies and funding partners. The meeting explored pathways for making economies low carbon, circular, nature positive and pro-poor including the role of partnerships like PAGE.

PAGE further strengthened the Green Transformation Economic Advisory Mechanism (Green TEAM), initiated in 2021 and facilitated the expansion of the Green TEAM advisory services to five additional PAGE countries, a total of 10, taking up immediate country-targeted demand. An important achievement in 2022 was the mobilization of economic expertise in support to Indonesia's G20 presidency through the Green TEAM, coordinated by the PAGE Secretariat.

Beyond targeted advice, a third dialogue of series on "Accelerating a Fair and Green Economic Transformation" in June explored knowledge needs of UNRCO economists, UN Country Teams and key stakeholders. In November 2022, in conjunction with the Management Board meeting, PAGE Secretariat organized a brainstorming discussion in the context of 'New Frontiers for a fair and Green Economic Transformation' which brought in the expertise of external partners and guest speakers from universities, international research institutes, and UNDCO. A Secretariat representative also participated in two DCO retreats for Europe and Central Asia and Asia and Pacific to exchange on capacity gaps, good practices and lessons learned.

## 5. COOPERATION WITH OTHER INITIATIVES

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### 5.1 IN-COUNTRY COOPERATION

At the country level, PAGE deepened existing cooperation and expanded collaboration with several organizations and initiatives. These collaborations are country-driven, dependent on the opportunities offered by the local context and needs. In that sense, PAGE offers a flexible mechanism for engaging with many global, regional and local organizations and initiatives.

Collaboration is taking place through the organization of joint events, implementation of joint activities and strengthening common platforms for a coordinated country delivery. The following section presents a brief description of the most relevant examples from 2022.

#### **Cooperation with GIZ:** PAGE and GIZ collaborated in **Ghana, Kyrgyz Republic and Rwanda:**

- **Ghana:** GIZ provided technical and financial support to PAGE's initiative on developing tools for aligning medium-term development plans and annual budgets with SDG targets and recovery plans, and on building the related capacities of district statisticians and budget officers from metropolitans, municipalities and district assemblies in collaboration with national governmental agencies.
- **Kyrgyz Republic:** Building on efforts that commenced since 2018, PAGE, together with GIZ continued to support the institutionalization of IGE modelling by translating modelling results into policy recommendations. Trainings are also being offered to a technical group of 29 representatives of departments and educational institutions to become key players in institutionalizing green economy modelling in strategic planning and integrating green economy into the country's governance system.
- **Rwanda:** GIZ contributed to PAGE consultation meetings which were held with the Ministers of Environment and of Finance, banking sector representatives, and development partners during the inception mission to Rwanda, with the objective of developing the terms of reference for Rwanda's stocktaking study.

**Cooperation with the Global Green Growth Institute (GGGI):** PAGE and GGGI have continued collaborative efforts in 2022 to support common partner countries in their transition to an IGE, including Senegal and Kyrgyz Republic.

- **Senegal:** High-level representatives from GGGI participated in the celebration of 8 years of partnership with PAGE in the capital city Dakar, which featured the presentation of a sustainability plan for Senegal beyond PAGE, and included panels and thematic sessions, an exhibition and a Media Award Ceremony.
- **Kyrgyz Republic:** GGGI finalized the legal assessment for the Kyrgyz Republic National Financing Vehicle, as an initial activity leading to market assessment and feasibility study to establish the Green Finance Facility. GGGI, alongside the Union of Banks of the Kyrgyz Republic and the Ministry of Economy and Commerce, supported the launching of green finance initiatives in Kyrgyz Republic.

**Cooperation with UNDP-Biodiversity Financing Initiative (BIOFIN):** Synergies between PAGE and BIOFIN continued to be leveraged in 2022 to advance green finance solutions in India, Indonesia, Kyrgyz Republic and Peru.

- **India:** Following the creation of a working group in India to develop a robust implementation framework to increase financial flows from Access and Benefit Sharing (ABS) in the country, the Quality Council of India initiated the design of a Voluntary Certification Scheme for Incentivisation of ABS. The scheme was approved in June 2022 and the registration of the scheme was completed. Stakeholder consultations were also held to explore the role of technologies, such as the blockchain, to improve ABS compliance and to ensure financial flows.
- **Indonesia:** UNDP held meetings with the National Board of Zakat for the Republic of Indonesia, the UNDP Innovative Finance Lab and the Ministry of National Development Planning to define locations and mechanisms for a pilot project on Islamic Finance for biodiversity in 2022. Three locations were identified and field visits were conducted to assess the key issues regarding land conservation and development in the area.
- **Kyrgyz Republic:** PAGE, in partnership with BIOFIN and the International Institute for Environment and Development, finalized the policy brief on reforming personal income tax exemption in agriculture, as a measure to support a shift towards a sustainable agriculture. The partnership extended to test a methodology to identify and analyse potentially harmful subsidies for biodiversity, and to complete a political economy analysis on the import of mineral fertilizers and crop protection chemicals in the form of VAT exemption.
- **Peru:** BIOFIN and PAGE supported the implementation of a roadmap for the mobilization of investments in natural infrastructure, which was approved by a Ministerial Resolution and is being carried out in different regions. In addition, a study was finalized on the inclusion of public investment projects identified through Work for Taxes (WxT). The study was followed by the promotion and implementation of three public investment projects in natural protected areas and species conservation management through WxT, as well as a training programme to subnational governments about the guidelines and benefits of investing in biodiversity and natural infrastructure initiatives through WxT.

PAGE countries are also collaborating with various other initiatives working on green economy and related areas. Selected examples from 2022 are included below:

- **The International Institute for Sustainable Development (IISD):** PAGE and IISD conducted a modelling and analysis on energy subsidies in Kazakhstan, which provides an assessment of subsidies for fossil fuel production and consumption.
- **The International Institute for Environment and Development (IIED):** PAGE produced a study on “promoting sustainable urban food systems in Mauritius by enhancing urban and peri-urban agriculture with circular economy approaches” in collaboration with the IIED and the University of Mauritius.
- **Cambodia Development Resource Institute:** PAGE initiated an Economic Transformation Policy Assessment in partnership with the Cambodia Development Resource Institute. The objective of the assessment is to identify critical policy areas for a green economic transformation covering high impact and priority sectors in line with the Government’s Economic Recovery Plan.



- **The Moroccan Agency for Sustainable Energy (MASEN):** PAGE initiated a benchmarking study on clean energy production in Morocco in collaboration with MASEN. The study will provide recommendations for the institutional framework and operationalization of the Coalition for Sustainable Energy Access, an UN initiative that aims to facilitate exchange of models and best practices on clean energy production and access.
- **Norwegian Foundation for Industrial and Technical Research:** In 2022, PAGE initiated a study on the impact of public policies and incentive measures on green recovery and decent job creation in Burkina Faso's tourism sector in partnership with the Norwegian Foundation for Industrial and Technical Research. The preliminary results of the study and the adopted methodology were presented in September 2022.
- **ILO-Sida (Swedish International Development Cooperation Agency) Partnership:** ILO-Sida Partnership Project is supporting the development of a [Green Jobs Assessment model](#) in Ghana, which will guide the implementation of the national Green Jobs Strategy among other national instruments and frameworks.
- **ISpani:** PAGE partnered with ISpani, a youth-led start-up, to surface the views and perceptions of diverse youth groups in South Africa through a Youth Barometer on Just Transition, engaging more than 100 unemployed youth.
- **Mongolian Energy Economics Institute (MEEI):** PAGE analyses the potential reforms of energy subsidies and tariffs to accelerate renewable energy development in Mongolia in collaboration with MEEI and the UN Resident Coordinator Office.
- **Overseas Development Institute:** PAGE finalized a report on fiscal policies to support Ghana in a post-COVID green economic recovery, working with the Overseas Development Institute's research team.
- **Mauritius Institute of Education (MIE):** PAGE collaborated with the Civil Service College and MIE to create a dedicated space for teachers to increase their capacities to integrate green and climate related issues in the curriculum.
- **Indonesia Expert Network for Climate Change and Forestry (APIK):** PAGE launched the second Inclusive Green Economy Modelling (IGEM) Course at the University of Indonesia in cooperation with the Environment Institute and APIK.
- **UNEP sub-regional office for Central Asia, the OSCE Programme Office in Astana and the Kazakhstani Association of Regional Environmental Initiatives:** The first draft of the Sustainable Public Procurement Market Readiness Assessment and the Prioritization Report were delivered to the Government of Kazakhstan in July 2022, which were presented at a training workshop, in partnership with UNEP sub-regional office for Central Asia, the OSCE Programme Office in Astana and the Kazakhstani Association of Regional Environmental Initiatives.
- **UNDP-GEF:** PAGE partnered with the UNDP-GEF project "Nationally Appropriate Mitigation Actions for Low-Carbon Urban Development", to develop a regional pilot programme for redirecting emission payments to finance green SMEs with a high emission reduction potential in the Pavlodar region of Kazakhstan and create fiscal incentives that promote green business and create green employment.

- **UNDP outside PAGE:** In Mongolia, PAGE is working with key UNDP initiatives outside of the PAGE programme to increase the scope and sustainability of results. In 2022, PAGE funds continue to be used to support two innovative green finance mechanisms in Mongolia: (1) SDG-based environmental budgeting; and (2) a private equity fund to green agriculture and livestock value chains.
- **ILO Regional Projects and Programmes:** PAGE Peru supported the Regional ILO Green Jobs Programme in the development of a study on the “opportunities to generate green job for refugees, migrants and nationals in Peru”, including case studies and identifying economic sectors of interest.
- **UNEP outside PAGE:** the UN Framework of Programmes on Sustainable Consumption and Production (10YFP), the Life Cycle Initiative, the International Resource Panel and Go4SDGs collaborated in leading training sessions in the 2022 PAGE Academy in China, which was organised by PAGE, Tongji University and other partners.

## 5.2 GLOBAL COOPERATION

Throughout 2022, PAGE continued to strengthen global partnerships in line with the evolving socio-economic context to reflect on the challenges and inform economic thinking, strengthen collaboration for capacity building and to disseminate IGE knowledge and ideas.

**Green Economy Coalition:** The Head of the PAGE Secretariat participated in a panel discussion organized by the Green Economy Coalition during the World Circular Economy Forum 2022 in Kigali, Rwanda. The panel discussed how small green enterprises in East Africa can influence the circular economy transition.

**Collaboration with global research institutes:** The University of Oxford and Cambridge Econometrics joined PAGE and partners in an open discussion session in November 2022 to reflect on critical themes such as building resilience to shocks and driving circularity, and on the challenges that a crisis-driven world presents to advancing a fair and green economic transformation. Cambridge Econometrics has been also working on upgrading the methodology behind the Green Economy Measurement Framework, by linking the Green Economy Progress Index with a macro-econometric model integrating the economy, energy systems and the environment, with two-way linkages between each component.

**Coalition of Finance Ministers for Climate Action:** The SBA – a novel and easy-to-use framework that building on Green, Resource-saving and Optimized (GRO) methodology – is currently being included in national country programming across PAGE and non-PAGE countries and as an area for collaboration with [the Coalition of Finance Ministers for Climate Action](#). SBA helps policymakers to align public finance and budgets with integrated national development and environmental objectives.

### **Development Coordination Office (DCO) Collaboration:**

In 2022, UN DCO and UN Resident Coordinators (UNRCs) participated in PAGE’s third dialogue on “One UN for Accelerating a Fair and Green Economic Transformation”. The dialogue was a unique opportunity to emphasise the significant role of the UN system and UN Resident Coordinator Offices (UNRCO’s) economists in providing sound economic advice to partner countries.

In addition, PAGE participated in two DCO retreats for Europe and Central Asia, and Asia and the Pacific to identify concrete opportunities to support countries in a green and fair economic transformation and explore the knowledge needs of UNRCO's economists, UN Country Teams (UNCTs) and key stakeholders. In December 2022 and based on the outcomes of the meetings, UN DCO and PAGE organized a two-day introductory training to Economists from UNRCO's on ["Advancing a green and fair economic transformation in a crisis-driven World: The Role of Macro Economic Modelling"](#). The partnership with UN DCO allows PAGE to embed its offer within countries' broader reform agendas and strengthen the focus on inclusive green economy in UN joint support.

**Supporting G20:** In 2022, PAGE supported the Indonesian Ministry of National Development Planning in the preparation of the G20 Development Working Groups (DWG) meetings and dialogues. For instance, the Head of the PAGE Secretariat contributed to a seminar on ["Navigating Challenges and Optimizing Opportunities in Green and Blue Economy Implementation in Developing Countries, LDCs, and SIDS"](#) and the Chair of the PAGE Management Board contributed to the third DWG Meeting Side Event ["Towards Implementation and Beyond: Measuring the Progress of Low Carbon and Green Economy"](#).

**Supporting GGKP:** PAGE has continued to support the Green Growth Knowledge Partnership (GGKP) in its work as a global community of organizations and experts committed to collaboratively generating, managing and sharing green growth knowledge. In 2022, this included the contribution of the Head of the PAGE Secretariat to the third session in the [GGKP's Stockholm+50 series](#) in April, aligning with the theme of [Leadership Dialogue 3](#): "Accelerating the implementation of the environmental dimension of Sustainable Development in the context of the Decade of Action". In addition, GGKP participated in the [high-level side event at the Climate COP27](#) co-organized by PAGE, which discussed circular economy principles and practices.

## 6. SOUTH-SOUTH COLLABORATION

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South-South and Triangular Cooperation (SSTC) allows countries to exchange knowledge, to learn from each other and utilize in the local context evidence-based solutions from one country to another. The common frameworks, provided by the 2030 Agenda for Sustainable Development and Paris Climate Agreement, offer excellent opportunities to establish good practices, identify factors for success and share those with countries that are also in search of pathways to a resource-efficient, low-carbon and socially inclusive economy.

SSTC empowers countries to design tailored responses to development challenges, considering evidence-based solutions from their peer countries. With 22 partner countries and eight funding partners engaged at various stages of a green economy transformation, including policy development at the national and sectoral levels, capacity-building and awareness-raising, PAGE provides an ideal platform for SSTC.

In 2022, the following SSTC activities took place, in the form of peer learning and regional exchanges:

### Regional Exchange on Green Recovery in West Africa's Tourism Sector

The Agrhyment Regional Center (ARC), a specialized agency of the Permanent Inter-State Committee against Drought in the Sahel, organized on 12 April, in collaboration with PAGE, Burkina Faso and UNITAR the sub-regional webinar [“Post-COVID-19 Economic Recovery and Ecological Transition in West Africa”](#) focusing on the tourism sector. The event brought together participants from Burkina Faso, Senegal and Morocco, including representatives of governments, academics, development experts and the PAGE teams. The webinar resulted in three key recommendations: (1) to base the recovery of the sector on the promotion of domestic tourism; (2) to strengthen the concept of an authentically African tourism that relies on the continent's values and cultural assets, and (3) for authorities and decision-makers to consider ways of supporting the ecological transition in the tourism sector through capacity-building and appropriate financing.

### Spotlight on Sustainable Finance at the Regional Green Economy Forum in Bishkek

The Ministry of Economy and Commerce of Kyrgyz Republic with its development partners GIZ, OSCE, UNDP, Accelerate Prosperity and the private sector, organized the regional event [“Green Economy Forum 2022: Green Economy Development in Central Asia”](#) on 11 November 2022, to offer a platform for all partners from Central Asia to discuss, find and apply green solutions in the region. The Forum brought together more than 500 representatives of different organizations, companies, and businesses across sustainable business and government for the day of the conferences, exhibitions and high-level dialogue sessions.

As part of the preparatory sessions for the forum, PAGE and the Union of Banks of the Kyrgyz Republic held on 10 November [a regional workshop to discuss sustainable finance](#) as a driver for a transition to low carbon, resource-efficient, sustainable economy in the Kyrgyz Republic. The workshop gathered representatives from the private banking sectors of Georgia, Kazakhstan, Mongolia and Kyrgyz Republic to exchange ideas and discuss ways to enhance sustainable finance to meet the 2030 Agenda for Sustainable Development and the climate goals of the Paris Agreement.

The discussions also focused on the Sustainable Finance Roadmap (SFRM) – a document drafted with the support of PAGE by the Ministry of Economy and Commerce and the Union of Banks which reviews the current state of sustainable finance in the country and outlines an Action Plan for the development of a sustainable financial system. The Russian version of SFRM was discussed with businesses, the financial sector, policymakers, civil society and academia during the Green Economy Forum 2022.

## Peer Exchange to Support Zambia’s Green Growth Strategy

Facilitated by the European Commission and PAGE, South Africa, represented by the Department of Forestry, Fisheries and the Environment, provided guidance to Zambia’s Ministry of Economy and Environment during the preparation of a Green Growth Strategy that is based on four pillars: resource efficiency, clean and green energy, waste reduction and inclusiveness. PAGE shared the suite of analytical tools available to support green economy policy analysis and design as well as practical experiences from the various initiatives South Africa has taken in its own transition process, including macroeconomic assessment, multi-stakeholder consultations, and the engagement of key-sector players in the validation of findings.

## Regional Exchanges in Latin America and the Caribbean

In 2022, Argentina shared its experiences in a regional context as well as through a collaboration with PAGE Uruguay.

In a UNFCCC Workshop for the Latin America and Caribbean region on [“Tools and Methodologies for modelling and assessing the impacts of the implementation of response measures”](#) held on 20-22 April in Antigua and Barbuda, PAGE Argentina presented its [labour impact evaluation of climate change policies](#) in support of Argentina’s NDC. The analysis provides costs and benefits of emission reduction options in different sectors and scenarios for COVID-19 pandemic recovery in Argentina.

As part of the [PAGE Uruguay Five-year event on 18-19 October](#), PAGE Argentina and the Inter-American Centre for Knowledge Development in Vocational Training led a workshop on strategies, indicators and policies for green jobs in the region. As a result, Argentina and Uruguay deepened their collaboration on the development of national indicators tracking the greening labour markets.

## Kyrgyz Republic learning from Mongolia’s Experiences in Mobilizing Green Finance

A 17-member delegation from Kyrgyz Republic representing both the public and private sectors visited Ulaanbaatar from 21 to 25 June 2022 to learn from the experiences of Mongolia in mobilizing green finance. The study tour resulted in the Kyrgyz delegation designing a pathway for launching a Kyrgyz Green Finance Corporation, which would facilitate blended finance from domestic public and private sources for green projects in different sectors—a priority measure outlined in the National Development Strategy 2026. Following the study tour, a feasibility study was launched for the Green Finance Corporation, building on a legal framework analysis conducted last year with the support of the Global Green Growth Institute.



## Family Gatherings

PAGE organized three informal family gatherings to facilitate exchange among national coordinators and UN agencies on emerging challenges as well as opportunities for further leveraging development partners and UN country teams, and influencing global debates such as Stockholm+50 and G20. The webinars provided an open space for PAGE countries to share their concerns in the context of multiple crises, countries' responses and strategies to align PAGE support with new realities. Besides inflation, political instability and energy security, countries like Argentina witness the burden of debt payment, reducing space for future oriented green investments. Several governments are reprioritizing, as in the case of Thailand exploring an emissions trading scheme as an alternative to the earlier planned carbon-tax. However, striving for resilience may also unlock opportunities to scale up mega renewable energy projects, as in Morocco, or pave the way for a more formalized transition to circular economy such as in India.

## LIST OF ABBREVIATIONS AND ACRONYMS

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ABS	Access and Benefit Sharing
ALMP	Active Labor Market Policies
ANAPEC	National Agency for the Promotion of Employment and Skills
APA	Academy of Public Administration
APIK	Indonesia Expert Network for Climate Change and Forestry
ASGM	Artesian and Small-scale Gold Mining
ARC	Agrhyment Regional Center
AVZUR	Alliance of Universities in Kyrgyzstan for Green Economy and Sustainable Development
BAPPENAS	Ministry of National Development Planning
BAT	Best Available Techniques
BAZNAS	Board of Zakat for the Republic of Indonesia
BIOFIN	Biodiversity Finance Initiative
CA4J	Climate Action for Jobs Initiative
CARES	COVID-19 Alleviation and Revitalization of Enterprises Support
CBAM	Carbon Border Adjustment Mechanism
CCA	Common Country Analysis
CCICED	China Council for International Cooperation on Environment and development
CDRI	Cambodia Development Resource Institute
CEMPRE	Corporate Commitment to Recycling
CESTI	Centre d'Études des Sciences et Techniques de l'Information
CIP	Country Implementation Plan
CNTAC	China National Textile and Apparel Council
COP	Conference of the Parties (COP)
CORE	Centre of Reform on Economics
CRJEA	Regional Center for Young Agricultural and Food Entrepreneurs
CRSAP	Climate Resilience Strategy and Action Plan
CSA	Climate Smart Agriculture
CSEA	Coalition for Sustainable Energy Access
CSO	Civil Society Organization
CTVET	Council for Technical and Vocational Education and Training System
CVE	Economic Watch Committee
DFC	Driving Force for Change
DFFE	Department of Forestry, Fisheries, and the Environment
DWG	Development Working Group
EC	European Commission
ECSWG	Environment and Climate Sustainability Working Group
EEWiGI	Economic Empowerment of Women in Green Industry
EfD	Environment for Development Initiative
EGSS	Environmental Goods and Services Sectors
EnMS	Energy Management System
ERI	Economic Research Institute
ERP	Economic Recovery Plan

ESCAP	Economic and Social Commission for Asia and the Pacific
EU	European Union
FAO	Food and Agriculture Organization
G20	Group of Twenty
G-Bel	Green-Blue Economy Learning
GDP	Gross Domestic Product
GEC	Green Economy Concept
GEF	Global Environment Facility
GELA	Green Economy Learning Assessments
GEPI	Green Economy Progress Index
GEPMF	Green Economy Progress Measurement Framework
GET	Green Economy Transformation
GGGI	Global Green Growth Institute
GGKP	Green Growth Knowledge Partnership
GHG	Greenhouse Gas
GJAM	Green Jobs Assessment Model
GLN	Green Economy Learning Network
GPDPs	Gram Panchayat Development Plans
Green TEAM	Green Transformation Economic Advisory Mechanism
GRO	Green, Resource-saving and Optimized
GSDS	Green State Development Strategy
GSS	Ghana Statistical Services
IESD	Institute of Environment for Sustainable Development
IGE	Inclusive Green Economy
IGEM	Inclusive Green Economy Modelling
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
IMF	International Monetary Fund
INEFOP	National Institute for Employment and Vocational Training
ISCC	International Sustainability and Carbon Certification
LabEC	Circular Economy Laboratory
LAC	Latin America and Caribbean
LCDC	Low Carbon Development Concept
LCDI	Low Carbon Development Initiative
LCDS	Low Carbon Development Strategy
LiFE	Lifestyles for Environment
LTS4CN	Long-term Strategy for Carbon Neutrality
MASEN	Moroccan Agency for Sustainable Energy
MEDD	Ministry of Environment and Sustainable Development
MEEI	Mongolian Energy Economics Institute
MEGNR	Ministry of Ecology, Geology and Natural Resources
METEST	Ministry of Education, Tertiary Education, Science and Technology
MIE	Mauritius Institute of Education
MINFIN	Public Ministry of Finance
MMDAs	Metropolitans, Municipalities and District Assemblies

MNE	Ministry of National Economy
MoEFCC	Ministry of Environment, Forest and Climate Change
MoES	Ministry of Earth Sciences
MoL	Ministry of Labour
MoRD	Ministry of Rural Development
MSME	Micro Small and Medium Enterprises
MTESS	Ministry of Labour, Employment and Social Security
NbS	Nature-based Solutions
NCCP	National Climate Change Policy
NEOC	National Emergency Operations Centre
NESDC	National Economic and Social Development Council
NDCs	Nationally Determined Contributions
NGO	Non-Governmental Organization
NITI Aayog	National Institution for Transforming India
NPCC	National Productivity and Competitiveness Council
NREP	National Resource Efficiency Policy
NSC	National Steering Committee
NSP	National Strategic Plan
NST	National Strategy for Transformation
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
PAGE	Partnership for Action on Green Economy
PAP	Programme d'action prioritaire
PCI	Produce, Conserve and Include
PEA	Poverty-Environment Action
PSE	Plan Senegal Emergent
QCI	Quality Council of India (QCI)
RAMCC	Global Compact of Mayors (Red Argentina de Municipios contra el Cambio Climático)
RCO	Resident Coordinator's Office
RCOY	Regional Conference of the Youth
RECP	Resource Efficiency Cleaner Production
RPJMN	Indonesian National Medium-Term Development Plan 2020-2024
RPRKD	Low Carbon Development Plan of West Java Province (Rencana Pembangunan Rendah Karbon Daerah)
RSPO	Roundtable on Sustainable Palm Oil
SAM	Social Accounting Matrix
SB	Subsidiary Body
SBA	Sustainable Budgeting Approach
SDGs	Sustainable Development Goals
SEEA	System of Economic and Environmental Accounts
SEIAF MT	Mato Grosso State Integrated Family Farming System
SERRP	Social and Economic Response Recovery Plan
SFRM	Sustainable Finance Roadmap
Sida	Swedish International Development Cooperation Agency
SIDS	Small Island Developing States
SME	Small and Medium-sized Enterprises

SNDD	National Strategy for Sustainable Development
SNEV	National Green Economy Strategy
SPP	Sustainable Public Procurement
SSTC	South-South and Triangular Cooperation
SWM	Solid Waste Management
T&A	Textile and Apparel
TOR	Terms of reference
ToT	Training of Trainers
TSA	Targeted Scenario Analysis
TVET	Technical and Vocational Education and Training System
UFMT	University of Mato Grosso
UM6P	University Mohammed VI Polytechnic
UN	United Nations
UN CC:Learn	UN Climate Change Learning Partnership
UNCTs	United Nations Country Teams
UNDP	United Nations Development Programme
UNDS	United Nations Development System
UNEA	United Nations Environmental Assembly
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFCSO	United Nations Framework of Cooperation for Sustainable Development
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
UNSDCF	United Nations Sustainable Development Cooperation Framework
UOB	Union of Banks
USAID	United States Agency for International Development
VCS-I-ABS	Voluntary Certification Scheme for Incentivisation of Access and Benefit Sharing
VPRPs	Village Poverty Reduction Plans
WB	World Bank
WCEF	World Circular Economy Forum
WxT	Public Works for Tax deductions
YEA	Youth and Education Alliance
YREB	Yangtze River Economic Belt





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