



# Tokyo Green Industry Conference 2011

16-18 November 2011

Tokyo Big Sight Conference and Exhibition Centre

## Organizers' Summary



### Green Industry

industrial development for low  
carbon, resource efficient and  
green growth



## Background

1. The Ministry of Economy, Trade and Industry (METI), Government of Japan, and the United Nations Industrial Development Organization (UNIDO) organized the Tokyo Green Industry Conference (TGIC) 2011 on 16-18<sup>th</sup> November 2011 at the Tokyo Big Sight Conference Centre, Tokyo, Japan. The TGIC aimed to highlight the availability of environmental and resource conservation techniques and practices that are good for business, environment and climate, employees, communities and consumers. The TGIC provided a platform to discuss policy and business solutions for achieving the widespread uptake of today's proven techniques and technologies and for enabling innovation to deliver longer term solutions that would enable even greater reductions in resource use and pollution intensity. Through related activities organized in collaboration with the INCHEM 2011 environmental technology exhibition, TGIC also provided opportunities to match environmental technology needs of participating developing countries with the international supply of Best Available Techniques (BAT) and Best Environmental Practices (BEP).
2. Green Industry was launched by UNIDO as the sector strategy for achieving the overall aims of green growth and green economy in the manufacturing and associated sectors. Green Industry is a two-pronged approach consisting of: (a) *Greening of Industry*: ensuring that all industries, regardless of sector, size, ownership, markets and location, continuously improve their environmental performance and resource productivity, and (b) *Creating Green Industries*: stimulating the development and creation of industries that deliver environmental goods and services (see also: UNIDO Green Industry Statement (Annex A)).
3. The Green Industry initiative was launched in Asia at the 2009 Manila Green Industry Conference, hosted by the Government of the Philippines and co-organized by UNIDO in close partnership with the United Nations Environment Programme (UNEP), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Labour Organization (ILO). At this occasion 21 Asian developing countries agreed on the Manila Green Industry Declaration <sup>(1)</sup> committing each to foster the promotion and implementation of Green Industry concepts, methods, techniques and technologies, in collaboration with their business sectors and other stakeholders, and with active support from UNIDO and its partner agencies.

## Conference Overview

4. The 2.5 day Tokyo Green Industry Conference 2011 was structured as a high level segment with combined panels of government and business leaders, city government and business roundtables, and technical sessions. The conference was preceded by a meeting of Senior Government Officials on 15<sup>th</sup> November 2011.

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<sup>1</sup> The Manila Green Industry Declaration was agreed and endorsed by 21 Asian developing countries (Afghanistan, Bangladesh, Bhutan, Cambodia, China, Fiji, India, Indonesia, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand, Timor-Leste and Viet Nam)), the United Nations Industrial Development Organization (UNIDO), the United Nations Environment Programme (UNEP), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Labour Organization (ILO). The full text is available at:

[http://www.unido.org/fileadmin/user\\_media/Services/Green\\_Industry/Manila\\_declaration.pdf](http://www.unido.org/fileadmin/user_media/Services/Green_Industry/Manila_declaration.pdf)

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The Chair's Summary of this Senior Officials Meeting is attached as Annex I to this Organizers' Summary of the TGIC. Moreover two side events took place, coordinated by respectively the Japan Green Information Technology Council and METI.

5. The TGIC was attended by some 300 participants representing over 40 countries, mostly from within the Asia Pacific Region. High level participants included, amongst others, vice and/or associate ministers in charge of industry, economy and/or environment from Afghanistan, Cambodia, China, Indonesia, Japan, Kyrgyzstan, Lao PDR, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam, along with mayors and other city and state level government leaders, business leaders and international experts.

### Summary of Discussions

6. In their respective welcome remarks on behalf of the host Government of Japan, the Vice Minister of Economy, Trade and Industry and the Parliamentary Vice Minister of Foreign Affairs, both stressed the importance of technology transfer for the realization of Green Industry, and provided examples of Japan's initiatives in this regard. They called upon UNIDO to continue its leadership for Green Industry at the global and regional levels. The Director General of UNIDO emphasized the developmental need and benefits of Green Industry, and applauded progress made by Signatory Countries to the Manila Green Industry Declaration, as duly reflected in the Chair's summary of the Senior Government Officials Meeting held on 15<sup>th</sup> November 2011 (attached as annex I to this Organizers' Summary). The Rio+20 Conference to be held in June 2012 will provide an opportunity to review international achievements and challenges, including the needs and opportunities for Green Industry, a message that was echoed in the written message from the United Nations Secretary General to the Conference.

7. Keynote presentations were delivered by the CEO of Toshiba who provided multiple examples of the company's achievements in greening processes, products and technologies, and the President of Japan's National Graduate Institute for Policy Studies, who argued in favor of green innovations focused on the mega-regions that drive industrial development and are home to rapidly expanding populations of middle class and affluent citizens. Both emphasized from different angles the need for business initiative for green innovations and government intervention to facilitate the delivery of such green innovations to the global society.

8. The first high level panel with participation of vice ministers from Lao, Philippines and Vietnam, the Director General of UNIDO and senior executives of Keidanren, the Global Green Growth Institute and the Ministry of Foreign Affairs (Japan) discussed innovative policies for Green Industry. Panelists acknowledged with appreciation the progress achieved by Signatories to the Manila Green Industry Declaration, and encouraged other countries to consider these experiences in their planning of Green Industry initiatives. Appreciating the efforts made by UNIDO to specify the development benefits of Green Industry (as per the UNIDO Green Industry Statement, included as annex A), it was noted that green growth and green economy are not yet being recognized as a development priority by many countries. A rich discussion took place among panelists about potential role of government, available policy instruments and best practices. Key elements listed by panelists



included: national government leadership; ownership by business sector; coordination and alignment between different policy domains; and use of an appropriate mix of policy instruments.

9. The second high level panel with participation of vice ministers from Indonesia, Nepal, Philippines, Sri Lanka and Thailand and the CEO of Chiyoda Corporation debated innovative business approaches for Green Industry. Panelists agreed on the need to scale-up the deployment of currently-available environment, energy and resource conservation techniques and technologies as a way to catalyze the development of Green Industry. Key elements for effective implementation by businesses discussed included: appropriate packaging of technological solutions (with business model, financing, capacity building, and policy change, where appropriate); top management commitment and leadership; technical and organizational competence; and regulatory and market certainty.

10. A roundtable of city government leaders took place with participation of the mayors of the cities of Kitakyushu and Kawasaki, two of the leading Japanese eco-towns, the deputy mayor of the city of Yokohama, and the vice chairman of the people's committee of the city of Hoi An (Vietnam). Each presented in brief their respective city's approach and achievements, demonstrating the diversity of approaches local governments can take to promote Green Industry with the dual benefits of creating business- and employment-opportunities and improving environmental amenity.

11. A total of six technical panels took place, each dedicated to one of the specific clusters identified for greening of existing industries (respectively: productive use of materials, energy and water; prevention of waste and emissions and sound management of chemicals) and creation of green industries (respectively for reduction, reuse and recycling of (waste) materials; pollution control; and renewable energy and energy efficiency). Each panel was introduced by a lead presenter, followed by three relevant case studies, and a panel discussion to identify best techniques and mechanisms for their transfer and deployment in priority sectors in developing and emerging economies. In each Technical Panel excellent practical solutions were presented that are suitable for transfer and replication in Asian countries. Jointly the Technical Panels showcased the availability of numerous technologies and techniques, including many originally developed in Japan, that could be deployed to realize Green Industry. Customized strategies are required to make these technological solutions available, applicable and affordable to enterprises in developing countries, through for example public-private partnerships, business-to-business transfers and/or joint ventures, and/or innovative models for licensing, leasing and/or financing.

12. A total of two side events took place, coordinated by the Government of Japan, dedicated to respectively the greening of the information technology sector and the Japanese Bilateral Offset Credit Mechanism. The presentations in the side events enabled conference participants acquainting themselves with recent developments and Japan's initiatives in both topical areas.

13. A roundtable of business leaders was convened and discussed how business initiatives could support wider-spread adaptation and adoption of Green Industry. The rich discussion touched upon key ingredients,



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including business strategy; training and capacity building; innovative finance; supply chain management, to mention a few.

14. Additional information material and short presentations were made available at the Green Industry exhibition booth set up by UNIDO and attended by INCHEM visitors. These covered specific Green Industry activities, designed and implemented by UNIDO in different countries globally.

15. This Organizers' Summary was presented and endorsed during the closing plenary, and further commented upon by representatives from participating UN agencies, UNIDO and UNEP. Panelists confirmed the importance of the conference deliberations as input for the preparation for and discussion at the Rio+20 Conference.

16. In their respective closing remarks, the Deputy Director General of UNIDO and the Director General of Trade and Economy of METI, expressed satisfaction with the insightful discussions that had taken place during the Tokyo Green Industry Conference and committed to foster consideration of the Conference proceedings during the Rio+20 and other relevant intergovernmental processes.

### **Summary Observations**

17. Green Industry aims to mainstream and scale-up proven resource productivity and environmental practices and techniques by embedding and mainstreaming these into industrial development strategies, and deploying in tandem, amongst others, industry, competitiveness, innovation and environmental policy instruments. Doing so, Green Industry is a development priority that realizes economic, environment and social development objectives through contributions to: income and employment creation; competitive and sustainable business; innovative and value-adding products; natural resources' security; mitigation and adaptation to climate change; environmental management; and industrial and chemical safety.

18. Despite the multiple development benefits, inertia exist that prevent enterprises and other organizations from considering and implementing Green Industry. These pertain in particular to access, applicability and affordability of Green Industry methods, techniques and advisory services, and uncertainty regarding benefits from and rewards for Green Industry achievements, resulting from subdued prices for natural resources (including water and energy), lacks environmental compliance and lacking market pull. Appropriately focused public private partnerships can address these inertia.

19. Technology and innovation provide an important lever for Green Industry, both through the widespread transfer and utilization of proven environment, energy and resource conservation techniques as well as from sustainability-led research and technology development. Several technologies have potential as platform technology for achieving step-improvements in resource productivity and environmental performance across a range of different industry sectors, such as for example green chemistry, advanced separation (including membrane technology), bio- and nano-technology. These platform technologies can complement specific technologies. Effective utilization of the existing technology stock in developing and emerging economies stands to benefit from improvements in their national systems of innovation, in particular through enhanced



collaboration between businesses, academia and the providers of technology, management and engineering services and financing; and civil society at large. National Resource Efficient and Cleaner Production (NECP) centers can play an important role in awareness raising, information dissemination (including through clearinghouses); capacity building; policy advice; and transfer and deployment of appropriate technologies to industries, particularly to SMEs.

20. In addition to setting up new mechanisms and institutions for Green Industry development and related technology collaboration and transfer, concerted efforts are needed to continue and where possible replicate and upscale the many relevant initiatives already in place such as for example: the Regional 3R Forum in Asia; the global Resource Efficient and Cleaner Production Programme; and eco-town, industrial energy efficiency and related Sustainable Consumption and Production initiatives. As the sheer size of the natural resource, environment and climate challenges dictates that different approaches and models need to be deployed as expediently as feasible, greater attention is needed to achieve synergies between such alternative approaches for example by enhanced networking and knowledge management between different initiatives, for which the recently established global Resource Efficient and Cleaner Production network (NECPnet) may provide a platform.

#### **Follow up**

21. Participants in the TGIC requested METI and UNIDO to take the lead in ensuring that the deliberations and outcomes of the TGIC will be adequately considered in relevant intergovernmental forums and negotiations, both at global and regional levels, including, but not limited to, the Rio+20 Conference and the Climate Technology Mechanism under the United Nations Framework Convention on Climate Change.

22. Participants invited UNIDO to take the initiative to develop in consultation with its interested Member States and sister agencies, a Green Industry Agenda with a proposal for establishment of an international forum comprising of representatives of leading donor and recipient countries, business sector entities and think tanks and civil society, where appropriate, to guide management and implementation of such Green Industry Agenda.

23. Participants considered the urgent need to decouple economic growth from the consumption of natural resources and the negative environmental impacts and therefore invited UNIDO to provide more information and background for the design, definition and formulation of relevant indicators and targets to monitor progress in measuring natural resource use, resource efficiency in production and progress in moving towards Green Industries or sustainable industrial development.

24. Reflecting upon the richness of contributions to and discussions during the TGIC, UNIDO and METI committed to prepare and publish a summary document of example successful technology collaboration and transfer initiatives.

[www.greenindustrytokyo.org](http://www.greenindustrytokyo.org)  
[www.unido.org/greenindustry](http://www.unido.org/greenindustry)





## **Annex I: Chair's Summary <sup>(2)</sup>**

### **Senior Officials Meeting on Green Industry**

**Tokyo, 15 November 2011**

1. Senior Government Officials representing Ministries of Industry, Trade, Economy and the Environment from Afghanistan, China, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand and Viet Nam met in Tokyo, Japan, at the invitation of the United Nations Industrial Development Organization (UNIDO), in conjunction with the Tokyo Green Industry Conference 2011. Participants considered the complex and urgent challenges concerning the development and promotion of Green Industry and identified possible ways for achieving and accelerating progress through national actions and strengthened international commitment and collaboration. They were supported by senior experts of their respective ministries and from UNIDO and its partner agency the United Nations Environment Programme (UNEP).
2. Expressing sympathy with the people of Japan and their resolve to recover from the March 11<sup>th</sup> Great East Japan Earthquake, and taking note of the urgent priority of the host government to lead this national recovery effort, the meeting applauded the joint leadership of the Government of Japan and UNIDO to convene and organize the Tokyo Green Industry Conference 2011. Moreover, participants confirmed that by organizing the Conference in parallel with an important technology exhibition on environment, energy and resource conservation, the organizers had made a praiseworthy effort to emphasize the pivotal role of technology and innovation as enablers for Green Industry and sustainable development at large.
3. Participants included representatives of 11 countries that are signatory to the 2009 Manila Green Industry Declaration <sup>(3)</sup>, which calls upon signatory governments to promote Green Industry in collaboration with their respective business sectors and civil society. Participants considered progress reported by these countries and discussed best practices suitable for replication and widespread uptake in other countries. Recognizing the pivotal contributions of Green Industry to Green Economy and Green Growth, participants also discussed the potential to promote Green Industry through the Rio+20 Conference.
4. While acknowledging that the situation varies between regions and countries and even within countries, the participants noted that, in overall terms, nearly half of the world's population continues to live in poverty and remains deprived from essential goods and services required for a decent life. Participants therefore noted that in order to alleviate poverty national and international efforts should remain focused on creating employment and income opportunities for all, for which accelerated growth of the manufacturing and related sectors is required.

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<sup>2</sup> The meeting was chaired by the UNIDO Representative to the United Nations. This Chair's Summary was reviewed during the closing session of the Meeting and unanimously endorsed by all its participants.

<sup>3</sup> The Manila Green Industry Declaration was agreed and endorsed by 21 Asian developing countries (Afghanistan, Bangladesh, Bhutan, Cambodia, China, Fiji, India, Indonesia, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand, Timor-Leste and Viet Nam), the United Nations Industrial Development Organization (UNIDO), the United Nations Environment Programme (UNEP), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Labour Organization (ILO). The full text is available at:

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5. Recognizing that the unbridled growth of manufacturing aggravates and worsens society's pressure on the environment, climate and natural resources, participants acknowledged the need to transition to sustainable industrial development. Acknowledging the track record of UNIDO, working in tandem with its member states and partner agencies, including UNEP, the International Labour Organization (ILO) and the Economic and Social Commission for Asia and the Pacific (ESCAP), participants welcomed and appreciated the UNIDO-led Green Industry Initiative, and requested UNIDO to continue to provide leadership and direction for Green Industry at the global and regional levels in support of their national initiatives.
6. Participants had rich discussions on Green Industry, including its scope, objectives and developmental benefits, and while acknowledging different interpretations between countries reflecting, amongst others, the status of their industrial development, natural resource endowments, vulnerability to climate change and environment, endorsed UNIDO's interpretation of Green Industry as the sector strategy for the manufacturing and related sectors to achieve the overall goals of Green Growth and Green Economy and thereby contribute to poverty alleviation and the transition to sustainable development.
7. Participants acknowledged with appreciation the progress reports received on the activities and outcomes from implementation of the Manila Green Industry Declaration <sup>(4)</sup>, from eight countries (Cambodia, China, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Sri Lanka and Vietnam) and additional information shared during the meeting by these and other signatory countries (Afghanistan, Indonesia, Nepal and Thailand). Signatory countries reported on numerous initiatives launched since the Manila Green Industry Conference in 2009, reflecting a rich variety of alternative approaches that they developed and implemented, under new overarching strategies and/or in support of implementation of previously existing policies and regulations. Difficulties to access appropriate technology and affordable financing, and weak human and institutional capacities were reported as common challenges for adapting and adopting Green Industry. The effective launch and implementation of Green Industry initiatives was found to be critically dependent on government leadership, including vision and political will, in tandem with enhanced business sector ownership. A focus on scale-able and replicable models in prioritized sectors or regions to initiate Green Industry deserves recommendation, provided each of such models simultaneously covers capacity building, enabling access to technology and financing and improvement of industrial policy and planning. Moreover it was noted that implementation of Green Industry also stands to benefit from measures that are not specific to Green Industry, but serve to achieve implementation and compliance with existing environment, technology, industry and related regulations and legislation for industries.
8. In discussing ways forward, participants took note of UNIDO's Green Industry Statement, annexed to this Chair's Summary (Annex A). They welcomed UNIDO's two-pronged approach consisting of: (a) *Greening of Industry*: ensuring that all industries, regardless of sector, size, ownership, markets and

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<sup>4</sup> The Manila Green Industry Declaration was agreed and endorsed by 21 Asian developing countries (Afghanistan, Bangladesh, Bhutan, Cambodia, China, Fiji, India, Indonesia, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand, Timor-Leste and Viet Nam), the United Nations Industrial Development Organization (UNIDO), the United Nations Environment Programme (UNEP), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Labour Organization (ILO). The full text is available at:

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location, continuously improve their environmental performance and resource productivity, and (b) *Creating Green Industries*: stimulating the development and creation of industries that deliver environmentally-friendly goods and services. The role of Green Industry in poverty alleviation and transition to sustainable development was acknowledged, as appropriately reflected in the seven Green Industry development benefits articulated by UNIDO, respectively: income and employment creation; competitive and sustainable business; innovative and value-adding products; natural resources' security; mitigation and adaptation to climate change; environmental management; and industrial and chemical safety.

9. Recognizing that Green Industry initiatives will need to be customized to national development needs and industry and environment contexts, participants acknowledged the usefulness of the guiding framework for action outlined in UNIDO's Green Industry Statement (Annex A). This foresees coordinated actions in parallel for: (a) greening of industry (with particular emphasis on resource efficiency, waste and emission prevention and chemicals management); (b) creation of green industries (particularly Reduce, Reuse and Recycling, pollution control and energy-related green industries); and (c) creation of an enabling framework (with a balanced package of policy and strategy, technology transfer and deployment, financing and capacity building).
10. Agreeing that the transition to Green Industry is urgent, the senior government representatives welcomed the call for action and endorsed the view that there was a need to act together, to act now and to act more profoundly using innovative approaches. They called upon UNIDO and its partners to develop an actionable Agenda for Green Industry, with policy goals and specific activities, recognizing the roles and responsibilities of key stakeholders.
11. Participants had further rich discussions on potential elements of such Agenda for Green Industry. Whilst there was general appreciation for an approach that calls on developed countries to achieve absolute decoupling and for developing countries to achieve relative decoupling, the lack of appropriate data hinders operationalization and quantification of such targets at this stage. Moreover, targets on overall reduction of volumes of waste and pollutants to be discharged into the environment could be considered. The Agenda may therefore need to adopt a two-pronged approach to develop in parallel the knowledge and information bases for Green Industry, whilst also ensuring that currently-proven policies, methods, techniques and technologies are without further delay scaled-up and mainstreamed.
12. Recognizing the importance of fostering the implementation of the Agenda for Green Industry, both at the national and international levels, participants recommended that the Agenda would be further developed and operationalized under the joint leadership of interested countries and international businesses, in partnership with existing networks and institutions, including for example the Resource Efficient and Cleaner Production Network (RECPnet). Consideration should be given to decide at the Rio+20 Conference on the creation of an appropriate forum for further development and implementation of the Agenda for Green Industry.
13. Participants acknowledged with appreciation the suggestion from the Government of Japan, to focus international Green Industry initiatives in those sectors that are most likely to have a lasting impact on the country's overall development, the well being of its citizens and the transition to sustainable development, in particular agriculture and food production, energy, water and sanitation, and urban development.



## Annex A: UNIDO Green Industry Statement

### I. Unlocking Development Opportunities

Green Industry unlocks development opportunities as enterprises improve their resource productivity and environmental performance (**greening of industry**) and establish new operations that deliver environmental goods and services (**creating green industries**).

This is imperative from triple bottom line economic, social and environmental perspectives, particularly as Green Industry supports:

1. **Income and employment creation** – advanced waste management and recovery services, renewable energy projects, and provision of other environmental goods and services creates jobs and provides a source of income, including for poor people with lower formal skill levels;
2. **Competitive and sustainable business** – reduced operational costs due to the reduced consumption of materials, energy and water and of minimization of waste and emission generation, whilst also assuring continuity of trade in light of tightening buyer requirements for environmental and social disclosure and performance;
3. **Innovative and value-adding products** – mainstreaming environmental and social concerns into product development, results in innovative products that benefit consumers and society at large, whilst not jeopardizing the quality of life of producers and of planet Earth;
4. **Natural resources' security** - reduced use of water, materials and fuels eases the pressures on these already-scarce resources, which are all expected to become scarcer in years to come if present population, urbanization and development trends continue as projected into the future;
5. **Mitigation and adaptation to climate change** – reduced greenhouse gas emissions from energy and non-energy sources along with better preparedness for the impacts of climate change on the operations of enterprises, the availability of their inputs and the markets for their products and services;
6. **Environmental management** – reduced generation of waste and emissions lessens the pollution burden on the natural environment and biodiversity; and
7. **Industrial and chemical safety** – better operated, maintained and managed plants that use chemicals responsibly pose fewer risks to workers and communities.

### II. Charting the Path

Green Industry is achieved through concerted actions that:

**A: Greening of Industry: Enable and support all industries regardless of their sector, size or location, to green their operations, processes and products to:**

1. **Use resources efficiency**: increase the productive use of materials, water and energy in industrial production, through such approaches as: dematerialization of products and value chains; use of materials with longer service lifetime; replacement of virgin materials with recycled materials; recycling, reuse and recovery of materials, energy and water; and use of materials, water and energy from sustainably-managed and/or low impact sources;



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2. **Minimize the generation of wastes and emissions:** minimize and where possible eliminate the creation of waste and emissions within factories, through such approaches as: improvements in process operation, monitoring and maintenance; waste minimization; application of advanced process technologies with higher efficiency and specificity; and recycling, reuse and recovery of process streams; and
3. **Minimize risks associated with chemicals and (hazardous) wastes:** minimize risks associated with production, use, and disposal of chemicals, through such approaches as: sound management of chemicals (aiming to achieve the WSSD 2020 goals); phasing out of toxic and other environmentally harmful substances (including those contributing to ozone layer depletion and/or climate change); application of Best Environmental Practices and Best Available Techniques to prevent unintended formation and emissions of POPs and other hazardous pollutants; replacement of chemical processes by non-chemical processes (biological, physical, etc); and replacement with safer, more specific and/or more effective alternative chemicals.

**B: Creating Green Industries: Establish and expand (new) green industries that supply environmental goods and services to:**

4. **Reduce, Reuse and Recycle waste materials:** support industries to develop and deliver advanced integrated waste management, recycling and resource recovery technologies, services and systems, for municipal, commercial, industrial, construction, demolition and other specific waste streams, and produce thereof reliable supplies of recycled materials and products;
5. **Improve industrial energy efficiency and make use of renewable energy:** support industries to deliver technology, equipments, products, management systems, know how and/or services that enhance industrial energy efficiency and the use of renewable energy (solar, bio- etc.) or other low carbon energy sources (in particular waste heat); and
6. **Collect, manage and dispose (hazardous) wastes and/or emissions in environmentally compatible ways:** support industries to develop and deliver technology, equipments, products, management systems, know how and/or services that collect, manage and dispose, without threats to the environment, (hazardous) wastes and/or emissions, including for example chemical and medical wastes, electronic waste, etc.

**C: Enabling Framework: Create an enabling framework that encourages businesses individually and collectively to adapt and adopt Green Industry through:**

7. **Mainstreaming and embedding Green Industry in industrial and related policies and strategies:** ensuring that Green Industry is a cross-cutting priority in competitiveness, innovation, trade and fiscal policies, through such approaches as: setting targets for sustainable production, dematerialization and recycling; employing customized mixes of information-based, regulatory, voluntary and market-based instruments; and encouraging, supporting and rewarding industry- and business-led initiatives;
8. **Fostering access to appropriate and affordable technology:** harnessing the potential of environment, resource conservation and energy technologies and techniques, through support for technology diffusion and deployment; technology assessment and road-mapping; and applied research and technology development;
9. **Enabling access to affordable financing:** supporting financial markets to develop and provide financing for Green Industry in forms suitable to the investment needs and risks in particular of Small and Medium Enterprises (SMEs), and where appropriate ensuring appropriate leverage on available public funding; and



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10. **Creating human and institutional capacity:** investing in dialogue with business and civil society on the need for and opportunities of Green Industry, in tandem with targeted information dissemination; professional, management and vocational training; and establishment of support institutions with advisory capacity on Green Industry.

### III. Getting Started

Green Industry initiatives are to be customized to the country's industrial and development needs, its environmental, resource and climate considerations and other relevant national factors. To catalyze a widespread transition to Green Industry however, a mix of the following elements deserves consideration:

1. **Industrial Policy and Strategy:** strengthening and creating trade, technology, training, economic, fiscal and/or other incentives for greening of industries and creation of green industries in relevant policies and strategies for industrial development as well as the institutions for their implementation, monitoring and enforcement;
2. **SME Support Services:** creating and strengthening the support structure for assisting industry, in particular Small and Medium Enterprises, with the adaptation and adoption of Green Industry including accessing, adapting and adopting the necessary technology and financing;
3. **Transformational Learning and Innovation:** developing and disseminating the knowledge, methods and processes for break-through, transformational Green Industry methods and technologies, through sustainability-led education, training and innovation initiatives; and
4. **Replicable Models:** developing, trialling and promoting replicable models for high-impact Green Industry solutions, for example for Eco-Industrial Parks and climate-resilient industries.