Disclaimer:
The Annual Report aims to provide overview of the activities and achievements of UNIDO’s activities in India during 2018, covering ongoing technical cooperation projects, new project developments, engagement with government, business and other stakeholders. However, it does not intend to provide any official data or information concerning any disputable issues. The views expressed in this publication are those of the contributors and do not necessarily reflect the views of UNIDO or Government of India or its funding agencies. UNIDO or Govt. of India or its funding agencies do not warrant or assume any legal liability or responsibility for the accuracy, completeness or usefulness of any information contained in this publication.
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FOREWORD

UNIDO expended in 2018 in India USD 8.7 million on the implementation of 16 technical cooperation projects contributing to different aspects of inclusive and sustainable industrial development, such as energy efficiency and renewable energy, environmentally sound management of waste and chemicals, cleantech innovation, productivity and appropriate technology. Each project involves a strong partnership with a national line ministry and relevant state, business and other entities.

2018 witnessed transition and strategic reorientation in the UNIDO India portfolio. The year started with an independent country evaluation supported by seven project level evaluations. It was found that UNIDO had contributed to inclusive and sustainable industrial development at micro, meso and macro levels, resulting in significant contributions to awareness raising and uptake of improved technologies and good industrial practices. UNIDO as member of the UN Country Team joined the signing of the UN India Sustainable Development Framework with NITI Aayog. In support thereof, UNIDO furthered the development of the UNIDO India Country Programme 2018-2022 that was endorsed for execution towards the end of the year.

In parallel UNIDO started regrouping its activities under its four new key results areas: inclusive and productive Micro, Small and Medium Enterprises (MSMEs); solutions for climate, resources and environment; inclusive and responsible value chains and business; and strategic policy for industrial transformation. A significant effort was made towards project pipeline development, in close consultations with diverse stakeholders in particular in the areas of MSME development and for policy support to improve preparedness for change towards Industry 4.0 and the circular economy.

As new project initiatives mature and are expected to start in 2019, UNIDO is confident it can continue its successful knowledge-based and action-oriented partnership with India to support industrial development that works for markets, for people and for the environment and climate.

René Van Berkel
UNIDO Representative
Regional Office in India
Set up in 1966 and became a specialized agency of the United Nations in 1985

UNIDO in India

At a Glance

It focuses its resources and expertise to support developing countries and economies in transition to achieve inclusive and sustainable industrial development.

As a technical cooperation agency, it designs and implements programmes focused on its thematic priorities, which directly respond to global development priorities. Through these thematic priorities, UNIDO supports its developing country member states achieving the Sustainable Development Goals.

170 Members

Vienna, Austria

Headquarters

Mr. Li Yong
from People’s Republic of China was elected as the Director-General of UNIDO in June 2013

India - UNIDO

India is a founder Member of the UNIDO. It is both a recipient as well as a contributor to the programmes of UNIDO.

INDIA’S:

Annual contribution to the regular budget of UNIDO EUR 0.8 MILLION (RS. 6.8 CRORE)

Annual voluntary contribution to the Industrial Development Fund (IDF) of UNIDO US $ 1.2 MILLION (RS. 7.44 CRORE)

Both of these contributions are made from the Non-Plan provision.

This contribution has two components:

A General Purpose Component of US $ 0.1 million which is utilized by UNIDO for its technical cooperation activities in developing countries.

A Special Purpose Component of US $ 1.1 million utilized for implementation of projects in India.

UNIDO Regional Office in India

Set up in New Delhi on 1st January, 2000

Covers 5 countries: India, Bhutan, Maldives, Nepal and Sri Lanka and coordinates UNIDO Country Offices in Afghanistan and Bangladesh

It acts as a focal point to mobilize and disseminate knowledge, information, skills and technology for fostering industrial development by applying best practices and approaches to common problems of the region.

The core elements of UNIDO’s delivery of technical cooperation services in this region are:

• to focus its activities in harmony with national policy priorities and development strategies
• to build strong and long-term partnerships with donors
• to increase UNIDO’s visibility and image in the region
• to support countries achieving globally agreed 2030 Sustainable Development Goals
GLOBAL STRATEGIC PRIORITIES

- Creating shared prosperity
- Advancing economic competitiveness
- Safeguarding the environment
- Strengthening knowledge and institutions

KEY AREAS OF CO-OPERATION

UNIDO’s linkages into the flagship programmes of the Government of India

- Promoting the inclusive Sustainable Industrial Development in India
  - Lima Declaration
  - 2030 Agenda for Sustainable Development

- Socio - Economic Development Framework of the GoI
  - Make in India Programme
  - 100 Smart Cities Programme
  - Swacch Bharat Mission
  - Skill India Programme
  - Start-up India Initiative

- Advancing Environmental Stewardship through Multilateral Environmental Agreements
  - Stockholm Convention on Persistent Organic Pollutants [POPs]
  - UN Framework Convention on Climate Change
  - Paris Climate Agreement
MILESTONES IN 2018

In 2018 UNIDO achieved steady progress in the implementation of its ongoing projects covering the pillars of greening of industry and advancing economic competitiveness in India. During 2018, UNIDO also intensified and strengthened its engagement with the business and industry sector, in its role as advocate and knowledge partner for inclusive and sustainable industrialization, in particular in accordance with the Sustainable Development Goal-9 (SDG9).

This special emphasis for ‘Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation’ under Sustainable Development Goal 9 (SDG9) in the 2030 Agenda for Sustainable Development validated UNIDO’s mandate in the international development framework. The other SDGs also have specific industry-related targets highlighting the multiple links between industrialisation (SDG9) and related thematic areas of water and sanitation (SDG6), sustainable energy (SDG7), decent work (SDG8), sustainable cities (SDG11), sustainable consumption and production (SDG12) and climate action (SDG13).

The following summarizes the main UNIDO engagements in the country with government, business, industry and civil society during the year. This is complimented by project specific activity summaries.
KEY EVENTS OF 2018

FEBRUARY, 2018

Conference on Jobs and Livelihoods 8-9 Feb 2019, NITI Aayog and CII, Delhi

UNIDO Representative conveyed that MSMEs are the backbone of industry and economy, yet only when geared up for growth, expansion and innovation. Moving forward requires informed and customized policies and incentives for enterprises of all sizes and types to expand and flourish, and thereby maximize job and livelihood creation.

APRIL, 2018

8th Regional Reduce, Reuse and Recycle (3R) Forum for Asia Pacific, UNCRD, Indore

UNIDO Representative provided theme presentation on Greening of Small and Medium Enterprises. Environmental responsibility includes practicing resource efficiency, acting as environmental steward, minimizing risk and preparing for emergencies. Resource Efficient and Cleaner Production is a practical way for SMEs to green, often with good cost savings. UNIDO also exhibited its work on sustainable cities and biomedical waste management.

MAY, 2018

Circular Economy Symposium, FICCI, Delhi

UNIDO Representative moderated session on good circular economy practices from India, including from Mahindra, Tata and Reliance Industries. Circular Economy goes beyond recycling economy by firstly maximizing use of renewables, secondly relentlessly practicing efficiency in resource use and thirdly, perpetually recycling and recovering wastes.

JUNE, 2018

World Environment Day, MoEFCC, Delhi

UNIDO participated in the UN pavilion of the World Environment Day Exhibition, with participation of several cleantech start ups that had graduated from the Global Cleantech Programme. Moreover, UNIDO participated in the panel discussion on sustainable cities, conveying that with proper integrated industry and urban planning, cities can become hubs of low carbon innovation.
UNIDO organized and hosted with DC MSME stakeholders’ dialogues in Delhi, Mumbai, Kolkata and Coimbatore on challenges and opportunities for growth of small industries. Levers for change are information, business and innovation support, improvements of manufacturing processes and cleaning up of contaminated clusters.

**AUGUST, 2018**

**Green Skills Certification Course on Cleaner Production, MoEFCC and GCPC, Ghandinagar**

On the occasion of the launch of the Green Skills Certification course on cleaner production, developed by the Gujarat Cleaner Production Centre, Dr Rene Van Berkel, presented keynote presentation on international status of resource efficient and cleaner production.

**SEPTEMBER, 2018**

**International Conference on Sustainable Standards and Trade, UNFSS and QCI, Gurgaon**

As member of the UN Forum on Sustainable Standards (UNFSS), UNIDO contributed to the release of the flagship report on Voluntary Sustainability Standards. Moreover, UNIDO representative moderated panel discussion on sustainability standards in textile and garment sectors. In doing so, he reiterated that sustainability standards are not a checklist to comply with yet rather a means for driving and achieving continuous improvement in environmental and social performance of enterprises and the value chains these are part of.

**National GEF Dialogue, MoEFCC, Delhi**

UNIDO shared results and experiences in the implementation of its GEF funded projects in India in the areas of energy efficiency, renewable energy for industrial applications, environmentally sound management of chemicals and waste and cleantech innovation and entrepreneurship. Moreover, UNIDO contributed actively to exploring priority areas for GEF7 programming.
Secretary DIPP, chaired National Steering Committee for the UNIDO India Country Programme, which reviewed progress and achievements of UNIDO in India and obtained stakeholders' endorsement for the results areas under the India UNIDO Country Programme 2018-2022.

UNIDO and FICCI organized international workshop to exchange good practices of the application of E-Commerce to improve markets for SMEs and improve livelihoods and incomes for artisans and producers.

Speaking on the subject of Industry 4.0 for inclusive and sustainable industrialization, Dr Rene Van Berkel, argued in favor of Indianized model and roadmap to smart manufacturing. Industry 4.0 Made in India way.

UNIDO co-organized technical panels on solar process heating and bioenergy for industry. Opportunities for concentrating solar thermal were particularly emphasized, for which UNIDO estimated a potential of 6.45 GW in India of which only about 0.1% has been realized.

Secretary DIPP, chaired National Steering Committee for the UNIDO India Country Programme, which reviewed progress and achievements of UNIDO in India and obtained stakeholders' endorsement for the results areas under the India UNIDO Country Programme 2018-2022.

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Speaking on the subject of Industry 4.0 for inclusive and sustainable industrialization, Dr Rene Van Berkel, argued in favor of Indianized model and roadmap to smart manufacturing. Industry 4.0 Made in India way.
“INCLUSIVE” in this context means that industrial development must include all countries and all peoples, as well as the private sector, civil society organizations, multinational development institutions, and all parts of the UN system, and offer equal opportunities and an equitable distribution of the benefits of industrialization to all stakeholders.

“SUSTAINABLE” addresses the need to decouple the prosperity generated from industrial activities from excessive natural resource use and negative environmental impacts.

The Lima Declaration, adopted by UNIDO’s Member States in December 2013, sets the foundation for a new vision of Inclusive and Sustainable Industrial Development (ISID) and highlighted the role of industrialization as a driver for development.

ISID therefore implies that no one is left behind and all parts of society benefit from industrial progress, which also provides the means for tackling critical social and humanitarian needs.

ISID aims at:

- Safeguarding environment
- Advancing economic competitiveness
- Creating shared prosperity

Facilitated by strategic policies
Implemented by strong & knowledge-rich institutions

It requires an industrial transformation to ‘factories fit for the future that were basically already urgently needed yesterday’. Such factories produce quality products that are sought after by markets in competitive manner, provide a decent reward to all involved in and affected by industrial production and have conservation of environment, resources and climate engrained in their business DNA.
UNIDO COUNTRY PROGRAMME

This annual report highlights key activities and achievements of UNIDO projects in India during 2018. These projects are implemented within the framework of UNIDO India Country Programme (CP), as agreed between the Government of India, through the Department of Industrial Policy and Promotion (DIPP) and UNIDO. 2018 marked a transitional year, as the 2013-17 CP had been completed, whilst the new 2018-22 CP was still being further developed and operationalized.
Twenty-four projects (including several with subsequent stages and/or combining earlier separate project concepts) were operationalized in India under the 2013-17 CP.

Over the 5-year period the total UNIDO expenditures mounted up to **USD 35,271,692** (incl. PSC).

14 projects started under the CP2013-17 continued in 2018, and five thereof were completed during 2018. In addition, one preparatory assistance was carried forward from 2017 and one new started in 2018. In total UNIDO expended USD 8.7 million on these 14 projects and 2 preparatory assistances over 2018 in India. These are listed in below table. 11 projects and one preparatory assistance are continuing into 2019, with a total remaining budget of USD 39.3 million (including PSC).

### PROJECT TITLE (*)

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Budget (incl. PSC)</th>
<th>Expenditures in 2017 (incl. PSC)</th>
<th>Expenditures in 2018 (incl. PSC)</th>
<th>Remaining Project Budget (incl. PSC)</th>
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<tbody>
<tr>
<td><strong>Appropriate technology, productivity and manufacturing management</strong></td>
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<tr>
<td>International centre for inclusive and sustainable industrial development (IC-ISID) (**)[DIPP–DIPP]</td>
<td>$1,035,853</td>
<td>$204,847</td>
<td>$1,87,676</td>
<td>$351,320</td>
</tr>
<tr>
<td>Development and adoption of appropriate technologies for enhancing productivity in the Indian bicycle and bicycle parts (**)[DIPP–DIPP]</td>
<td>$1,842,465</td>
<td>$501,957</td>
<td>$774,301</td>
<td>$561,000</td>
</tr>
<tr>
<td>Kanpur leather development project 2015-2017 (**)[DIPP–DIPP]</td>
<td>$1,000,000</td>
<td>$383,537</td>
<td>$190,619</td>
<td>Completed 31 March 2018</td>
</tr>
<tr>
<td>Development and adoption of appropriate technologies for enhancing productivity in the cement sector (**)[DIPP–DIPP]</td>
<td>$1,270,685</td>
<td>$502,833</td>
<td>$116,081</td>
<td>Completed 31 March 2018</td>
</tr>
<tr>
<td>Development and adoption of appropriate technologies for enhancing productivity in the paper and pulp sector (**)[DIPP–DIPP]</td>
<td>$1,644,150</td>
<td>$484,735</td>
<td>$85,680</td>
<td>Completed 31 March 2018</td>
</tr>
<tr>
<td>Supporting small and medium-sized manufacturers in the automotive component industry in India [DHI–DHI]</td>
<td>$1,021,728</td>
<td>$239,524</td>
<td>$105,769</td>
<td>Completed 30 June 2018</td>
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<tr>
<td><strong>Environmentally sound management of chemicals and waste</strong></td>
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<tr>
<td>Environmentally sound management of medical wastes in India [GEF-MoEFCC]</td>
<td>$11,000,000</td>
<td>$2,929,904</td>
<td>$1,044,969</td>
<td>$2,326,816</td>
</tr>
<tr>
<td>Environmentally sound management and final disposal of PCBs in India [GEF-MoEFCC]</td>
<td>$15,510,000</td>
<td>$306,246</td>
<td>$2,10,232</td>
<td>$1,574,294</td>
</tr>
<tr>
<td>Development and promotion of non-POPs alternative to DDT [GEF-MoEFCC]</td>
<td>$9,130,000</td>
<td>$1,051,191</td>
<td>$2,379,897</td>
<td>$5,446,640</td>
</tr>
<tr>
<td>PROJECT TITLE (*)</td>
<td>TOTAL BUDGET (incl. PSC)</td>
<td>EXPENDITURES IN 2017 (incl. PSC)</td>
<td>EXPENDITURES IN 2018 (incl. PSC)</td>
<td>REMAINING PROJECT BUDGET (incl. PSC)</td>
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<tr>
<td><strong>Industrial energy efficiency</strong></td>
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<tr>
<td>Promoting energy efficiency and renewable energy in selected micro, small and medium enterprises (MSME) clusters in India [GEF-BEE]</td>
<td>$7,889,308</td>
<td>$139,630</td>
<td>$211,146</td>
<td>$3,583,982</td>
</tr>
<tr>
<td>Promoting market transformation for energy efficiency in micro, small &amp; medium enterprises [GEF-MSME]</td>
<td>$4,912,001</td>
<td>$1,619,994</td>
<td>$1,644,271</td>
<td>$1,595,903</td>
</tr>
<tr>
<td><strong>Renewable energy</strong></td>
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<tr>
<td>Promoting business models for increasing penetration and scaling up of solar energy [GEF-MNRE]</td>
<td>$4,801,691</td>
<td>$434,111</td>
<td>$337,964</td>
<td>$1,242,398</td>
</tr>
<tr>
<td>Organic waste streams for industrial renewable energy applications in India [GEF-MNRE]</td>
<td>$3,666,300</td>
<td>$142,884</td>
<td>$109,083</td>
<td>$3,197,624</td>
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<tr>
<td><strong>Sustainable cities</strong></td>
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<td>Sustainable cities, integrated approach pilot in India [GEF-MoHUA]</td>
<td>$13,623,853</td>
<td>$446,691</td>
<td>$62,970</td>
<td>$11,687,775</td>
</tr>
<tr>
<td><strong>Cleantech innovation and entrepreneurship</strong></td>
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<td></td>
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<tr>
<td>Facility for low carbon technology deployment [GEF-BEE]</td>
<td>$9,583,561</td>
<td>$645,265</td>
<td>$1,210,065</td>
<td>$7,691,754</td>
</tr>
<tr>
<td>GEF UNIDO cleantech programme for SMEs [GEF-MSME]</td>
<td>$1,100,000</td>
<td>$328,549</td>
<td>$17,949</td>
<td>Completed 30 April 2018</td>
</tr>
<tr>
<td><strong>Preparatory assistances</strong></td>
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</tr>
<tr>
<td>Modernization and greening of small and medium industries in India [UNIDO-MSME]</td>
<td>$20,855</td>
<td>$ -</td>
<td>$5,703</td>
<td>$15,152</td>
</tr>
<tr>
<td>India country programme formulation [UNIDO-DIPP]</td>
<td>$22,831</td>
<td>$16,088</td>
<td>$6,613</td>
<td>Completed 30 Nov 2018</td>
</tr>
<tr>
<td><strong>Country Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$89,075,281</td>
<td>$10,377,985</td>
<td>$39,274,659</td>
<td>$3,197,624</td>
</tr>
</tbody>
</table>

(*) between brackets [donor-line ministry], with GEF=Global Environment Facility; DIPP=Department for Industry Policy and Promotion; DHI = Department for Heavy Industry; MSME = Office of Development Commissioner MSME; MoEFCC = Ministry of Environment, Forests and Climate Change; MNRE = Ministry for New and Renewable Energy; MoHUA = Ministry for Housing and Urban Affairs; and BEE = Bureau of Energy Efficiency

(**) projects executed through the joint DIPP-UNIDO International Centre for Inclusive and Sustainable Industrial Development, IC-ISID
In parallel, UNIDO as member of the United Nations Country Team (UNCT) signed the UN India Sustainable Development Framework (UNSDF), which governs the work of the UN at large in India. Among the seven results areas under this UNSDF, UNIDO contributes to three, respectively on poverty and urbanization; climate change, clean energy and disaster resilience; and skilling, entrepreneurship and job creation.

**SEVEN MAJOR PRIORITIES AND OUTCOMES IDENTIFIED BY KEY STAKEHOLDERS**

**Priority I: Poverty and Urbanisation**
By 2022, institutions are strengthened to progressively deliver universal access to basic services, employment, and sustainable livelihoods in poor and excluded rural and urban areas.

**Priority II: Health, Water and Sanitation**
By 2022, there is improved and more equitable access to, and utilization of, quality affordable health, water, and sanitation services.

**Priority III: Education and Employability**
By 2022, more children, young people, and adults, especially those from vulnerable groups, enjoy access to quality learning for all levels of education.

**Priority IV: Nutrition and Food Security**
By 2022, all children enjoy essential nutrition services and rural smallholders and other vulnerable groups have improved livelihoods and greater access to a nutritionally adequate food basket.

**Priority V: Climate Change, Clean Energy and Disaster Resilience**
By 2022, environmental and natural resource management (NRM) is strengthened and communities have increased access to clean energy and are more resilient to climate change and disaster risks.

**Priority VI: Skilling, Entrepreneurship, and Job Creation**
By 2022, people vulnerable to social, economic and environmental exclusion, have increased opportunities for productive employment through decent jobs and entrepreneurship.

**Priority VII: Gender Equality and Youth Development**
By 2022, women, children, and young people have improved access to equal opportunities and an enabling environment to advance their social, economic and political rights.
FACILITY FOR LOW CARBON TECHNOLOGY DEPLOYMENT

**BUDGET**
USD 8,712,328

**CO-FINANCING**
USD 59,770,000

**DONOR**
GEF

**DURATION**
3rd January 2016 – 31st December 2020

**STATUS**
Ongoing

**PARTNERS**
UNIDO, Bureau of Energy Efficiency and CII

**LOCATION**
India

**CONTEXT**

The project aims to facilitate the adoption of low carbon technologies across the Indian industrial sector for waste heat recovery, space conditioning and pumping (irrigation). Strengthen the collaboration between government agencies, industry, innovators, the research community, financing institutions and technology experts in the field of innovative low-carbon technologies.

**IMPACT ACHIEVED**

**FLCTD project portal**
WWW.LOW-CARBON-INNOVATION.ORG
was developed and launched including explanatory video on project approach.

Upon BEE endorsement
UNIDO signed agreement with 13 FIRMS for providing INR 3,53,85,000 for respective technology demonstrations to be completed by 30th November 2019.

**13 WINNERS**

The Innovation Challenges for 2018 were concluded in OCTOBER 2018

out of 127 applications received for three verticals

WINNERS GET FINANCIAL ASSISTANCE for technology demonstration for replication and scale-up
The project aimed to strengthen the policy and institutional framework, and build national capacity to promote innovations in clean energy technologies in SME clusters in India. It will strive to support innovative startups and promote entrepreneurship in selected SMEs identified through the national/regional competition. It will also mobilize investment and develop the national capacity of SME sector in India to promote clean low carbon technologies linking to global value chain resulting in the reduction of GHG emissions and carbon footprints of the selected SME clusters.

**CONTEXT**

UNIDO launched the Global Cleantech Innovation Programme in India (GCIP India) in cooperation with the Ministry of Micro, Small & Medium Enterprises (MSME) in May 2013.

Between 2014 and 2017, GCIP India held:

- **FOUR ANNUAL COMPETITIONS**
- **RECEIVED MORE THAN 700 APPLICATIONS**

84 small businesses and entrepreneurs who qualified the selection process benefitted from the programmes support.

GCIP’s emphasis on market research, business development and financial modelling rather than technology validation or technical development was considered valuable and distinctly different by the participants, who had access to other business incubators and accelerators within India.

GCIP India’s thematic focus on cleantech – particularly

- Energy efficiency
- Renewable energy
- Water efficiency
- Waste beneficiation

and its support for innovations in businesses with capital-intensive, high startup costs also addressed a gap evident across comparable initiatives.

“**The Ministry of Micro, Small and Medium enterprises (M/o MSME) has provided collaborative support to the Global Cleantech Innovation Programme, which was implemented from 2013 to 2017. The GCIP experience in India demonstrated that various indigenous clean technology innovations bring tangible benefits to energy and environmental issues at a local level. These innovations can provide solutions that help advance governments key initiatives like ‘Start-up India’, ‘Make in India’ ‘Atal Innovation Mission’ and ‘Swachh Bharat Mission’.**

I understand that the GCIP programme identified and built capacity of 84 start-ups in clean technologies covering areas of energy efficiency, renewable energy, water and waste beneficiation. These cleantech startups have demonstrated strong credentials by winning at the GCIP Global competitions held in the US in 2016, 2017 and 2018.”

- Mr. Ram Mohan Mishra, Additional Secretary and Development Commissioner, Ministry of MSME (quoted from GCIP Compendium, July 2018)
PROMOTING MARKET TRANSFORMATION FOR ENERGY EFFICIENCY IN MICRO, SMALL- AND MEDIUM ENTERPRISES (MSMEs)

<table>
<thead>
<tr>
<th>BUDGET</th>
<th>USD 4,465,455</th>
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</thead>
<tbody>
<tr>
<td>CO-FINANCING</td>
<td>USD 26,860,000</td>
</tr>
<tr>
<td>DONOR</td>
<td>GEF</td>
</tr>
<tr>
<td>DURATION</td>
<td>February 2016 - August 2020</td>
</tr>
<tr>
<td>STATUS</td>
<td>Ongoing</td>
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<tr>
<td>PARTNERS</td>
<td>UNIDO, MoMSME, EESL, SIDBI and BEE</td>
</tr>
<tr>
<td>LOCATION</td>
<td>India</td>
</tr>
</tbody>
</table>

**CONTEXT**

The objective of the project is to
- promote the implementation of energy efficiency in the MSME sector
- address the identified barriers for scaling-up energy efficiency investments and consequently promote a cleaner and more competitive MSME industry in India.

**IMPACT ACHIEVED**

The project is in the early stage of implementation and has completed the below activities.

**BASELINE ENERGY STUDY**

- Brainstorming workshops were held to scope replicable technologies in association with local industry associations, MSME-Dis, EESL, BEE and Local Industry units etc.

- To create awareness about the project
- To carry out preliminary screening of prospective technologies.

**VIDEO GRAPHIC**

- Baseline audit of 2 units at Vellore Cluster for LSU Dryer technology
- have been completed for 5 clusters namely Jorhat, Surat, Vapi, Ludhiana, Jalandhar and Odisha

**Expected result from the project:** 9,561,838 GJ (0.228 MToE) / 806,000 tonnes CO2eq

**27 TECHNOLOGIES** identified in all clusters
13 will be presented in 2nd WTG
Inauguration of pilot demonstration project on Energy Efficient Compressed Air System

International study tour to New Zealand dairy sector

**ENERGY EFFICIENCY AND RENEWABLE ENERGY IN SELECTED MICRO, SMALL AND MEDIUM ENTERPRISES (MSME) CLUSTERS IN INDIA**

<table>
<thead>
<tr>
<th>GEF GRANT</th>
<th>US$ 7,172,097</th>
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</thead>
<tbody>
<tr>
<td>CO-FINANCING</td>
<td>US$ 26,200,000</td>
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<tr>
<td>DONOR</td>
<td>GEF</td>
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<tr>
<td>DURATION</td>
<td>April 2011 - June 2021</td>
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<tr>
<td>STATUS</td>
<td>Ongoing</td>
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<tr>
<td>PARTNERS</td>
<td>UNIDO, BEE, MSME and MNRE</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Pan India</td>
</tr>
</tbody>
</table>

**CONTEXT**

Project aim

The project promotes an enabling market environment for introducing Energy Efficient (EE) technologies and enhancing the use of Renewable Energy (RE) technologies in process applications in 5 sectors (ceramic production, hand tool production, foundries, brass production, and dairy production).

The project aims to increase capacity of suppliers of Energy Efficiency/Renewable Energy product and service providers for scaling up the project to a national level.

**IMPACT ACHIEVED**

120 Detailed Project Reports (DPRs) have been prepared on various possible EE technologies in the clusters and units have already implemented more than 50 DPRs and many are under various stages of implementation.

Capacity building and database of LOCAL SERVICE PROVIDERS (LSPs) were developed in 12 clusters.

- **Brass**: Jamnagar
- **Ceramics**: Khurja, Thangadh and Morbi
- **Dairy**: Gujarat, Sikkim and Kerala
- **Foundry**: Belgaum, Coimbatore and Indore
- **Hand tools**: Jalandhar and Nagaur

**AUG 2018**
Organized project launch workshop at Kerala Dairy Cluster
Inaugurated EMC (Energy Management centre) in Kerala Dairy cluster

Developed 70 case studies on EE TECHNOLOGIES for wider reach and knowledge dissemination in the clusters.
PROMOTING BUSINESS MODELS FOR INCREASING PENETRATION AND SCALING UP OF SOLAR ENERGY

| PARTNERS: Ministry of New and Renewable Energy (MNRE) | Indian Renewable Energy Development Agency (IREDA), National Institute of Solar Energy (NISE) |

**CONTEXT**

Concentrating Solar Thermal (CST) systems for industrial application offer affordable solution to address the twin challenge of GHG emission reduction and of optimizing the solar energy deployment in the country.

**Roadmap 2020 for CST in India**

**6.45 GWTH** total industry market potential of CSTs

The objectives of the project are in line with the government priorities as highlighted in the Jawaharlal Nehru National Solar Mission (JNNSM) of the Ministry of New and Renewable Energy (MNRE), Government of India.

**IMPACT ACHIEVED**

**First ever dedicated loan scheme** for CST promoting large-scale projects in partnership with IREDA

Supported and promoted specialized applications of CST in unexplored sectors such as

- **OIL REFINING**
- **EFFLUENT TREATMENT ETC.**

While many projects are in the pipeline,

**4 PROJECTS** with a total collector area of **1,313 m²** received support (technical/financial) from UNIDO

**BUDGET** **USD 4,365,174**

**CO-FINANCING** **USD 21,825,870**

**DONOR** GEF

**DURATION** 60 months

**STATUS** Ongoing

**LOCATION** Nation-wide

While many projects are in the pipeline,**

**4 PROJECTS**

with a total collector area of

**1,313 m²**

received support (technical/financial) from UNIDO
The overall objective of the project was to strengthen the global competitive position of the Indian cement industry. The project aimed to do this by strengthening the capacity and capability of the nodal technical institution for the cement industry - the National Council for Cement and Building Materials (NCCBM) - to provide better management and technical support to the industry.

The project focused on:
- competitiveness of cement industry
- facilitate access to necessary technology
- expertise transfer
in line with the National Manufacturing Policy (Government of India, 2011)

The project developed new standards for 'Composite cement' and 'Construction and demolition wastes' with inputs from NCCBM.

The utilization of alternative fuels and raw materials for cement production, emissions management in cement plants, process technology, energy efficiency, new cement products and quality management were identified as priority areas for the Indian cement industry and special emphasis was given to these topics.

"NCCBM needed exposure to international experts and institutions working in the cement industry. UNIDO facilitated access to such expertise and highlighted technologies and practices that should be adopted in the Indian context. All the experts and institutions that UNIDO has put us in touch with have been extremely open and forthcoming with ideas and information. This has been useful for NCCBM.

UNIDO has also assisted NCCBM in the past, during a previous project in 1984. At that time, we needed support in areas such as productivity enhancements and energy efficiency. Because of the interventions then, NCCBM was able to help the industry become as energy efficient as it is today. At present, we are an efficient industry, but we are still lagging in waste utilization due to lack of expertise. This current UNIDO project was thus a timely intervention in the current industry context. NCCBM has begun to receive increased consultancy projects after undergoing UNIDO trainings.

It is because of UNIDO’s many interventions that NCCBM has been able to better serve the industry, and in turn been able to generate approximately 80% of its revenue from industry-sponsored projects."

- Mr. Ashwani Pahuja, former Director General, NCCBM
DEVELOPMENT AND ADOPTION OF APPROPRIATE TECHNOLOGIES FOR ENHANCING PRODUCTIVITY IN THE PAPER AND PULP SECTOR

BUDGET
USD 1,644,150

DONOR
DIPP (NOW DPIIT), Government of India

DURATION
28 months (December 2015 – March 2018)

STATUS
Completed

LOCATION
Saharanpur (Uttar Pradesh), Vapi (Gujarat), Coimbatore (Tamil Nadu), Kolkata (West Bengal)

PARTNERS: Central Pulp and Paper Research Institute (CPPRI), Saharanpur, India

CONTEXT
The Indian paper industry faces several challenges:
- Inadequate cost efficiency and productivity due to a scarcity of raw material supply and quality
- Low economies of scale
- Low energy efficiency
- Inefficient internal water handling
- Low pulp yield

Project aim
Support the pulp and paper industry in addressing these challenges

Strengthening the global competitive position of the industry.

Project focuses on competitiveness of the pulp and paper industry and facilitate necessary technology and expertise transfer, in line with the National Manufacturing Policy (Government of India ’11).

IMPACT ACHIEVED
Overall achievements outlined below:

ENHANCED EXPERTISE, SKILLS AND EXPOSURE
to best available technologies and global best practices at CPRRI.

Establishment of institutional linkages and partnerships with leading technical institutions and organizations in the global pulp and paper sector.

Project interventions are aligned with

ENHANCED EXPERTISE, SKILLS AND EXPOSURE

“The UNIDO project has given us a strategic direction about where to go in the future – we can better prepare when the demand for writing and printing grade paper is declining due to digitalization. Economic security for the industry has to be ensured. The industry will have to diversify their products by utilizing the chemical components; we have started educating the industry that this might be the future. Paper mills in the future might make higher profits by producing chemicals, fuels.

Prior to the UNIDO project, we only worked with the Indian industry and the government – this was a closed circle. This has now gone beyond that: We are now interacting with the outside world and are exploring partnerships. If there is a project proposal submission call, we just drop an email to one of our partners – we have the contacts now. Our connectivity has improved.”

- Dr. Bipin Prakash Thapliyal, Director CPPRI
On-site training programme on cleaner tanning technologies

Energy and carbon footprint assessment in tannery

KANPUR LEATHER DEVELOPMENT PROJECT

BUDGET
USD 1,000,000

DONOR
DIPP (NOW DPIIT), Government of India

DURATION
29 months (November 2015 – March 2018)

STATUS
Completed

LOCATION
Unnao, Banthar and Jajmau (Uttar Pradesh)

PARTNERS: Council for Leather Exports (CLE), Central Leather Research Institute (CLRI), Kanpur Unnao Leather Cluster Development Co. Ltd. (KLC)

CONTEXT

Project aim
To enable local leather-based industry in the three clusters around Kanpur (Unnao, Banthar and Jajmau) to sustainably convert locally available raw hides and skins to exportable products either directly as genuine leather or as derived finished products (e.g. footwear).

PROJECT OUTCOMES
Sustainable leather processing Waste management

IMPACT ACHIEVED

The initiatives and activities under the project were directed to:
- Promote environmental sustainability and greater production efficiency through adoption of best practices in leather processing
- Enhance waste management by reducing the amount of pollution generated at source and containing the impact of waste on the environment
- Create employment and income opportunities in local leather-based industry
- Contribute to the enhanced performance of local SMEs, thus ensuring their sustainable inclusion in domestic and international supply chains

The project’s overall achievements are outlined below:

E-LEARNING RESOURCES AND ANIMATED TRAINING MATERIALS were developed
Topics including:
- Sustainable leather manufacturing technologies
- Occupational safety and health-related topics
- Tannery effluent treatment

INTRODUCTION AND INSTITUTION OF THE FIRST-EVER INNOVATION AWARD SYSTEM (FOR THE LEATHER TANNERIES)
Support of Council for Leather Exports (CLE) and Kanpur Unnao Leather Cluster Development Co. Ltd. (KLC), for promotion of cleaner technologies, Occupational Safety and Health (OSH) improvements, and energy efficiency as also for showcasing the related best practices in tanneries.

"Kanpur is a big leather cluster and we have a lot of potential. The environmental issues faced are a serious concern. UNIDO’s help on these major issues is a big support to the industry, and we look forward to the continued support from UNIDO as well as the Government of India for future projects as well."

-Mr. Mukhtarul Amin, Chairman, Council for Leather Exports
DEVELOPMENT AND ADOPTION OF APPROPRIATE TECHNOLOGIES FOR ENHANCING PRODUCTIVITY IN THE INDIAN BICYCLE AND BICYCLE PARTS SECTOR

BUDGET
USD 1,842,465

DONOR
DIPP (NOW DPIIT), Government of India

DURATION
32 months (January 2017 – August 2019)

STATUS
Ongoing

LOCATION
Ludhiana (Punjab)

PARTNERS: Research and Development Centre for Bicycle and Sewing Machine (RDCBSM), All India Cycle Manufacturers’ Association (AICMA), The United Cycle and Parts Manufacturers Association (UCPMA)

CONTEXT

The coming trend is of aluminium and carbon cycles, but there is a need to study the technology used in manufacturing light-weight bicycles. UNIDO’s study tour to China provided us with the required exposure and we learnt a lot about their latest technology. We will benefit by bringing in latest technology in manufacturing light-weight bicycles. Further, we can sign MOUs with China for collaboration.

- Mr. A.S. Bhogal, Senior Member and Advisor to Executive Committee, UCPMA

The modalities of implementation include comprehensive upgrading of capabilities of RDCBSM and associations through both:

**Soft interventions**
- Skills development
- Training
- Capacity building
- Technical workshops

**Hard interventions**
- Procurement of equipment for the testing facility of RDCBSM.

The project identified KEY SUPPLY AND DEMAND-RELATED BARRIERS AND INDUSTRY-WIDE RECOMMENDATIONS towards adoption of global best practices and leading technologies, and the role of RDCBSM in such a context.

**Project interventions are aligned with**

- Enable RDCBSM and the associations to acquire the necessary exposure to, and knowledge of, best available technologies and best practices across the global bicycle industry.

- To facilitate implementation of appropriate technologies and measures in the Indian context.
IC-ISID continued to support implementation of four projects in India focused on

- Leather
- Cement
- Pulp And Paper
- Bicycle Sector

IC-ISID contributed to awareness generation and advocacy for inclusive and sustainable industrialization.

The project established linkages with various international organizations, including R&D institutions, industry associations towards identification of ISID-relevant projects for future implementation.

The joint DPIIT-UNIDO International Centre for Inclusive and Sustainable Industrial Development (IC-ISID) works to facilitate inclusive and sustainable industrialization in India and other developing countries (through South-South and triangular cooperation).

**Project aim**

- The project promotes introduction and adoption of advanced manufacturing technologies in the manufacturing sector in India to strengthen productivity and competitiveness of MSMEs
- The project aims to identify and transfer best and proven technology-led solutions from India to other developing countries, and
- It serves as a model for promoting targeted interventions in select manufacturing sectors.

**Impact Achieved**

$916,684

DIPP (NOW DPIIT), Government of India

5 years

Ongoing

Government, technical institutes and industry

Global

CONTEXT

IMPACT ACHIEVED
ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA

**BUDGET**
US$14,100,000

**CO-FINANCING**
US$29,000,000

**DONOR**
GEF

**DURATION**
01/01/2010 – 31/12/2019

**STATUS**
Ongoing

**LOCATION**
Bhilai Steel Plant, Bhilai, Chhattisgarh
Central Power Research Institute, Bangalore

**CO-FINANCING**

**DONOR**

**DURATION**

**STATUS**

**LOCATION**

**PARTNERS:** Ministry of Environment, Forests and Climate Change (MOEFCC), Central Power Research Institute and Steel Authority of India Ltd.

**CONTEXT**

The project addresses national priorities for environmentally sound disposal of POPs chemicals specifically to:

- Eliminate PCB-containing equipment
- Reduce PCBs releases from industrial wastes and sewages,
- Improve environmental performance in power sector
- Improve environmental performance in industry sector,
- Identify PCBs wastes and contaminated sites and their environmentally sound and safe management.

**The progress in the current year:**

- 400 tons of pure PCBs and 600 tonnes of low concentration PCBs containing oil treated
- Mobile dechlorination system with accompanying sodium dispersion unit fully commissioned
- Civil and associated works for static dechlorination and plasma plants in completion phase.

**Objectives**

- Strengthen the legal and regulatory framework for environmentally sound management (ESM) and disposal of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes;
- Improve institutional capacity at all levels of PCBs disposal management;
- Removal of 7,700 tonnes of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes from targeted sites and transport them to disposal unit; and
- Disposal of 7,700 tonnes PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes in an environmentally sound manner.

The objectives are being achieved through a combination of strategies, including legislative and regulatory assessment, capacity building, public education, technology transfer, technology dissemination, technical training and technical support.

**IMPACT ACHIEVED**

**THE MOBILE DECHLORINATION PLANT**

being operated by CPRI, has been treating the PCBs stocks located at different sites in the country.

The static plant at **BHILAI STEEL PLANT** is able to achieve its target to dispose of

1700 tonnes of pure PCBs

5100 tonnes of PCBs from PCB-containing equipment, PCB-containing mineral oil/wastes.

**PROJECT GOAL:**

- Establishing quality, reliable, sustainable and resilient infrastructure
- Reduce the number of deaths/illnesses from hazardous chemicals and air, water and soil pollution and contamination.
- Compliance with the international Stockholm Convention

**Mobile dechlorination plant in operation at PCB owner’s site**
The project reviewed 14 sectors identified under the National Master Plan to select priority SME sectors and clusters with the most promising potential for the use of organic waste streams. This resulted in four priority sectors namely Sugar, Poultry, Cattle farming, Fruit, Vegetable and food processing. These sectors have large potential but the bio-resources remain unexploited for energy generation.

The project mapped availability of bio-waste, particularly state wise potential of both urban and industrial wastes suitable for energy generation including thermal, power and bio-CNG.

**Project intervention are aligned with**

**CONTEXT**

The project is contributing to reduction of Greenhouse Gas (GHG) emissions by promoting investment in renewable energy technologies that transform the market for using organic waste for industrial energy applications in micro, small and medium enterprises in India. The project focuses on the application of bio-methanation technology (also known as biogas or anaerobic digestion), which caters to a wide range of applications like power generation, fuel for heating and automobiles and generates potentially valuable by-products such as organic manure/fertilizer, sulphur, carbon dioxide etc.

**Project aim**

- Strengthening policy and institutional framework
- Demonstration of financially feasible technologies in selected sectors
- Increase use of technologies in organic waste to energy applications in industry
- Capacity building of private and public stakeholders

The project is contributing to reduction of Greenhouse Gas (GHG) emissions by promoting investment in renewable energy technologies that transform the market for using organic waste for industrial energy applications in micro, small and medium enterprises in India. The project focuses on the application of bio-methanation technology (also known as biogas or anaerobic digestion), which caters to a wide range of applications like power generation, fuel for heating and automobiles and generates potentially valuable by-products such as organic manure/fertilizer, sulphur, carbon dioxide etc.

**IMPACT ACHIEVED**

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The project mapped availability of bio-waste, particularly state wise potential of both urban and industrial wastes suitable for energy generation including thermal, power and bio-CNG.
ENVIRONMENTALLY SOUND MANAGEMENT OF MEDICAL WASTES IN INDIA

Project aim

Reducing unintentionally produced Dioxins and Furans (ranked as Persistent Organic Pollutants (POPs)) by efficient and environmentally sound management of biomedical waste and assist India in implementing its relevant obligations under the Stockholm Convention.

UNIDO in coordination with Ministry of Environment, Forest and Climate Change (MoEFCC) has been implementing the medical waste Project with objective of reducing unintentionally produced Dioxins and Furans by efficient management of biomedical waste and assist India in complying obligations under the Stockholm Convention as per the article 7 of the NIP.

CONTEXT

PARTNERS: Ministry of Environment Forest and Climate Change (MoEFCC), Ministry of Health and Family Welfare (MoH&FW) & GOVERNMENTS OF KARNATAKA, MAHARASHTRA, GUJARAT, ORISSA AND PUNJAB

IMPACT ACHIEVED

Approximately 4,158 NUMBER OF BINS of each of the 4 colors (as per Schedule-I of BMWM Rules, 2016) has been provided for segregated source collection of medical waste along with covered waste collection trolleys for safe waste movement.

Elaborate training programs has been conducted in project states on environmentally sound management of medical waste which again is in line with BMWM Rules, 2016.

More than 20 NUMBER OF MICROWAVES has been provided to large hospitals in the 5 project states to promote non-burn technology as BAT.

Waste tracking by bar coding is being implemented as per Rule, 4 of BMWM Rules, 2016.
DEVELOPMENT AND PROMOTION OF NON-POP ALTERNATIVES TO DDT

**Budget**
US$8,300,000

**Co-Financing**
US$43,147,167

**Donor**
GEF

**Duration**
Five years up to July 2020

**Status**
Ongoing

**Location**
Pan India

**Context**

**Project aim**
India is the only country remaining that still produces, uses and exports DDT. There is an urgent need to develop holistic and country-wide approach to establishing viable alternatives for protection against malaria and other mosquito transferred diseases and phase-out strategy of DDT in the country. The project aims to combat mosquitoes at different critically weak points in their life cycle through the introduction of bt-based biopesticides and neem-based botanical pesticides and further reinforcing with Long Lasting Insecticidal Nets (LLIN) impregnated bed nets with synthetic pyrethroids as the final barrier.

**Impact Achieved**

- **ECO-FRIENDLY NEEM BASED PESTICIDES**
  - Local production of LLIN would reduce the dependency on the import.
  - Pilot machinery for scaling up of neem based pesticides

- **Large scale propagation of new cultivars of neem**
  - would provide quality raw material for the production of DDT alternative pesticide products.

- **Establishment of commercial scale production facility for Bt based biopesticides**
  - would substantially reduce the load of DDT on the environment.

- **Production and introduction of all the neem and Bt based products**
  - would have positive impact and contribute to SDGs.

**Project Goals**

- Establishing quality, reliable, sustainable and resilient infrastructure and
- Reduces the number of deaths/illnesses from hazardous chemicals and air, water and soil pollution and contamination.

**Project interventions are aligned with**

- 9 INTEGRATED MANUFACTURING
- 3 SET DEATH AND POISON GAS
- 6 SANITIZATION AND URBANIZATION
- 12 SUSPENDER GUN AND SABOTAGE
The SC-IAP project intends to assist India to reduce cities’ greenhouse gas emissions (through investment projects and technology demonstration); promote sustainable cities practices through partnership approach; and increase scope and depth of integrated urban sustainability management.

The general framework of the project is organized into 4 components:

1. Sustainable Urban Planning and Management
2. Investment Projects and Technology Demonstration
3. Partnership and Knowledge Management Platform
4. Monitoring and Evaluation

The project contributes to the implementation of the United Nation’s Sustainable Development Goals

It includes the implementation of

- Sustainability planning
- Pilot sustainable investment projects
- Capacity building, and
- Development of Greenhouse Gas (GHG) inventories for selected cities
UNIDO initiated a supplier development programme with a view to supporting small and medium-sized manufacturers in the automotive component industry in India.

Funded by the Government of India, to help SMEs in the sector overcome challenges related to low productivity, insufficient and inconsistent quality, as well as scalability to become more efficient, reliable and cost-effective suppliers.

The Programme is developed and implemented by UNIDO jointly with the Indian Automotive Components Manufacturers Association (ACMA).

UNIDO-ACMA-DHI PARTNERSHIP PROGRAMME

**BUDGET**
- UNIDO: US$909,674
- ACMA: US$1,165,715

**CO-FINANCING**
- US$1,131,086

**DONOR**
- Department of Heavy Industries, GoI

**DURATION**
- 48 months

**STATUS**
- Completed in June 2018

**PARTNERS**
- Automotive Components Manufacturers Association (ACMA)

**LOCATION**
- 152 companies covering 25 clusters at 12 locations in India

**CONTEXT**

The Programme is developed and implemented by UNIDO jointly with the Indian Automotive Components Manufacturers Association (ACMA).

**IMPACT ACHIEVED**

The project contributes to the implementation of the United Nation’s Sustainable Development Goals

- Promote sustained, inclusive and sustainable economic growth, full and productive employment decent work for all.

Developing skill across different areas in automotive sector through transfer of knowledge and experience facilitating the dissemination of local expertise.

- Build resilient infrastructure
- Promote inclusive and sustainable industrialization
- Foster innovation through dissemination of UNIDO tools.

The results achieved at the firm level have been remarkable.

- 25% improvement in delivery time for many products
- 52% decrease in average lead-time required for completion of products
- 30% reduction in machine downtime through preventive maintenance practices

In terms of environmental performance, the company Metalman Auto, for instance, has reached substantial savings in the consumption of energy and resources.

- 24,000 LITRES per month in water
- 260 units per month in electricity saved

Furthermore, accidents were reduced to practically zero

- 51% reduction in absenteeism among employees since the implementation of the programme
## OUTLOOK AND STRATEGIC DIRECTIONS

### UNIDO INDIA COUNTRY PROGRAMME 2018-22

**Objective:** To initiate and facilitate transition towards inclusive and sustainable industrial development in India

<table>
<thead>
<tr>
<th>Key Result Areas</th>
<th>SOLUTIONS FOR CLIMATE, RESOURCES AND ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRODUCTIVE AND RESILIENT MSMEs</strong></td>
<td>• Energy, renewables and air pollution</td>
</tr>
<tr>
<td>• MSME business ecosystem</td>
<td>• Resources, water and effluents</td>
</tr>
<tr>
<td>• Skilled workforce</td>
<td>• Chemicals and waste</td>
</tr>
<tr>
<td>• Technology, quality and management</td>
<td></td>
</tr>
<tr>
<td><strong>INCLUSIVE AND RESPONSIBLE VALUE CHAIN AND BUSINESS</strong></td>
<td></td>
</tr>
<tr>
<td>• Sustainable livelihood</td>
<td>• Insight and foresight</td>
</tr>
<tr>
<td>• Responsible business</td>
<td>• Public private development partnership and dialogues</td>
</tr>
<tr>
<td><strong>STRATEGIC POLICY FOR INDUSTRIAL TRANSFORMATION</strong></td>
<td></td>
</tr>
</tbody>
</table>
UNIDO started development and resource mobilization for new generation of projects, specifically aligned with the CP 2018-2022, including:

- Promotion of productivity and innovation in automotive components manufacturing industry, approved and funded by DHI for project start from 1 January 2019

- Firm Level demonstrations of appropriate technology and productivity methods in paper industry (prospective funding by DIPP, through IC-ISID)

- National Leather Development Programme (prospective funding by DIPP, through IC-ISID)

- Accelerating industrial development through Industry 4.0 (prospective funding by DIPP, through IC-ISID)

- National innovation and innovation systems survey 2019 (prospective funding by Department of Science and Technology (DST), through IC-ISID)

- Promoting innovative technologies for utilization of paddy straw for production of pulp and paper (prospective funding by DST, through IC-ISID)

- Small industries development support initiative (prospective funding by DC MSME through IC-ISID)

- Clean technology assessment for industries in Hindon river (prospective funding through National Clean Ganga Mission (NCGM), through IC-ISID)
The UNIDO Regional Office in India is directly responsible for India, Bhutan, Maldives, Nepal and Sri Lanka and coordinates the UNIDO Country Offices in Afghanistan and Bangladesh. The Regional Office is led by the UNIDO Representative.

**UNIDO REGIONAL OFFICE IN INDIA**

René Van Berkel  
**UNIDO Representative**  
**Regional office in India**

- **Vinay Vij**  
  **(Admin)**

- **Harjit Singh Chandhok**  
  **(Admin)**

- **Sohan Badhan**  
  **(Admin Support)**

- **M. Vasudevan**  
  **(Sr. Chauffeur)**
ABBREVIATIONS

ACMA  Automotive Component Manufacturers Association of India
BAT  Best Available Techniques
BEE  Bureau of Energy Efficiency
BEP  Best Environmental Practices
BSP  Bhilai Steel Plant
CBWTF  Common Biomedical Waste Treatment Facilities
CII  Confederation of Indian Industries
CLRI  Central Leather Research Institute
CP  Country Programme
CPPRI  Central Pulp & Paper Research Institute
CPRI  Central Power Research Institute
CS  Concentrated Solar
DC  Development Commissioner
DDT  Dichloro Diphenyl Trichloroethane
DG  Director General
DIPP  Department of Industrial Policy and Promotion, Government of India
EE  Energy Efficiency
EESL  Energy Efficiency Services Limited
FICCI  Federation of Indian Chambers of Commerce and Industry
GEF  Global Environment Facility
GHG  Greenhouse Gas
GoI  Government of India
HQ  Head Quarters
IC-ISID  International Centre for Inclusive and Sustainable Development
RE  Renewable Energy
RENPAP  Regional Network on Pesticides for Asia and the Pacific
RO  Regional Office
SDGs  Sustainable Development Goals
SE4ALL  Sustainable Energy For All
IREDA  Indian Renewable Energy Development Agency
JNNSM  Jawaharlal Nehru National Solar Mission
LDCs  Least Developed Countries
LLIN  Long Lasting Insecticidal Nets
MNRE  Ministry of New and Renewable Energy, Government of India
MoEF&CC  Ministry of Environment, Forests and Climate Change, Government of India
MoHI  Ministry of Heavy Industries, Government of India
MSMEs  Micro, Small and Medium Enterprises
NBRI  National Botanical Resources Institute
NCCBM  National Council for Cement and Building Materials
NGO  Non-Government Organisation
NIP  National Implementation Plan
PCB  Poly Chlorinated Biphenyls
PDU  Pilot Demonstration Units
PMU  Project Management Unit
POPs  Persistent Organic Pollutants
UN  United Nations
UNIDO  United Nations Industrial Development Organization
UR  UNIDO Representative
URO  UNIDO Regional Office