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INDUSTRIAL DEVELOPMENT ORGANIZATION
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MULTILATERAL INDUSTRIAL
POLICY FORUM



THE MULTILATERAL INDUSTRIAL POLICY FORUM

Inaugural Edition 2023
Outcome Document

20–21 March 2023

Vienna International Centre, Vienna, Austria /

Online via Zoom Platform

Contact information: MIPF@unido.org



THE MULTILATERAL INDUSTRIAL POLICY FORUM

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Executive Summary

The renaissance of industrial policy: harnessing opportunities

We are witnessing a renewed global interest in industrial policy, spurred by structural trends such as digitalization, decarbonization and the recalibration of global production. However, this resurgence of interest in industrial policy is faced with the challenges of post-pandemic recovery, international conflict, and macroeconomic instability. As a result, the landscape of industrial development has become more intricate, presenting both opportunities and challenges for industrialization.

Against this backdrop, there is a call for a new generation of sustainable industrial policies which effectively reconciles national interests, the scope for regional coordination and collaboration, and international governance around industrialization with the global community's commitments to the UN 2030 Development Agenda and its Sustainable Development Goals (SDGs).

UNIDO, as the specialized agency of the United Nations with a unique mandate to promote and accelerate sustainable industrial development, has heeded this call and launched the *Multilateral Industrial Policy Forum* (MIPF). By expanding UNIDO's policy advisory services, the MIPF strengthens the Organization's brokering role, and positions it at the forefront of discussions on industrial policy.

MIPF Inaugural Edition 2023

The MIPF's inaugural edition took place from 20–21 March 2023. It convened around 500 attendees with various backgrounds from over 70 countries, representing geographical regions from around the world. The Forum received strong positive feedback from

Member States and participants, featured an impressive line-up of panellists, including ministers, internationally renowned scholars such as **Jeffrey Sachs** and **Mariana Mazzucato**, and industrial development practitioners and experts.

Key messages from the Forum

The Forum's first day consisted of **high-level discussions on the Future of Industrial Policy**, followed on Day 2 by exchanges on practical experiences around the implementation of concrete policy measures in different policy areas and country contexts.¹

The event's three key takeaways are:

- ▶ **Industrial policies must be purpose-oriented:** the SDGs must be actively embedded in industrial policies;
- ▶ **Large-scale transformations can only be realized through inter-governmental coordination:** countries must collaborate to achieve regional scale;
- ▶ **Greater investments are crucial:** strategies must be supported by corresponding financial resources.

Scaling up the MIPF

The primary motivation for expanding the MIPF derives from a careful analysis of the lessons gleaned from its inaugural edition. These insights will guide the scale-up phase and serve as the foundation for future editions of the MIPF. These are:

- ▶ **Facilitate greater interactivity** by adopting an in-person format that fosters direct engagement among participants;
- ▶ **Maintain the MIPF Desk** as the dedicated administrative body responsible for communication, coordination, engagement with Member States and logistical support;
- ▶ **Foster partnerships** to nurture an enabling environment to collectively advance industrial policy expertise.

Towards long-term consolidation

The MIPF is an integral component of UNIDO's efforts to enhance industrial intelligence and capacity development. As such, it plays a crucial role in facilitating voluntary exchange of best practices and knowledge on innovative approaches to industrial policy. Additionally, it provides a global platform to foster collaborative agreements on industrial development. UNIDO invites Member States and international organizations that share common strategic priorities in industrial policy to join in scaling up and consolidating the MIPF.

Contact

MIPF@UNIDO.org

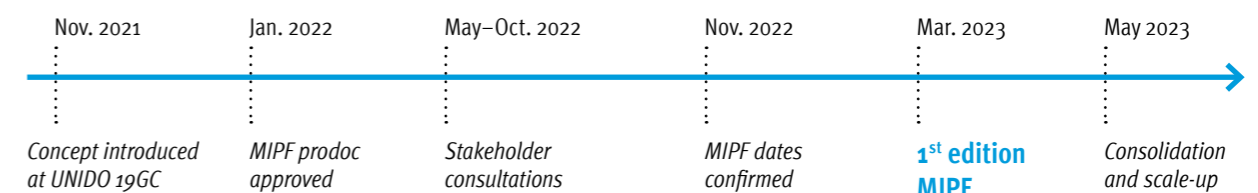
About the Forum

The official launch of UNIDO's MIPF took place during a side event at UNIDO's 19th General Conference in November 2021. In January 2022, UNIDO allocated seed funding for the preparation of the concept and the organization of the first edition of the Forum as a pilot activity intended to inform its consolidation and scaling up. **Figure 1** provides a schematic of the timeline with relevant milestones for the establishment of the MIPF.

The MIPF is consistent with UNIDO's mandate of "*Strengthening knowledge and institutions*", which intends to enhance the knowledge base for inclusive and sustainable development and institutional capacity at the technical, policy and normative level.² Through its engagement in industrial policy-oriented research and the delivery of specialized industrial policy advisory services to Member States, UNIDO identified an urgent need for a forum to facilitate multilateral policy dialogue and knowledge sharing on industrial policy matters.

UNIDO is in a privileged position to address this need, building on its accumulated expertise in fostering global dialogues around industrial development matters. In line with UNIDO's motto '*Progress by innovation*', the MIPF is part of UNIDO's commitment to foster knowledge sharing on industrial policy for the benefit of all.

Figure 1: Timeline of the MIPF's development



¹ Recordings available in the MIPF's dedicated YouTube channel (<https://www.youtube.com/@mipfunido>).

² UNIDO (2017), *Medium-term programme framework 2018–2021. Proposal on "Strengthening knowledge and institutions"* Note by the Secretariat (GC.17/6). United Nations Industrial Development Organization. <https://undocs.org/pdf?symbol=en/GC.17/6>

By focusing on good policy practices, the MIPF contributes to the Organization’s ability to facilitate inter-governmental dialogue and international coordination around industrial policy matters. The Forum enables UNIDO to strengthen its brokering role by allowing policymakers to engage with other stakeholders in different stages of the industrial policy process, from formulation and design to implementation, monitoring and evaluation. Hence, The MIPF is an integral component of UNIDO’s support for industrial intelligence capacity development (Figure 2).

In short, the MIPF is a global platform for sharing knowledge and best practices related to the different stages of the industrial policymaking cycle, from policy formu-

lation and design to implementation, monitoring and evaluation of industrial policies. Its primary objectives are to facilitate the exchange of industrial policy knowledge among Member States and to foster engagement between policymakers, academia and industrial practitioners on successful industrial policy experiences that may be relevant for Member States.

The MIPF’s 2023 edition was a pilot activity to inform future consolidation and scaling up of the Forum. The goal going forward is to integrate it with other UNIDO global forum activities and build partnerships within the industrial development community to ensure the Forum’s sustainability.

MIPF Inaugural Edition 2023

MIPF 2023 in numbers

The inaugural edition of MIPF took place in a hybrid format on 20–21 March 2023, with participants gathering in person at UNIDO Headquarters in Vienna, and virtually via the Zoom platform. Around 500 attendees, including high-level policymakers and world-leading industrial development experts, explored how contemporary industrial policy can be effectively leveraged to accelerate progress on the Sustainable Development Goals (SDGs), most notably SDG9 “Industry, Innovation and Infrastructure”.

The 2023 edition occurred over two days with sessions dedicated to political statements, keynotes by industry representatives and prominent academics, and panel discussions. For a full overview of the programme, see Annex 1.

The first day of the Forum focused on *the Future of Industrial Policy* and how industrial policy can contribute to accelerate achievement of the SDGs, particularly in developing countries. Figure 3 presents the total number of online participants (300 on the first day). The second day consisted of four interactive learning sessions on how to harness industrial policy to develop solutions to climate change, and to address the opportunities and challenges emerging from the digitalization of manufacturing. A total of 261 unique online participants attended the second day.

Figure 4 illustrates the level of interest in the different sessions. The Member State endorsements and the keynote address of Professor Jeffrey Sachs attracted the strongest interest, closely followed by the high-level

Figure 2: UNIDO’s approach to industrial policy advisory services

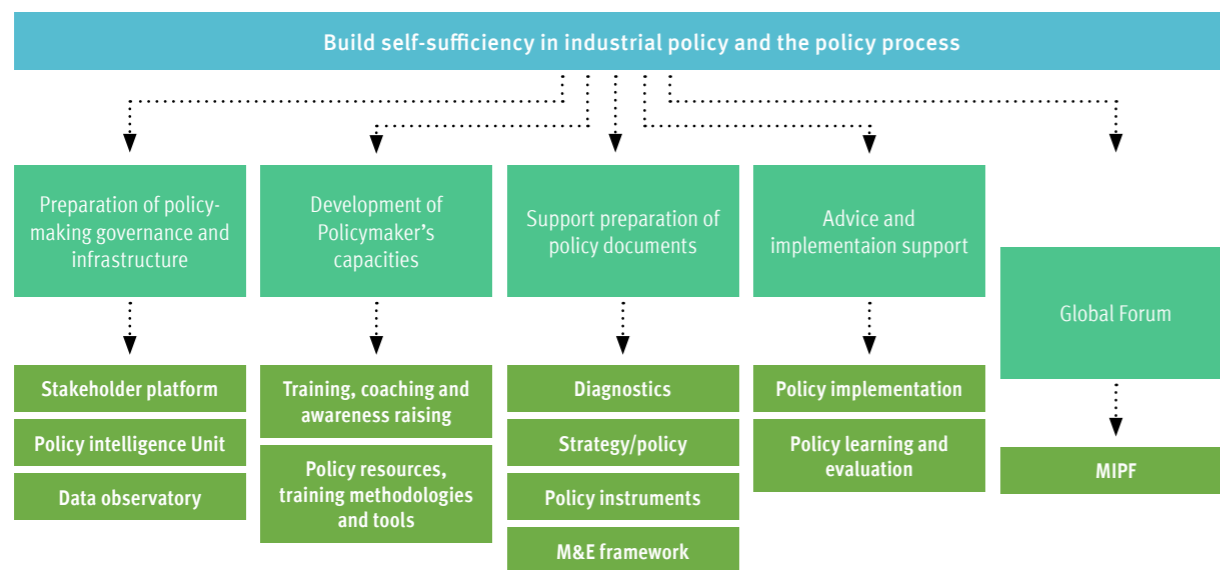
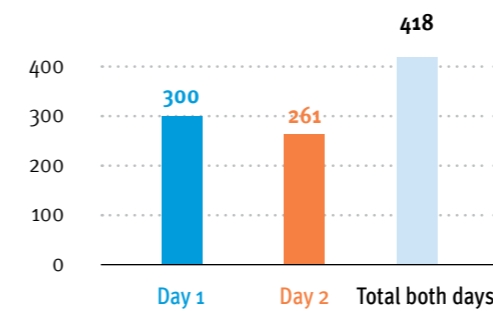
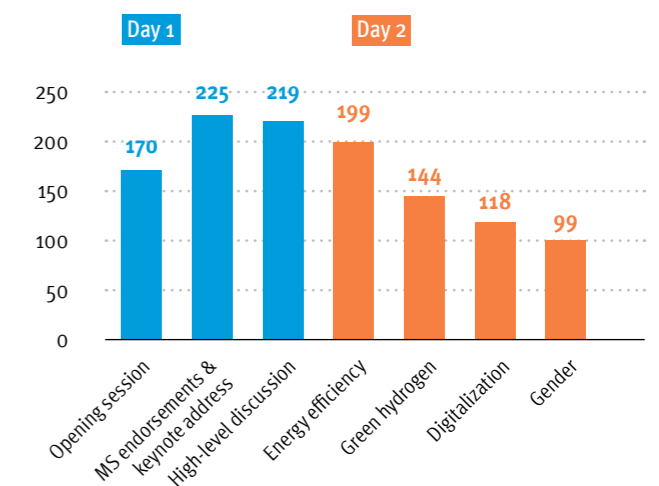


Figure 3: Total number of unique online attendees



Source: MIPF Zoom

Figure 4: Online attendance per session



Source: MIPF online attendance

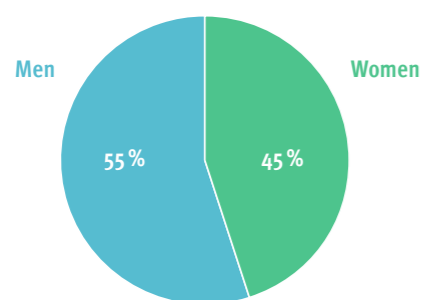
discussion on *the Future of Industrial Policy*. On Day 2, the session *Industrial Policy for Energy Efficiency* attracted the highest number of participants.

The MIPF team set out a target of securing at least 40 per cent female speakers in its experts' line up. **Figure 5** shows that this target was achieved, i.e. the MIPF featured a balanced gender distribution among speakers.

Similarly, **Figure 6** presents the diversity of professional backgrounds among the Forum's attendees. In addition to delegates from Permanent Missions and policymakers from Member States, strong interest in the Forum was also expressed by private sector representatives and NGOs.

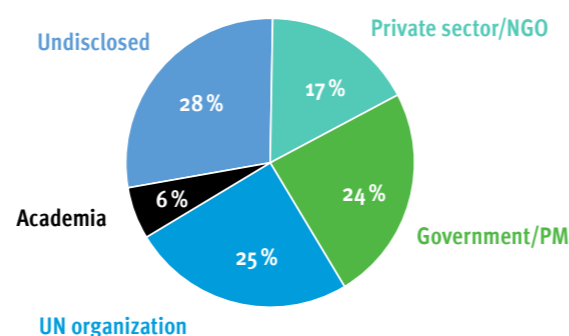
The Forum achieved a balanced distribution of speakers and participants across all regions of the globe. **Figure 7** illustrates that the Asia-Pacific region was the most strongly represented region, comprising 25 per cent of all participants, with Europe following closely behind.

Figure 5: Gender distribution of MIPF panellists



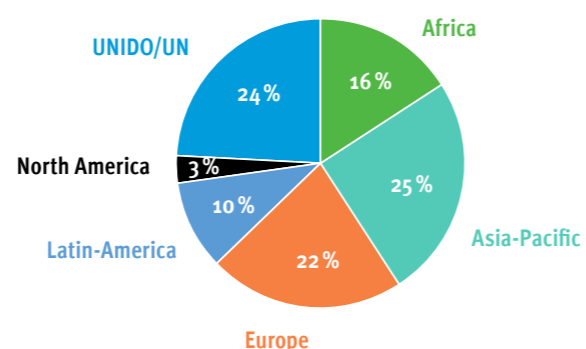
Source: MIPF panellists

Figure 6: Attendance distribution according to professional background



Source: MIPF Zoom and conference services

Figure 7: Attendance distribution according to geographical background



Data: MIPF Zoom and conference services

Summary of the MIPF proceedings

Day 1 of the MIPF

On the first day of the Forum, high-level policymakers and experts shared their practical knowledge and experiences on the necessary ingredients of industrial policy to advance the 2030 Agenda. The opening ceremony featured UNIDO's Director General, Gerd Müller, who inaugurated the MIPF with his opening statement, and Industrial Development Board (IDB) President, H.E. Am-

bassador Solano, Costa Rica. Following endorsements and statements from Member States, including several Ministers and ministerial-level speakers, Prof. Jeffrey Sachs, Director of the Center for Sustainable Development at Columbia University, took the floor to deliver his keynote address. The first day concluded with a high-level session on *the Future of Industrial Policy*. A summary of the key takeaways from Day 1 is provided below:



Photo 1: Professor Jeffrey Sachs delivered the Forum's keynote address



Photo 2: UNIDO Director General Gerd Müller opened the Forum

- 1 The outbreak of COVID-19, and the triple planetary crises of climate change, biodiversity loss and pollution have shown that any progress made towards the achievement of the SDGs can easily be reversed.
- 2 A substantial increase in financing is necessary to achieve structural transformations, but financing continues to be highly lopsided towards advanced economies.
- 3 Effective public policies are necessary to achieve structural transformations, which requires active participation of all stakeholders (i.e. the public and private sectors in collaboration with research and development (R&D) institutions (academia) and the finance sector), alongside regulatory tools, and frameworks as well as standards (decarbonization, energy transition (increasing energy efficiency, green hydrogen, etc.), digitalization/technology, innovation, infrastructure, gender equality, education and skills). These policies must be accompanied by transparency and accountability.
- 4 Effective industrial policy implementation is challenging. Governments must set a long-term planning horizon, take the country's industrial capabilities into consideration, and recognize that policy design differs from policy implementation.

5 Large-scale transformations (see point 3) can only be achieved with broad and integrated industrial policies (see point 7) and government interventions (e.g. through financing or regulation) in collaboration with the private sector, finance sector and academia;

6 No country acting alone is able to address the challenges we face today. Large-scale transformations can best be achieved if they entail regional collaboration.

7 Industrial policies must be purpose-oriented, and the SDGs must be actively embedded in them; moreover, a combination of policies (e.g. integration of industrial with technology, innovation, energy, climate, education, gender policies) will be necessary to achieve sustainable and inclusive industrial development (i.e. ensure a maximization of synergies);

8 Incentives for investments will be key. ‘Conditionality’ may need to be explored as a way to accelerate the large-scale transformations necessary for the achievement of the SDGs (see point 5).

Day 2 of the MIPF

On the second day of the MIPF, the focus shifted to the implementation of action-oriented policy measures in different policy areas and country contexts. This was achieved through four thematic learning sessions intended to facilitate knowledge and experience sharing of policymaking experiences on an operational level.

Professor Jeffrey Sachs delivered the opening remarks for the interactive learning sessions on Day 2. His main argument is that governments need to plan sustainably, i.e. combine the economic, social and environmental dimensions in their policy planning. Professor Sachs put forward six key points:

- 1 Governments must prioritize SDG-based planning, that is, plan policies that consider economic, social and environmental aspects. Ministries need training in how to address these three dimensions to plan effectively.
- 2 Long-term planning is crucial for mapping out the long-term direction of policies. A time horizon of 20 years is necessary. This is particularly difficult for poor countries due to their lack of financing (see point 6).
- 3 Public policy must be combined with technological upgrading, which requires the involvement of technical experts (e.g. engineers, etc.).
- 4 Transcending the national level and cooperating on a regional scale to apply technologies and build infrastructure.
- 5 Training, education and high-quality educational material are key. Online education provides a solution to upgrade skills as it allows workers to be flexible (e.g. to participate in training after work).
- 6 Financing and investment are crucial, yet current financing for developing countries is inadequate. Credit is expensive for poor countries for unfair reasons.



Photo 3: Jeffrey Sachs opened Day 2

Professor Sachs therefore urges developing countries to turn to their respective development bank, which offer fair financing for 30-40 years of maturity. In addition, he urges countries in one region to join together to force development banks to increase the scale of financing they provide to developing countries.

Industrial Policy for Energy Efficiency

Energy efficiency is crucial for decarbonization. It is a very cost-effective way to expand energy generation and expand renewable energy sources. However, the world is not on track to achieve the goal of doubling the rate of energy efficiency by 2030 as called upon in SDG7. Two key challenges prevent the scaling up of energy efficiency tools in businesses:

- 1 An overall lack of knowledge, both at the technical level (‘how to’), as well as lack of awareness of the benefits of energy efficiency; and
- 2 Insufficient knowledge about the availability of and/or inadequacy of policy tools and incentives, including sufficient financing, which prevents businesses from investing more in energy efficient practices and technologies.

The first recommendation emerging from the discussion at the MIPF is that countries need to raise awareness about energy efficiency measures:

- ▶ Egypt integrated energy efficiency measures as part of its industrial policies through a national energy efficiency plan from 2019 to 2022 and the country’s 2030 industrial strategy. In addition, Egypt has taken action to raise awareness through the inclusion of data collection, training and the launch of a national energy balance, which is a framework that combines commodity balances to gain an overview of a country’s energy system.



Photo 4: Yuko Yasunaga opened the session “Industrial Policy for Energy Efficiency”

The second recommendation is to set up a suitable regulatory framework combined with specific policy measures to encourage energy efficiency:

- ▶ Austria set specific energy efficiency targets which were achieved in 2019 and subsequently introduced the goal of reducing of its energy consumption by 1/5th by 2030.
- ▶ Two distinct examples from Egypt are first the cut in electricity subsidies to stimulate efficiency, and secondly, the introduction of the Industrial Motors Energy Efficiency Programme, which established a conducive legal and regulatory framework for energy efficient motors in Egypt. This includes monitoring motors’ efficiency, establishing a minimum energy efficiency guarantee and the regulation of imports of panels.
- ▶ According to the International Energy Agency’s (IEA) policy packages, industrial energy efficiency policies are most efficient if they combine a mix of regulations (in terms of energy use, motors), information (benchmarking and knowledge sharing) and incentives (subsidies, tax incentives). Moreover, voluntary measures—measures that are put in place based on dialogue with stakeholders—tend to be more effective than mandatory measures that are imposed.



Photo 5: Hydrogen Europe CEO, Jorgo Chatzimarkakis, presented at the session “Industrial Policy for Green Hydrogen”

Industrial Policy for Green Hydrogen

Green hydrogen has the potential of decarbonizing hard-to-abate industries and to promote industrial development. By endorsing renewables and substituting much of the fossil fuel economy in the future, green hydrogen can become a real gamechanger for developing countries. However, many challenges remain for the achievement of a just hydrogen transition. The main challenges include:

- 1 lack of infrastructure to produce green hydrogen due to limited electrolyser capacity and to transport it (e.g. via pipelines);
- 2 the need for capacity development, i.e. providing domestic industries with the necessary skills and training; and
- 3 lack of investment to make hydrogen projects bankable.

The current structure of hydrogen markets are evolving towards an oligopsony, with many sellers but only a handful of buyers. This may limit the potential of domes-

tic industrial development and the creation of new industries in developing countries. Industries favour market conditions where affordable energy is widely available. This opens up opportunities in developing countries that offer renewable energy sources at affordable costs.

Countries need to harness the opportunities green hydrogen present to develop their domestic infrastructure and industrial capabilities.

Recommendation 1 is that countries need to promote the expansion of their industrial capabilities by developing a dedicated industrial strategy:

- ▶ Morocco has designed a national green hydrogen roadmap with the aim of creating an industrial sector for green hydrogen and achieve a clean energy transition. With a high potential in renewable energy sources, Morocco is strategically targeting the development of a global green hydrogen value chain by actively engaging with public and private sector stakeholders. Morocco

plans to create domestic green hydrogen clusters and to replace ammonia imports with local production by developing the local market. The country also envisages a high demand potential in Europe and aims to collaborate with private sector actors to export green energy.

- ▶ Argentina developed the 2030 National Low-Emission Hydrogen Strategy, which focuses on public-private partnerships, the industrial application of hydrogen, and investment in R&D. The strategy builds on the first regulatory hydrogen framework, which was enacted in 2006. Argentina aims to achieve a target of more than 5-GW of electrolysis capacity by 2030 and to scale up its domestic hydrogen market .

Recommendation 2 is setting clear and major targets to stimulate investment:

- ▶ The European Union has set ambitious targets for hydrogen until 2030, but to benefit from this opportunity, policymakers and experts agree that certain pre-conditions must be met. For example, the EU has set targets

Climbing the Ladder of Industrial Digitalization

To achieve digital transformation, multiple collaborative interventions are needed to increase technological and human capital capacity development. Financing and investment in infrastructure, as well as in education and training, are key to support developing countries’ climb up the technological ladder.

Second, sound regulatory frameworks must be in place to create an enabling environment for the application of digital technologies in industry and to promote readiness of both markets and mindsets.

Digitalization in industrial SMEs is marked by four main challenges:

to produce 10 million tonnes of hydrogen and import 10 million tonnes of hydrogen. Thereby, the EU aims to stimulate both domestic market production in developing countries by ramping up demand creation and investments from Europe in developing countries.

Recommendation 3 is to prevent unfair exploitation of developing countries. The panellists agreed that developing countries should introduce policies that stimulate the use of green hydrogen to manufacture and export (basic) products:

- ▶ For example, in Morocco, developers could utilize green hydrogen to produce green ammonia for export and the same could apply to the production of green steel.

- 1 how to gain basic capabilities to engage in digital transformation;
- 2 how to address the scarcity of skilled labour;
- 3 how to overcome low technological maturity and improve digital literacy; and
- 4 how to address capital shortages.

The panellists recommend treating digitalization as a journey through public-private collaborations. The session presented two different approaches:



Photo 6: Marco Kamiya moderated the session “Climbing the Ladder of industrial Digitalization”

- ▶ In Brazil, the State of São Paulo’s journey to digital transformation is built on Brazil’s Digital Transformation Strategy. The **programme generates a collaborative ecosystem of support**. It entails efforts to: (i) train and

educate the labour force in digital technologies through Brazil’s national service for industrial training, the Serviço Nacional de Aprendizagem Industrial (SENAI); (ii) mobilize engineering and business schools to offer short-term training programmes for executive management (i.e. convince them that this is a feasible process), and (iii) engage leading large companies capable of inducing transformation.

- ▶ In India, the State of Tamil Nadu is addressing this issue through the development of an advanced manufacturing hub in Tamil Nadu. Advanced manufacturing is viewed as a journey as well, with the government collaborating with three leading companies in the field through public-private partnerships to set up two innovation centres to house start-ups while facilitating access to finance through grants.

Gender and Industrial Policy

Gender equality and the empowerment of women are deeply anchored in the 2030 Agenda and the SDGs. Yet despite evidence that increasing the rate of women’s participation in industry has a positive impact on productivity and efficiency, they continue to be underrepresented in industry. Moreover, whenever they are included, they are not perceived as “agents of change”. This translates into several key challenges:

- 1 Low representation of women in high-technology sectors due to structural and cultural barriers to empower women in industry;
- 2 Lack of access to education and training and limited opportunities for career development, impeding women’s ability to shape and influence industrial policy;
- 3 Lack of women’s representation in leadership and managerial positions in the industrial sector, which can result in policies that fail to consider/ address the needs

and experiences of female workers or inadvertently reinforce gender inequalities in industry.

The panellists agreed that there is still a lot of room for improvement in the design of gender transformative industrial policies. The imperative for establishing a “gender-enabling environment” is now more pressing than ever. The panellists put forth several recommendations to address these challenges, including:

The development of gender transformative industrial policies should support better industrial performance and changes in social norms.

- ▶ For example, in Spain, the Industrial Plan “Basque Industry 4.0” aims to promote the digital transformation of Basque industries by including specific measures to address the gender divide in the science and transformative technology sector.



Photo 7: Fernando Cantu Balzadua moderating the discussion with panellists Jennifer Castañeda-Navarrete, Fatou Haidara and Cecilia Ugaz Estrada (from left to right)

- ▶ In South Africa, an ongoing initiative promotes women’s economic empowerment in green industry to tackle the issues of gender inequality and energy crisis.

Collection of gender disaggregated data will help achieve more effective implementation of gender sensitive approaches and facilitate sustainable industrialization.

- ▶ In the Republic of Korea, findings from a comprehensive study on “Gender and Plastic Circular Economy” highlight the disparities in the share, impact and roles of women and men in various industrial subsectors related to the circular economy.
- ▶ In 2021, South Africa participated in the Policy Assessment for the Economic Empowerment of Women in Green Industry. The study found that although South Africa has made progress in mainstreaming gender into its green industry policies, gaps still exist that need to be addressed, such as the lack of a clear gender analysis

in policy documents and insufficient implementation of gender-responsive budgeting.

Action is needed to acknowledge that gender equality is both essential for achieving the SDGs and fundamental for improving industrial performance.

- ▶ The study “Impact of Women in Industrial Competitiveness”, conducted by the Government of the Basque Country (Spain) in 2023, reveals that greater gender equality and diversity led to increased competitiveness of companies in the region. These companies with improved gender equality achieved higher growth rates of more than 10 per cent during the 2019–2021 period compared to companies with a lower gender balance. Moreover, companies that scored higher on gender equality indicators performed better in research and innovation metrics. This highlights the critical role of gender equality in promoting sustainable economic growth and could be replicated in other contexts.

Way Forward

Drawing on the results of the 2023 edition of the MIPF, this section outlines concrete steps that need to be taken to cultivate the Forum's consolidation and scalability.

GOVERNANCE

The organizing team will continue to assume responsibility for coordinating and implementing future editions of the MIPF, including organizing preparatory events, managing logistics, developing the Forum's content, promoting networking and partnership building, as well as facilitating bilateral and multilateral exchanges. The organizing team is exploring the possibility of establishing an Advisory Committee consisting of prominent academics and subject matter experts to advise on the strategic direction and content of future MIPF editions. This idea has already been proposed to Member States but requires further discussion and the definition of a concrete plan for confirming the Advisory Committee.

TARGET AUDIENCE

The MIPF will continue to target a range of stakeholders and audiences, including Member States and other countries (governments), international organizations with a mandate in industrial development, academia and specialized media. In addition, enhancing private sector participation remains a valuable input to supplement knowledge exchange and guide future industrial development interventions, as emphasized by Member States.

THEMATIC FOCUS

The organizing team will retain responsibility for the selection of MIPF topics in consultation with Member States and other stakeholders, with the aim of reflecting Member States' collective interests and providing practical guidance. Member States that wish to share their industrial policy learning experiences are cordially invited to contribute to the Forum.

INTERACTIVE LEARNING MECHANISM

The MIPF will continue to use interactive learning sessions to facilitate knowledge sharing between Member States on concrete policymaking experiences related to

industrial policy interventions. Such sessions provide a dedicated space for Forum participants to exchange information and elaborate possible measures to achieve industrial development goals. UNIDO will identify topics, lead the dialogue and document the lessons learned to foster networking among participants. Learning opportunities can be greatly enhanced by increasing in-person participation of panellists and subject matter experts from Member States in the MIPF.

To create concrete value for Member States, the approach of the interactive learning sessions needs to be further refined and stronger in-person participation of panellists and subject matter experts from Member States in the MIPF supported. UNIDO will explore ways to facilitate interaction among participants and reflect these in the future programme and structure of the MIPF.

ONGOING ENGAGEMENT WITH MEMBER STATES

UNIDO plans to continue its close engagement with Member States as part of the process of defining the MIPF's content and format. One immediate action is convening a debrief session with the Member States, which will furthermore serve to collect inputs towards scaling up of the MIPF, and to explore opportunities for collaboration and partnership building. Additionally, UNIDO is open to conducting bilateral consultations with interested Member States to gain insights into their specific needs and priorities in the industrial policy process, which could be of interest in the MIPF context.

PARTNERSHIP BUILDING

To ensure the Forum's sustainability, the MIPF team is exploring potential partnerships for the organization of the Forum, including funding options. Partnerships could also be established with multilateral institutions that share common strategic priorities and a vision of strengthening knowledge sharing and mutual learning on policy matters.

Appendix 1: MIPF Agenda

MULTILATERAL INDUSTRIAL POLICY FORUM 2023

Programme

Background

The UNIDO Multilateral Industrial Policy Forum (MIPF) is a global industrial policy forum that broadens and scales the scope of UNIDO's industrial policy-related advisory services. The MIPF's primary objective to provide a mutual learning platform for a multilateral policy dialogue on industrial policy matters, with emphasis on the contribution of industrial policy to the achievement of the Sustainable Development Goals (SDGs). This year, the MIPF will focus on industrial policies for digitalization of manufacturing and sustainable industrialization.

Date and Venue:

20–21 March 2023

Hybrid mode: In person at CR-3, Vienna International Centre, Vienna / Online:

Day 1, 20 March 2023

14:00–14:15	<p>OPENING CEREMONY <i>Moderated by</i> MR. CRISTIANO PASINI – Director, Division of Capacity Development, Industrial Policy Advice and Statistics, UNIDO</p> <p>Opening remarks MR. GERD MÜLLER – UNIDO Director General</p> <p>Statement on behalf of the UNIDO Member States H.E. MR. ALEJANDRO SOLANO ORTIZ – President of the Industrial Development Board, Permanent Representative of Costa Rica to the United Nations Office in Vienna</p>
14:15–15:00	<p>STATEMENTS BY MEMBER STATES <i>Moderated by</i> MS. SELMA PRODANOVIC</p> <ul style="list-style-type: none"> H.E. MS. MERCEDES MARCÓ DEL PONT (Argentina) – Secretary of Strategic Affairs H.E. MR. JULIO JOSÉ PRADO (Ecuador) – Minister of Production, External Trade, Investments and Fisheries H.E. MR. YOUSEF AL SHAMALI (Jordan) – Minister of Industry Trade and Supply and Minister of Labour H.E. MR. RAÚL PÉREZ REYES ESPEJO (Peru) – Minister of Production H.E. MR. KHALED OSAILY (State of Palestine) – Minister of National Economy MS. XU XIAOLAN (China) – Vice Minister, Ministry of Industry and Information Technology MR. ÁDÁM NAGY (Hungary) – Deputy State Secretary for Industrial Policy, Ministry for National Economy MS. SUSANA PECOY SANTORO (Uruguay) – National Director of Industries, Ministry of Energy, Industry and Mining

	<p>KEYNOTE ADDRESS MR. JEFFREY SACHS – Director of the Center for Sustainable Development, Columbia University</p>
15:00–15:15	<p>Coffee break & networking provided by UNIDO – Room Co4, VIC, 4th floor</p>
15:15–16:45	<p>HIGH-LEVEL SEGMENT ON THE FUTURE OF INDUSTRIAL POLICY <i>Moderated by</i> MS. SELMA PRODANOVIC</p> <p><i>Participants of the high-level segment will discuss the future of industrial policy and how to foster industrial development for the achievement of the 2030 Agenda for Sustainable Development and specifically SDG 9 on industry, innovation and infrastructure.</i></p> <p>Introductory remarks MS. MARIANA MAZZUCATO – Professor in the Economics of Innovation and Public Value, University College London, founding director of the UCL Institute for Innovation and Public Purpose (IIPP) – <i>pre-recorded message</i> MS. RAGNHEIÐUR ELÍN ÁRNADÓTTIR (OECD) – Director, OECD Development Centre – <i>pre-recorded message</i></p> <p>Panellists:</p> <ul style="list-style-type: none"> MS. JAYATI GHOSH (Jawaharlal Nehru University) – Chairperson of the Centre for Economic Studies and Planning – <i>online</i> MR. RICHARD KOZUL-WRIGHT (UNCTAD) – Director of the Globalisation and Development Strategies Division – <i>online</i> MR. CARLOS LOPES (University of Cape Town) – Professor, Former Executive Secretary of the UN-Economic Commission for Africa (UNECA) – <i>online</i> MR. WILSON PERES – former adviser to the Executive Secretariat at the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) – <i>online</i> MR. JEFFREY SACHS (Columbia University) – Director of the Center for Sustainable Development MR. CIYONG ZOU (UNIDO) – Deputy to the Director General and Managing Director, Directorate of Technical Cooperation and Sustainable Industrial Development
16:45–16:50	<p>Q&A AND CLOSING REMARKS MS. SELMA PRODANOVIC</p>
	<p style="text-align: center;">Day 2, 21 March 2023</p>
10:00–10:10	<p>Welcome by MR. CRISTIANO PASINI – Director, Division of Capacity Development, Industrial Policy Advice and Statistics, UNIDO</p> <p>Opening remarks MR. JEFFREY SACHS – Director of the Center for Sustainable Development at Columbia University</p>
10:10–17:40	<p>INTERACTIVE LEARNING SESSIONS</p>

<p>10:10-11:45</p>	<p>“Industrial Policy for Energy Efficiency”</p> <p><i>The session will showcase how promotion of energy efficiency brings positive spill overs in terms of technological change and production process optimization. Participants will discuss ways in which policies aimed at reducing energy consumption can be consistent with economic competitiveness.</i></p> <p>Moderated by MS. HANAN HANZAZ FEHRI (UNIDO) – Chief Regional Bureau, Arab Region</p> <p>Opening remarks MR. YUKO YASUNAGA (UNIDO) – Deputy to the Director General and Managing Director, Directorate of Corporate Services and Operations</p> <p>Introductory presentation MS. RANA GHONEIM (UNIDO) – Chief, Industrial Systems and Industrial Decarbonization Unit – <i>online</i></p> <p>Presentation on policy frameworks for energy efficiency MS. EMMA MOONEY (International Energy Agency) – Programme Officer, Energy Efficiency Division – <i>online</i></p> <p>Moderated discussion, followed by Q&A Session</p> <ul style="list-style-type: none"> • MR. MOHAMED ABDUL-KAREEM (Egypt) – Chairman of Industrial Development Authority, Ministry of Trade and Industry – <i>online</i> • MR. THOMAS EIBL (Austria) – Senior Advisor at the Economic Policy Department, the Austrian Federal Economic Chamber – <i>online</i> • MS. DORA LARYEA (Ghana) – Senior Programme Officer at the Ministry of Energy, Power Directorate – <i>online</i>
<p>11:45-13:15</p>	<p>“Industrial Policy for Green Hydrogen”</p> <p><i>The session will offer insights into elements to be considered when developing strategies for enabling the transition to a green hydrogen economy, harnessing its opportunities, and overcoming current bottlenecks that slow down the development of the green hydrogen industry in developing countries.</i></p> <p>Moderated by MS. PETRA SCHWAGER (UNIDO) – Chief, Division of Climate and Technology Partnerships</p> <p>Opening remarks MR. GUNTHER BEGER (UNIDO) – Managing Director, Directorate of SDG Innovation and Economic Transformation</p> <p>Introductory presentation MS. SMEETA FOKEER (UNIDO) – Research and Industrial Policy Officer, Division of Climate & Technology Partnerships – <i>online</i></p> <p>Presentation of policy experiences</p> <ul style="list-style-type: none"> • The case of Morocco, by MR. SAMIR RACHIDI (Morocco) – Acting General Manager at IRESEN – <i>online</i> • The case of Argentina, by MS. VERONICA ROBERT (Argentina) – Undersecretary of Strategy for Development in the Presidency of Argentina – <i>online</i> <p>Moderated discussion, followed by Q&A Session</p> <ul style="list-style-type: none"> • MR. SAMIR RACHIDI (Morocco) – Acting General Manager at IRESEN – <i>online</i> • MS. VERONICA ROBERT (Argentina) – Undersecretary of Strategy for Development in the Presidency of Argentina – <i>online</i> • MR. EMANUELE BIANCO (IRENA) – Programme Officer – <i>online</i> • MR. JOHN MATHEWS (Macquarie University) – Professor Emeritus, Macquarie Business School, Macquarie University • MR. JORGO CHATZIMARKAKIS (Hydrogen Europe) – CEO

<p>13:15-14:15</p>	<p>Break</p>
<p>14:15-15:45</p>	<p>“Climbing the Ladder of Digital Transformation”</p> <p><i>The session will facilitate knowledge exchange on policies to create a suitable industrial ecosystem around the diffusion, absorption and adoption of advanced digital production technologies by industrial SMEs in developing countries.</i></p> <p>Moderated by MR. MARCO KAMIYA (UNIDO) – Chief, Division of Digital Transformation & AI Strategies</p> <p>Opening remarks MS. CECILIA UGAZ ESTRADA (UNIDO) – Director, Gender Equality and Empowerment of Women Unit</p> <p>Introductory presentation MR. ALEJANDRO LAVOPA (UNIDO) – Research and Industrial Policy Officer, Industrial Policy Research Unit</p> <p>Presentation of policy experiences</p> <ul style="list-style-type: none"> • Digitalization of industrial SMEs in São Paulo, Brazil by MR. LUCIANO COUTINHO – Chairman of the Council for Medium and Small Industrial Enterprises (COMPI) at the Federation of Industries of the State of São Paulo (FIESP) and Professor at the State University of Campinas – <i>online</i> • Digitalization of industrial SMEs in Tamil Nadu, India, by MR. GAURAV DAGA (India) – Special Secretary to the Industries Department, Tamil Nadu – <i>online</i> • Strengthening implementation design of artificial intelligence (AI) eco-system in Jordan, by MS. LAMA ARABIAT (Jordan) – Head of Artificial Intelligence at Ministry of Digital Economy and Entrepreneurship – <i>online</i> • MS. ZHANG XIAOYAN (China) – Vice-president of the China Center for Information Industry Development (CCID) <p>Moderated discussion, followed by Q&A Session</p> <ul style="list-style-type: none"> • MR. LUCIANO GALVÃO COUTINHO (Brazil) – Chairman of the Council for Medium and Small Industrial Enterprises (COMPI) at the Federation of Industries of the State of São Paulo (FIESP) and Professor at the State University of Campinas – <i>online</i> • MS. ZHANG XIAOYAN (China) – Vice-president of the China Center for Information Industry Development (CCID) • MR. GAURAV DAGA (India) – Special Secretary to the Industries Department, Tamil Nadu – <i>online</i> • MS. LAMA ARABIAT (Jordan) – Head of Artificial Intelligence at Ministry of Digital Economy and Entrepreneurship – <i>online</i> • MS. ANNALISA PRIMI (OECD Development Centre) – Head of Structural Polices and Innovation Unit – <i>online</i> • MR. AXEL KLAPHAKE (GIZ) – Director, Division for Economic and Social Development, Digitalisation – <i>online</i>
<p>15:45-16:00</p>	<p>Coffee break and networking provided by UNIDO – Room Co4, VIC, 4th floor</p>
<p>16:00-17:30</p>	<p>“Gender and Industrial Policy”</p> <p><i>The session aims to foster dynamic dialogue between stakeholders committed to women’s empowerment in the industrial sector. Participants will discuss policy responses to evolving gender equality challenges due to the twin transformation towards digitalization of manufacturing and greening of the economy.</i></p> <p>Moderated by MR. FERNANDO CANTU-BAZALDUA (UNIDO) – Chief Statistician, Industrial Statistics & SDG 9 Reporting Unit</p>

Opening remarks

MS. FATOU HAIDARA (UNIDO) – Deputy to the Director General and Managing Director, Directorate of Global Partnerships and External Relations

Introductory presentation

MS. CECILIA UGAZ ESTRADA (UNIDO) – Director, Gender Equality and Empowerment of Women Unit

Presentation of policy experiences

The case of Spain, by MS. CRISTINA OYÓN – Director of Technology, Innovation and Sustainability, SPRI Group, Department of Economic Development, Sustainability and Environment, Basque Government – *online*

Moderated discussion, followed by Q&A Session

- MS. JENNIFER CASTAÑEDA-NAVARRETE (University of Cambridge) – Senior Policy Analyst, Policy Links, IfM Engage, Institute for Manufacturing – *online*
- MS. ANNELINE CHETTY (South Africa) – Chief Operations Officer, Industrial Competitiveness & Growth, Department of Trade and Industry – *online*
- MS. JOOYOUNG PARK (Seoul National University) – Associate Professor, Department of Civil and Environmental Engineering – *online*

17:30–17:40

Wrap-up and closing remarks

MR. CIYONG ZOU (UNIDO) – Deputy to the Director General and Managing Director, Directorate of Technical Cooperation and Sustainable Industrial Development

Appendix 2: MIPF Speakers' Biographies

MULTILATERAL INDUSTRIAL POLICY FORUM 2023

Biographies of Speakers

Day 1, 20 March 2023

OPENING CEREMONY



Gerd Müller

Director General of the United Nations Industrial Development Organization (UNIDO)

Gerd Müller, Director General of the United Nations Industrial Development Organization (UNIDO) since 10 December 2021, has had various leadership positions from an early stage in his career. Following his tenure as a Member of the European Parliament, he was appointed Parliamentary State Secretary at the Federal Ministry of Food, Agriculture and Consumer Protection in 2005. In 2013, he was appointed Federal Minister for Economic Cooperation and Development in the German government, a post he held until 2021. Müller has many years of experience in the fields of multilateral cooperation, sustainability, sustainable management and innovative agriculture. Implementing the 2030 Agenda for Sustainable Development, the Paris Agreement on climate action, the Convention on Biological Diversity, and the Beijing Declaration on Gender Equality are key focus areas of his work. Furthermore, he is a strong advocate of fair trade, and initiated legislation in Germany and the European Union on social and environmental standards along supply chains.



Cristiano Massimo Pasini

Director of the Division of Capacity Development, Industrial Policy Advice and Statistics at UNIDO

Cristiano Massimo Pasini, Director of the Division of Capacity Development, Industrial Policy Advice and Statistics at United Nations Industrial Development Organization (UNIDO) in Vienna, Austria has nearly 15 years of high-level professional experience in various managerial positions on industrial and socio-economic development, environment, poverty reduction, and post-war recovery in the Middle East and Latin America. Prior to his assignment in Vienna in October 2022, he was Director of the Regional Office of UNIDO for Mexico and Central America. Pasini also served as UNIDO Representative in Colombia (2019–2021), and Lebanon (2013–2019) leading UNIDO's strategic and programmatic engagements in those countries. Pasini served as UNIDO Country Coordinator for Iraq (2011–2013) and led several technical cooperation projects in SME development, industrial zones development and investment promotion from 2006–2011.



Alejandro Solano Ortiz

President of the Industrial Development Board and Permanent Representative of Costa Rica to the United Nations Office in Vienna

Alejandro Solano Ortiz is Ambassador of Costa Rica to Austria and Permanent Representative of Costa Rica to the United Nations Office in Vienna (UNOV), the International Atomic Energy Agency (IAEA), the Preparatory Commission of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), and the United Nations Industrial Development Organization (UNIDO). Previously, he held prominent positions such as Deputy Minister of Foreign Affairs (2014–2018); Minister Counsellor and Consul General at the Embassy of Costa Rica in Belgium (2010–2014); Director General of Foreign Policy at the Ministry of Foreign Affairs (2008–2010); and Minister Counsellor at the Permanent Mission of Costa Rica to the United Nations Office in Geneva (2001–2006). Solano Ortiz has held various posts in the Embassy of Costa Rica in Switzerland and Argentina, and started his career as a lawyer in Fallas Solano Law Firm. Solano Ortiz graduated from the University of Costa Rica and is an attorney-at-law. He also holds a Master of Science degree in International Affairs as well as in Aeronautical and Space Law.



Jeffrey Sachs

Professor and Director of the Center for Sustainable Development at Columbia University

Jeffrey Sachs is University Professor and Director of the Center for Sustainable Development at Columbia University, where he led the Earth Institute from 2002 until 2016. Previously, he spent over 20 years as professor at Harvard University. He is President of the UN Sustainable Development Solutions Network, Co-Chair of the Council of Engineers for the Energy Transition, Commissioner of the UN Broadband Commission for Development, academician of the Pontifical Academy of Social Sciences at the Vatican, and Tan Sri Jeffrey Cheah Honorary Distinguished Professor at Sunway University. He has been Special Advisor to three United Nations Secretaries-General, and currently serves as an SDG Advocate under Secretary General António Guterres. His recent awards include the 2022 Tang Prize in Sustainable Development, the Legion of Honor by decree of the President of the Republic of France, and the Order of the Cross from the President of Estonia. His most recent books are “The Ages of Globalization: Geography, Technology, and Institutions” (2020) and “Ethics in Action for Sustainable Development” (2022).



Selma Prodanovic

MIPF moderator, Vice President of the European Business Angel Network (EBAN) and founder of the SDG platform 1MillionStartups

Selma Prodanovic has been named Startup-Grande-Dame by the media, and is passionate about empowering people and creating a better future. She was awarded “TOP 100: Europe’s Most Influential Women in the Startup and VC Space” and “TOP 25 most active female business angel in Europe”. Prodanovic is an inspiring keynote speaker, serial entrepreneur, and investor. She is Vice President of the European Business Angel Network (EBAN), founder of the SDG platform 1MillionStartups, and initiator of the

EBAN Manifesto for Gender Balanced Investing. Prodanovic has personally coached over 500 startups and advised numerous global investors and corporations.

HIGH-LEVEL SEGMENT ON THE FUTURE OF INDUSTRIAL POLICY



Mariana Mazzucato

Professor in the Economics of Innovation and Public Value at University College London and Founding Director of the UCL Institute for Innovation and Public Purpose

Mariana Mazzucato is Professor in the Economics of Innovation and Public Value at University College London (UCL) where she is the Founding Director of the UCL Institute for Innovation and Public Purpose. Over the last two years, her work has influenced a new mission-oriented approach to EU innovation policy; redesigned a ‘challenge-oriented’ UK industrial policy; and helped create a new National Investment Bank in Scotland. Recent books include “Mission economy: A moonshot guide to changing capitalism” (2021), “The entrepreneurial state: debunking public vs private sector myths” (2011) and “The value of everything: making and taking in the global economy” (2017). She acts as Advisor to a wide range of governments and organizations around the world, including the Italian Prime Minister, the President of South Africa, the Vatican and the World Economic Forum. She has consulted public and private sector organizations around the world on the role of the state in modern capitalism and how to achieve smart, inclusive and sustainable economic growth.



Ragnheiður Elín Árnadóttir

Director OECD Development Centre

Ragnheiður Elín Árnadóttir has been the Director of OECD Development Centre since 16 August 2021. Árnadóttir served as Minister of Industry and Commerce in Iceland from 2013–2017 and was an elected Member of Parliament for the Independence Party from 2007–2016. Before being elected to Parliament, she was successively a political advisor to the Minister of Finance, the Minister of Foreign Affairs and the Prime Minister. She also worked for the Trade Council of Iceland both in New York and in Reykjavík. A non-resident Senior Fellow at the Atlantic Council’s Global Energy Centre, she was the Chairman of the Board of Directors of Duty Free Iceland, and a member of the Board of Directors of Landsvirkjun (national power company). Árnadóttir has a master’s degree in Foreign Service from Georgetown University in Washington, D.C., and a bachelor’s degree in Political Sciences from the University of Iceland. She attended the Georgetown Leadership Seminar in 2007 by invitation.



Jayati Ghosh

Professor of Economics at the University of Massachusetts Amherst

Jayati Ghosh taught economics at Jawaharlal Nehru University, New Delhi for nearly 35 years, and has been Professor of Economics at the University of Massachusetts Amherst, USA since January 2021. She has authored and/or edited over 200 scholarly articles and 20 books including “The making of a catastrophe: Covid-19 and the Indian economy”(2022); co-authored “Demonetisation decoded” (2017); co-edited “Elgar Handbook of Alternative Theories of Economic Development” (2014); “Never done and poorly paid: women’s work in globalising India” (2009). She has advised governments in India and other countries, including as Member of the National Knowledge Commission of India (2005–09). She was Executive Secretary of International Development Economics Associates, an international network of heterodox development economists, from 2002–2021. Ghosh has consulted various international organizations such as the ILO, UNDP, UNCTAD, UN-DESA, UNRISD and UN Women, and is a member of many international commissions, including the UN Secretary General’s High-Level Advisory Board on Effective Multilateralism.



Richard Kozul-Wright

Director of Globalization and Development Strategies Division at UNCTAD

Richard Kozul-Wright is Director of UNCTAD’s Globalization and Development Strategies Division. He has worked at the United Nations in both New York and Geneva. He has published widely on economic issues including in the Economic Journal, the Cambridge Journal of Economics, The Journal of Development Studies, and the Oxford Review of Economic Policy. He is the author of “The resistible rise of market fundamentalism” (with Paul Rayment) and “The case for a new Bretton Woods” (with Kevin Gallagher), and is co-editor of the “Oxford Handbook on Industrial Policy”. He has also co-edited volumes of Transnational Corporations and the Global Economy, Economic Insecurity and Development, Securing Peace, Climate Protection and Development and Industrial Policy, Transforming Economies: Making Industrial Policy Work for Growth, Jobs and Development with the International Labour Organization. He holds a PhD degree in economics from the University of Cambridge.



Carlos Lopes

Honorary Professor at the Nelson Mandela School of Public Governance at the University of Cape Town

Carlos Lopes is Honorary Professor at the Nelson Mandela School of Public Governance at the University of Cape Town and Visiting Professor at Sciences Po. He is an Associate Fellow at Chatham House, a visiting Senior Fellow at the Overseas Development Institute and 2022 Fellow at Oxford Martin School, University of Oxford. Specialized in development and strategic planning, he has authored and/or edited over 20 books and feature articles in Project Syndicate, CNN, Le Monde, Financial Times, China Daily, The Guardian, New African and Jeune Afrique. He has occupied prominent positions such as Executive Secretary of the Economic Commission for Africa (2012–2016), UN Assistant Secretary-General and Political Director

for Secretary-General Kofi Annan, African Union High Representative for Partnerships with Europe and a member of the African Union Reform Team led by President Paul Kagame. He is currently a member of the Advisory Council of the African Continental Free-Trade Area.



Wilson Peres

Senior Economic Affairs Officer at the Division of Production, Productivity and Management at the UN Economic Commission for Latin America and the Caribbean (ECLAC)

Wilson Peres is Senior Economic Affairs Officer at the Division of Production, Productivity and Management of the UN Economic Commission for Latin America and the Caribbean (ECLAC) in Santiago, Chile. He was previously the Chief of ECLAC’s Industrial and Technological Development Unit, Investment and Corporate Strategies Unit, and Innovation and ICT Unit. He has been a consultant to the OECD Development Center, the Organization of American States and the Mexican Government, as well as Visiting Research Fellow and Lecturer at the University of California, San Diego (UCSD), Professor of Industrial Organization and Theory of the Firm at the CIDE in Mexico City, and Professor of Development Strategies at the Universidad de Chile in Santiago. His publications include “The new digital revolution. From the consumer internet to the industrial internet” (2015), “Big data and open data as sustainability tools” (2014), and “Industrial policies in Latin America” (2013).



Ciyong Zou

Deputy to the Director General and Managing Director of the Directorate of Technical Cooperation and Sustainable Industrial Development at UNIDO

Ciyong Zou is Deputy to the Director General and Managing Director of the Directorate of Technical Cooperation and Sustainable Industrial Development, which oversees the Organization’s development of capacities for industrial development as well as industrial policy advice, statistics and research activities and the Organization’s normative contribution to achieving the Sustainable Development Goals. He is also the Director General’s Special Representative for the G77 and China. Joining UNIDO in 2013, Zou is the architect of UNIDO’s Programme for Country Partnership, and has guided the Organization’s field and strategic engagements. Before joining UNIDO, he performed multiple roles, including Deputy Director General of the International Department at the Chinese Ministry of Finance, Alternate to the Chinese Executive Director at the World Bank, and Global Environmental Facility Operational Focal Point for China. Zou holds a Ph.D. in Economics from China’s Ministry of Finance Graduate School of Research Institute for Fiscal Science.

Day 2, 21 March 2023

INTERACTIVE LEARNING SESSIONS

“Industrial Policy for Energy Efficiency”



Yuko Yasunaga

Deputy to the Director General and Managing Director of the Directorate of Corporate Services and Operations at UNIDO

Yuko Yasunaga is Deputy to the Director General and Managing Director of the Directorate of Corporate Services and Operations (COR), which is responsible and accountable for the management of UNIDO’s human, financial and material resources. He is also the Director General’s Special Representative for Asia. From 2017–2022, Yasunaga was Head of the UNIDO Investment and Technology Development Office, Tokyo, to promote private investment and technology from Japan to developing countries. Prior to working for UNIDO, he served as Vice President at Japan’s National Institute of Advanced Industrial Science and Technology, promoting research collaboration with the private sector. He has also served as Deputy-Director General for Industrial Science and Technology, Director of the Mineral Resource Development, for Gas Safety Regulation, and for Research and Development Promotion at Japan’s Ministry of Economy, Trade, and Industry. Yasunaga holds a Ph.D. in Engineering from the University of Tokyo.



Hanan Hanzaz Fehri

Chief Regional Bureau for the Arab Region at UNIDO

Hanan Hanzaz was appointed as Head of the Regional Coordination Division for Arab Countries at UNIDO Headquarters in Vienna in March 2021. She is an engineer laureate from the Mohammed VI School of Engineers, Morocco, with a background in Industrial Process Engineering. Hanzaz has a commitment to sustainable and inclusive development, starting her career in the banking sector and later joining the Moroccan Center for Clean Production as Managing Director. In 2014, she joined the Moroccan mining group MANAGEM as Director of the Foundation and later as Director of Energy and Environmental Affairs. She has held various positions in the General Confederation of Moroccan Enterprises and has participated in international programmes focusing on women’s leadership in the environment. Hanzaz served as UNIDO Representative in Morocco from March 2017 to February 2021, strengthening cooperation with the United Nations Country Team and promoting partnerships with government, financial institutions and the private sector.



Emma Mooney

Programme Officer at the Energy Efficiency Division at the International Energy Agency

Emma Mooney joined the Energy Efficiency Division of the IEA in 2022. In her role as Energy Analyst, she provides analysis and advice on energy efficiency across a wide range of sectors, specializing on industrial energy efficiency and management. Prior to joining the IEA, Mooney worked in sustainable energy projects in both the private and public sector, with a strong emphasis on applied research and project development, specifically in the industrial sector. Along with having over 20 years of experience in the energy sector, she is a Chartered Engineer, and holds a Doctorate in Industrial Energy Efficiency and an MBA.



Mohamed Abdel Karim

Chairman of Industrial Development Authority at the Ministry of Trade and Industry of Egypt

Mohamed Abdel Karim has over 30 years of executive experience in various industrial sectors and extensive consulting experience in the field of automation (digital conversion). He has expertise in business transformation, change management, transformation strategies, strategic management, corporate governance, industrial development strategies, operations management, institutional development and resource development. Karim held the position of CEO of a number of large companies, where the development of manufacturing and testing technology and transfer of the latest technology were at the top of his priorities. He has studied industrial technologies in other countries and localizes all relevant ones, in addition to setting comprehensive development plans and training members of senior and middle management to adapt to the new work system.



Thomas Eibl

Senior Advisor at the Economic Policy Department, the Austrian Federal Economic Chamber

Thomas Eibl is Senior Policy Advisor in the Economic Policy Department of the Austrian Federal Economic Chamber. The focus of his work lies on industrial and geopolitical policy. Before joining the Austrian Federal Economic Chamber in July 2022, Eibl spent 10 years lecturing and researching in the fields of (International) Political Economy, European Economic Governance and Economic Policy at the University of Passau. His teaching and publications have always had a strong European focus, especially on the political economies of Germany, France and the UK.

“Industrial Policy for Green Hydrogen”



Petra Schwager

Chief of the Climate and Technology Partnership Division at UNIDO

Schwager has long-standing experience in managing international technical cooperation programmes and networks for inclusive and sustainable industrial development. Her technical expertise covers a wide range of environment- and energy-related topics, including green hydrogen, renewable energy, bioenergy, resource efficiency, circular economy and green chemistry. She has worked with governments, the private sector, NGOs and academia in more than 40 countries in Asia, Africa, Latin America, Central and Eastern Europe. In her current position at UNIDO, she heads the development and negotiations of innovative climate and technology partnerships and related technical cooperation programmes. She designed and manages UNIDO’s Global Programme for Green Hydrogen in Industry. She studied economics at the Vienna University of Economics and Business Administration and environmental management at the University of London.



Samir Rachidi

Acting General Manager of IRESEN

Rachidi is Acting General Manager of IRESEN. Together with his team, he develops research projects and demonstration activities focusing on PtX, green chemistry, energy storage, concentrated solar (CSP) and hybridization of solar and bioenergy. Prior to his current position, Samir served as R&D Programme Manager at MASEN. His role consisted of catalysing national R&D efforts in the field of solar energy, building international R&D project partnerships and collaborations in the area of solar applications, as well as defining strategic R&D orientation to help unleash Morocco’s industrial potential in the solar sector. Previously, he was R&D Engineer in “Resplnnovation”, a start-up in Sophia-Antipolis, France. In addition, Rachidi also lectures at the “University Mohammed VI Polytechnic – UM6P” and the “Centrale Casablanca” Engineering School. He was recently elected as General Secretary of the Moroccan Cluster of Green Hydrogen, and leads the green hydrogen task force of the “Green Economy Commission” within CGEM Morocco.



Veronica Robert

Undersecretary of Strategic Development in the Presidency of Argentina

Veronica Robert is the Undersecretary of Strategic Development in the Presidency of Argentina. She holds a PhD in Economics and a Master’s degree in Economics and Industrial Development. She is Researcher at the National Council of Scientific and Technical Research and teaches undergraduate and graduate courses at the National University of San Martín and the National University of General Sarmiento. Her area of specialization is the economics of innovation and technological change.



Emanuele Bianco

Programme Officer at IRENA

Emanuele Bianco is Programme Officer at IRENA. He is lead author of IRENA’s Green Hydrogen Policy Guides, which present the main policies to support green hydrogen transition from niche to mainstream in an organic way. Bianco’s contribution to IRENA’s work also includes analysis on the renewable energy market in Southeast Europe, auction design, heating and cooling policies and power market structures.



John Mathews

Professor Emeritus, Macquarie Business School, Macquarie University

John Mathews is Professor Emeritus at Macquarie University, Sydney, in the Macquarie Business School. Formerly Professor of Strategy at MGSM, he concurrently held the Eni Chair of Competitive Dynamics and Global Strategy at LUISS University in Rome from 2009–2012. Professor Mathews focuses on the strategic dynamics of greening of industry. In 2017, he published “Global green shift” (<http://www.anthempress.com/global-green-shift-pb>), with a web page created for the book (www.globalgreenshift.org). In 2018, Professor Mathews was awarded the biannual Schumpeter Prize in recognition of his work. He published a new book in 2023 on the green hydrogen industrial revolution: A Solar-Hydrogen Economy - Environment and Sustainability ([anthempress.com](http://www.anthempress.com)).

“Climbing the Ladder of Digital Transformation”



Cecilia Ugaz Estrada

Director of the Gender Equality and Empowerment of Women Unit at UNIDO

Cecilia Ugaz Estrada is Director of the UNIDO Gender Equality and Empowerment of Women Unit. She was previously Director of the Policy Research and Statistics Department at UNIDO. Prior to joining UNIDO, she served as United Nations Resident Coordinator and UNDP Resident Representative for Paraguay, as Deputy Resident Representative for UNDP in Argentina and as Deputy Director of the UNDP Human Development Report Office. Ugaz Estrada also held various positions with the United Nations and in academia in Switzerland, the United Kingdom and Finland as well as with the World Bank in Washington, D.C. She holds a PhD in economics from Ecole des Hautes Etudes en Sciences Sociales in Paris (Econometrics of Investment) as well as graduate degrees in economic modelling from France and Peru.



Alejandro Lavopa

Research and Industrial Policy Officer at the Division of Capacity Development Industrial Policy Advice and Statistics at UNIDO

Alejandro Lavopa is Research and Industrial Policy Officer at the Division of Capacity Development, Industrial Policy Advice and Statistics of UNIDO. He coordinates the production of UNIDO's flagship publication, the Industrial Development Report, and is responsible for providing policy advice on issues related to industrialization, social inclusion and technology upgrading. He obtained his PhD in Economics and Policy Studies of Technical Change at UNU-MERIT. Before joining UNIDO, Alejandro worked at the Argentine Ministry of Economy and the University of Buenos Aires. Recent publications include articles in journals, such as *World Development* and *Structural Change and Economic Dynamics*, and chapter contributions to key reference books.



Luciano Coutinho

Professor of Economics at the University of Campinas-UNICAMP, Brazil

Luciano Coutinho is Full Professor of Economics at the University of Campinas-UNICAMP, Brazil. He has also been a Visiting Scholar at the University of Texas, USA; the University of Paris XIII, France, and at the Ortega and Gasset Institute in Madrid, Spain. He was Deputy Minister of Science and Technology (1985–1989) and President of The Brazilian Development Bank (BNDES) (2007–2016). In addition to publishing numerous articles and books, Coutinho was Project Coordinator of a landmark research project on the competitiveness of the Brazilian industrial sector in the early 1990s. In 2017, he led a large research project commissioned by the Brazilian Confederation of Industry on the impact of disruptive innovation in Brazilian manufacturing in the forthcoming ten years (2017–2027). Coutinho holds a PhD in Economics from Cornell University, USA.



Axel Klaphake

Director, Division for Economic and Social Development, Digitalisation at GIZ

Axel Klaphake is an economist and political scientist by training (University of Cologne, Université de Clermont-Ferrand) and holds a PhD in Environmental Management and Planning from the Technical University Berlin. During his career, he has worked on issues linked to economic development and the sustainable management of natural resources, holding jobs with several research institutes, think tanks and consulting companies in Germany, USA and Brazil. He joined GIZ in 2007 as Adviser to the Federal German Ministry of Economic Cooperation and Development on G8 issues and water and infrastructure development in Africa. From 2009–2017 he worked as Head of regional and bilateral programmes in Uganda and as GIZ Country Director in Uganda and Ethiopia. He currently heads the Division Economic and Social Development, Digitalisation in the Global Department at GIZ HQs. He has been closely involved with efforts to strengthen synergies between private sector development and development cooperation.

“Gender and Industrial Policy”



Fernando Cantu Bazaldua

Chief Statistician at UNIDO

Fernando Cantu Bazaldua is Chief Statistician of the United Nations Industrial Development Organization (UNIDO), where he is in charge of delivering UNIDO's international mandate on producing and disseminating global industrial statistics, including SDG 9 indicators. Prior to joining UNIDO, he worked as a statistician and economist at different United Nations agencies, other international organizations, and academia. His professional interests include official statistics, predictive analytics, composite indicators, and metrics of performance, applied to manufacturing and other areas of sustainable development. He holds a PhD in Econometrics from the University of Geneva, Switzerland.



Fatou Haidara

Deputy to the Director General and Managing Director, Directorate of Global Partnerships and External Relations and Director General's Special Representative for Africa at UNIDO

Fatou Haidara, Deputy to the Director General and Managing Director of the Directorate of Global Partnerships and External Relations, and Director General's Special Representative for Africa at the United Nations Industrial Development Organization (UNIDO), has extensive experience as a strategic partnerships and policy envoy. Prior to joining UNIDO, she served in several ministerial positions for the Government of Mali, including as Minister of Employment and Vocational Training and Minister of Industry, Trade and Private Sector Development. At UNIDO, Haidara has led and coordinated UNIDO's contribution in a number of multi-lateral negotiations culminating in resolutions that have set the foundation for inclusive and sustainable industrial development (ISID); notably, the Istanbul Plan of Action for LDCs and the Lima Declaration. She has promoted and contributed to UNIDO's programmes in Africa, cooperation with LDCs, expanding South-South Cooperation as well as initiating and leading programmes for Human Security, Youth Employment and the Economic Empowerment of Women.



Cristina Oyón

Director of Technology, Innovation and Sustainability in the Department of Economic Development, Sustainability and Environment of the Basque Government

Cristina Oyón is in charge of the design and implementation of technology and industrial development strategies for the Basque Government. She is Member of the Industrial Forum, which assesses the European Commission's implementation of industrial strategy. She leads the Net Zero Basque Industrial Super Cluster that aims to accelerate the path to net zero emissions in the Basque Country and the Women in Manufacturing expert group of the World Manufacturing Foundation, which was set up in 2020 and aims to contribute to the momentum of closing the gender gap in the manufacturing industry and beyond.



Jennifer Castañeda-Navarrete

Senior Policy Analyst at IfM Engage at the University of Cambridge

Castañeda-Navarrete is Senior Policy Analyst at IfM Engage, University of Cambridge. She has 15 years' experience in policy analysis, both as an academic and as a policy practitioner in developing and developed country contexts. She has collaborated with numerous international organizations in the area of industrial policy, including the Association of Southeast Asian

Nations, the Inter-American Development Bank, United Nations Industrial Development Organization and the United Nations Development Programme. She is an active member of the International Association for Feminist Economics and holds a PhD in Development Studies from the University of Sussex, UK.



Anneline Chetty

Chief Operations Officer of Industrial Competitiveness & Growth at the Department of Trade and Industry of South Africa

Anneline Chetty is Chief Operations Officer of the National Department of Trade and Industry, focusing on job creation. She is currently Mrs Commonwealth SA – the main aim of this pageant is to empower women with knowledge to inspire and motivate other women and to

bring sustainable change in their countries. In July 2017, she was awarded a meritorious award in recognition of her leadership towards the development of South Africa's economy and creating an environment for the fostering of entrepreneurship, championing the cause of disadvantaged groups and the promotion of gender rights. Chetty is currently title holder of the Standard Bank Top Woman in Public Sector, recognizing her exceptional performance and contribution to changing the lives of South Africans. She was furthermore awarded Women of Excellence Award at the Women's Economic Forum (WEF) in New Delhi, India in April 2018.



Jooyoung Park

Associate Professor at the Department of Civil and Environmental Engineering at Seoul National University

Jooyoung Park is Associate Professor at the Department of Civil and Environmental Engineering, Seoul National University. She is particularly interested in sustainable materials management of industrial systems, and focuses on exploring circular economy strategies and their effect

on industrial clusters, water infrastructure and urban built environment. Before joining Seoul National University, she worked at the School of Management, Universidad de los Andes in Colombia as well as the Graduate School of Energy and Environment, Korea University. She has a PhD in Environmental Studies from Yale School of Forestry and Environmental Studies and a Master and Bachelor of Science in Civil, Urban and Geosystems Engineering from Seoul National University.



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