INDO-GERMAN ENVIRONMENT PARTNERSHIP

Approach Paper
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Abbreviations

ALEAP  Association of Lady Entrepreneurs of Andhra Pradesh
AP    Andhra Pradesh
APIIC  Andhra Pradesh Industrial Infrastructure Corporation
ASEM  Advisory Services in Environmental Management
BMZ   German Ministry for Economic Cooperation and Development
CG    Chhattisgarh
DEA   Department of Economic Affairs
DPR   Detailed Project Report
GCPC  Gujarat Cleaner Production Centre
GIDB  Gujarat Infrastructure Development Board
GIDC  Gujarat Industrial Development Corporation
GIZ   Deutsche Gesellschaft für Internationale Zusammenarbeit
GUJ   Gujarat
HP    Himachal Pradesh
HR    Human Resources
IGEP  Indo-German Environment Partnership
JNNURM Jawaharlal Nehru National Urban Renewal Mission
KAR   Karnataka
KSPCB Karnata State Pollution Control Board
MAHA  Maharashtra
MEPMA Mission for the Elimination of Poverty in Municipal Areas
MoEF  Ministry of Environment & Forests
MoHUPA Ministry of Housing and Poverty Alleviation
MoS   Ministry of Steel
MoUD  Ministry of Urban Development
MSW   Municipal Solid Waste
NGOs  Non-Governmental Organization
NIA   National Investigation Agency
NMSH  National Mission on Sustainable Habitat
NRM   Natural Resource Management
PEC   Policy for Environment and Climate
PPP   Public Private Partnership
RAY   Rajiv Awas Yojana
RDF   Residual Dry Fractions
RMC   Raipur Municipal Corporation
SFCPoA Slum Free City Plan of Actions
SID   Sustainable Industrial Development
SLB   Service Level Benchmark
SME   Small and Medium Enterprise
SPCB  State Pollution Control Board
SUDA  State Urban Development Authority
SUH   Sustainable Urban Habitat
TMC   Tirupati Municipal Corporation
ULB   Urban Local Body
WP    Work Package
1. Introduction

Indo-German bilateral cooperation in the environmental sector has a longstanding and successful tradition. The first agreement between the two Governments dates back to December 1971. In the initial period, individual projects were carried out tackling such topics as air and water pollution and environmental quality monitoring. Those standalone projects were summarized and merged in the year 2002 under an umbrella programme called the Advisory Services in Environmental Management (ASEM).

In the year 2009, it was reiterated that environment shall remain one of the focal areas of the Indo-German cooperation. In the concerned Priority Area Strategy Paper, entitled “Environmental policy, protection and sustainable use of natural resources,” the overall objective and forms of cooperation were agreed upon. There was also a common understanding that the environment sector shall be divided into two substantive parts: (1) Adaptation to climate change and the sustainable use of natural resources (Natural Resource Management, NRM), and (2) Sustainable urban and industrial development. ASEM represented the second sub-sector.

In April 2011, a new Urban Sanitation Programme was added to this subsector. An ASEM Progress Review held in August 2011 confirmed successful project implementation but recommended to launch the new Indo-German Environment Partnership (IGEP) Programme which shall build on the experience of ASEM but at the same time strengthen its thematic profile in the urban and industrial sector, enhance the effectiveness to up-scale successful case studies and support the environmental reform agenda and priority needs of India. Accordingly, in the inter-governmental negotiation held between Federal Republic of Germany and the Government of India on 2/3 November 2011, the new programme, known as the Indo German Environment Partnership (IGEP) Programme, was conceived. The graphic shows how IGEP is embedded into the overall GIZ-India set-up.

Fig. 1: Positioning of IGEP Programme within the Indo-German Bilateral Cooperation
A new dimension in bilateral cooperation project in an emerging country like India is the scale, speed and impact of urban and industrial development. Everything is happening at a faster pace, on a bigger scale, resulting in a more complex work load for government authorities or municipal and industrial managers. In the coming years we are supposed to see growth in demand for everything. There will be increased competition on the national, regional and global market and we will see increasing constraints on how that demand can be met, through resource tensions and resource constraints. As a consequence, there will be new challenges faced in new dimensions, whereas previous problems still remain. The Indian Government, the private sector, as well as a development cooperation agency such as GIZ have to react to these developments. The IGEP Programme has been designed to respond to these challenges.
2. Overview of the IGEP Programme

The IGEP programme has three broad components (1) Sustainable Urban Habitat (SUH), (2) Sustainable Industrial Development (SID), and (3) Policy for Environment and Climate (PEC).

The activities related to capacity building, climate change and gender mainstreaming cut across the three components. The following figure gives an overview of the objectives at the level of the programme and of the three components.

Fig. 2: Objectives at programme and component level

Note: A complete list of objectives and indicators is available in Annexure 1
Core Topics of IGEP’s Intervention

There is a common understanding that IGEP with its limited human and financial resources will not be able to tackle all possible environmental problems in India, but instead, has to focus on selected “hot spots” referred to under IGEP as “Core Topics”. Table 1 lists core topics from the list of potential areas jointly identified with MoEF.

Table 1: Core topics under IGEP

<table>
<thead>
<tr>
<th>Core Topics under IGEP</th>
<th>Coverage Under Thrust Areas</th>
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<tbody>
<tr>
<td></td>
<td>SUH</td>
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<tr>
<td>Environmental Infrastructure in Urban and Industrial Areas</td>
<td></td>
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<tr>
<td>1 Municipal Solid Waste (MSW)</td>
<td>✔</td>
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<tr>
<td>2 Slum-free cities</td>
<td>✔</td>
</tr>
<tr>
<td>3 Wastewater management</td>
<td>✔</td>
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<tr>
<td>BAT not entailing excessive costs (BATNEEC)</td>
<td></td>
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<tr>
<td>4 Environmentally friendly techniques in industry sectors</td>
<td>✔</td>
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<tr>
<td>Climate Change and Disaster Risk Management</td>
<td></td>
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<tr>
<td>5 Urban-Industrial Climate Change including Disaster Risk Management</td>
<td>✔</td>
</tr>
<tr>
<td>Promotion of eco-industrial parks</td>
<td></td>
</tr>
<tr>
<td>6 Planning of new industrial parks and investment zones</td>
<td>✔</td>
</tr>
<tr>
<td>Environmental policy/guidelines/tool kits</td>
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<tr>
<td>7 Natural Resource Accounting in selected sectors</td>
<td></td>
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<tr>
<td>8 Environmental Fiscal Reform (EFR) in the area of waste and wastewater</td>
<td>✔</td>
</tr>
<tr>
<td>9 Resource Efficiency and Sustainable Consumption</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Capacity Development (Cross Cutting)</td>
<td></td>
</tr>
<tr>
<td>Capacity building and Institutional strengthening at all levels including private sector cooperation</td>
<td></td>
</tr>
<tr>
<td>- Strengthening of involved institutions</td>
<td>✔</td>
</tr>
<tr>
<td>- Supporting the establishment of Centre of Excellence (FICCI-CACE)</td>
<td></td>
</tr>
<tr>
<td>- Promoting Private Sector Corporation</td>
<td>✔</td>
</tr>
<tr>
<td>- Gender mainstreaming</td>
<td>✔</td>
</tr>
</tbody>
</table>
**Partners**

The Ministry of Environment and Forests (MoEF) of the Government of India and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Ministry for Economic Cooperation and Development (BMZ) are responsible for planning and implementation of the IGEP Programme. At the start of the IGEP Programme, MoEF and GIZ enter into an Implementation Agreement defining the overall roles, responsibilities and contributions. For the implementation of measures under different thematic subjects of the IGEP Programme, there will be cooperation agreements with partners at central/state/local levels. Those partners will be e.g. the Ministry of Urban Development (MoUD), Ministry of Housing and Poverty Alleviation (MoHUPA), the Central and State Pollution Control Boards, Industry Associations and Urban Local Bodies. The list of partners can be extended upon requirements and after internal agreement with MoEF.

**Duration**

The IGEP Programme will have an overall time horizon of up to 6 years (March 2012 – February 2018). The first phase of the programme will have duration of three years with effect from 1st March 2012 to 28th February 2015.

**Contribution**

For the first phase of the IGEP Programme during March 2012 to February 2015, the Government of the Federal Republic of Germany is providing GIZ with up to EUR 8,000,000 as the German contribution for technical assistance. Additionally, an amount of up to EUR 2,000,000 is targeted for funding/co-financing from Indian, German, and other bilateral or multilateral organizations. The contribution of the Indian counterparts will be the steering of a smooth project implementation as well as to make available all required financial resources for physical installation of urban and industrial infrastructure.
3. Approach

The IGEP Programme has been structured to provide tangible and measurable impacts supporting the environmental reform agenda of India. The Programme is targeted for policy level impacts related to new/modified standards/guidelines/rules/laws/policy. For intensifying the cooperation efforts IGEP will focus on a few priority issues/core topics. However, the Programme targets increased outreach involving other states in the discussion process and sharing of experiences, even though the pilots/up-scaling processes supported or taken up for demonstration purposes can be realized in a few states/areas only. For ensuring increased outreach, an active role at national and State level is indispensable.

In order to efficiently use its resources, the IGEP Programme has been designed to have three major approach of work taking into consideration the past experiences from ASEM:

1. **Pilot Projects and their Up-scaling**

   This approach of work reflects the core task of the IGEP Programme and will be described in more detail in Chapter 4. It has been allocated 60% of the Programme resources (HR, time, and budget). The main measures include the implementation of pilot measures through well performing partners, validation of pilot experience and dissemination leading to up-scaling. It also entails systematic capacity needs assessments and plan for capacity development.

2. **Quick Response**

   This approach of work has been allocated 20% of resources. It aims at advisory services and capacity development measures for specific solutions responding to ad hoc demands or short-term requirements in order to overcome a specific bottleneck of the partner agency or of an environmental problem.

3. **Policy Dialogue**

   20% of resources will also be allocated to this approach of work which aims at advisory services and capacity development measures for providing a platform for dialogue on new upcoming environmental policy issues and new themes on low carbon, inclusive growth, climate change, sustainable consumption etc.

The overall intervention approach for IGEP is based on a systematic implementation of the following five main corner stones from the very beginning as shown in the following figure:
Pilot projects / measures are technical (i.e. relating to technology and techniques) and/or managerial (i.e. relating to processes, operational models, etc.) solutions for challenges in environmental service provision of states and cities to citizens and within industrial sectors, clusters or parks. They are – at least in parts – replicable and implemented to demonstrate the relevance of a solution, gather experiences in the respective context and prove effectiveness to partners. IGEP differentiates between comprehensive, major pilots that encompass a five to six year implementation perspective and specific sub-pilots or supportive modules which are concluded within a maximum of two years.

The list of core topics mentioned in Table 1 is based on these five corner stones of IGEP approach. Within each core topic, IGEP then identifies innovative technical and/or managerial solutions to the challenges that India faces, and develops appropriate pilot measures.

Pilot projects are then implemented and knowledge generated on feasible solutions. Dynamic knowledge management and capacity development in cooperation with effective institutional partners is the bridging tool between demonstration of solutions and institutional development. This knowledge is then validated disseminated and integrated in policy dialogue in cooperation with partners.

Up-scaling/replication aims at enhancing the outreach (= number of people/companies/industrial parks etc. reached) and structural impact of a tested solution (pilot), it can relate to the whole pilot approach or – more likely – to relevant replicable elements. It needs to be conceptualized right from the start because it is mainly achieved through solutions being taken over by partners (requiring a capacity to do so) and policy integration.
Key Instruments

The overall purpose of the IGEP Programme is to support the environmental reform process of India. This ambitious target can only be achieved by applying a concerted, coordinated and balanced set of different instruments. Due to the long lasting engagement of GIZ in assisting emerging countries in improving their environmental performance, IGEP can revert to a variety of proven tools and instruments. Parts of these are shown in the figure below:

Fig. 4: Instruments and tools available for application

- **Advocacy/Awareness Programmes**
  - Workshops at national, state & local level
  - Knowledge management
  - Gender mainstreaming
  - Exposure events
  - Web-platforms
  - Documentation
  - Films, posters, exhibitions, etc.

- **Dialogue/Forums**
  - Participatory approach at cluster/neighbourhood level
  - Inter-disciplinary & multi stakeholder dialogues at all levels
  - International conferences
  - Dispute resolution

- **Capacity Development Measures**
  - Capacity Development Plans
  - Institution building
  - Change management
  - Web-based training
  - Blended learning
  - Study tours
  - Training Effectiveness Analysis

- **Advisory Services**
  - Technical inputs
  - Customized solutions
  - Pilots
  - Policy advice
  - Legal framework
  - Cost-benefit analysis
  - Public private partnership
  - Impact monitoring
  - International expertise on BAT
4. Putting Approach into Practice

For each core topic (Table 1), pilots have been selected and states and project areas at local levels (e.g., cities, industrial areas) identified together with the relevant partners. The selection was based on up-scaling potential, willingness and commitment of the state level and local partner agencies, including availability of budget and staff for implementation; and working experience of GIZ in the past. Tables 2, 3.1 and 3.2 list the pilots and implementation partners for components 1 and 2.

Table 2: Core topics and pilots for Component 1: Sustainable Urban Habitat

<table>
<thead>
<tr>
<th>Core Topic</th>
<th>Pilots</th>
<th>City, State</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Solid Waste (MSW)</td>
<td>Service Improvements in solid waste management through effective use of SLB</td>
<td>Shimla, HP</td>
<td>MoUD, MoEF, JNNURM</td>
</tr>
<tr>
<td></td>
<td>Support development for hilly area municipal solid waste landfills</td>
<td>Shimla, HP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model development for an integrated SWM system for small/ medium urban areas</td>
<td>Tirupati, AP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-processing of dry-waste fractions of MSW in cement industries for better economic and environmentally sound utilization of RDF</td>
<td>Nashik, MAHA</td>
<td></td>
</tr>
<tr>
<td>Slum-free Cities</td>
<td>Improve selected environmental services in identified slum settlements through participatory processes</td>
<td>Raipur, CG Tirupati, AP</td>
<td>MoHUPA RAY</td>
</tr>
<tr>
<td></td>
<td>Improve basic services and neighbourhood green spaces through formulation and implementation of Slum Free City Plan of Actions (SFCPoAs)</td>
<td>Raipur, CG Tirupati, AP</td>
<td></td>
</tr>
<tr>
<td>Urban-Industrial Climate Change including Disaster Risk Management</td>
<td>Academic project: &quot;Slum Free Cities: Shaping Cities in the Times of Climate Change&quot;</td>
<td>Tirupati, AP</td>
<td>MoUD NMSH</td>
</tr>
<tr>
<td></td>
<td>City Action Plan for Climate Change</td>
<td>Nashik, MA</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.1: Core topics and pilots for Component 2: Sustainable Industrial Development

<table>
<thead>
<tr>
<th>Core Topic</th>
<th>Pilots</th>
<th>State</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Management</td>
<td>Planning and demonstration of CETPs</td>
<td>AP</td>
<td>APIIC</td>
</tr>
<tr>
<td></td>
<td>CETP at Industrial Parks of Mallapur and Nacharam</td>
<td>AP</td>
<td>APIIC</td>
</tr>
<tr>
<td></td>
<td>CETP/STP in Electronic City, Bangalore</td>
<td>KAR</td>
<td>SPCB</td>
</tr>
<tr>
<td></td>
<td>CETP performance improvement in up to three identified GIDC Industrial Estates in Gujarat</td>
<td>GUJ</td>
<td>GIDC/ GCPC</td>
</tr>
<tr>
<td>Planning of New Industrial Parks and Investment Zones</td>
<td>Planning of new Industrial Parks and Investment Zones</td>
<td>GUJ</td>
<td>MoI</td>
</tr>
<tr>
<td></td>
<td>Development Plan for Dholera Investment Zone (Gujarat)</td>
<td>GUJ</td>
<td>GIDB</td>
</tr>
<tr>
<td></td>
<td>Site Master Plan for Industrial Park of Association of Lady Entrepreneurs of Andhra Pradesh (ALEAP)</td>
<td>AP</td>
<td>ALEAP</td>
</tr>
<tr>
<td></td>
<td>Transformation of existing industrial parks in Naroda Industrial Area</td>
<td>GUJ</td>
<td>NIA</td>
</tr>
<tr>
<td></td>
<td>Waste management (Karnataka)</td>
<td>KAR</td>
<td>Karnataka SPCB</td>
</tr>
<tr>
<td></td>
<td>Waste Management in Vapi Industrial Estate</td>
<td>GUJ</td>
<td>Ass. &amp; Mgmt. Ltd.</td>
</tr>
<tr>
<td></td>
<td>Climate change adaptation in industrial areas (Gujarat)</td>
<td>GUJ</td>
<td>GCPC</td>
</tr>
</tbody>
</table>
Table 3.2: Core topics and pilots for Component 2: Sustainable Industrial Development

<table>
<thead>
<tr>
<th>Core Topics</th>
<th>Pilots</th>
<th>State</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmentally-friendly Techniques for Selected Industry Sectors</td>
<td>Environment Friendly Techniques in Iron &amp; Steel Sector (Sponge Iron Plants/Clusters) (Blast Furnace; Waste to Energy)</td>
<td>National</td>
<td>MoS</td>
</tr>
<tr>
<td>Supportive modules</td>
<td>Management models for waste &amp; waste water management in Selected Industry Sectors</td>
<td>KAR</td>
<td>KSPCB</td>
</tr>
<tr>
<td></td>
<td>Environment-friendly Techniques in Selected Industry Sectors - Textile, Pulp and Paper</td>
<td>GUJ</td>
<td>GCPC</td>
</tr>
<tr>
<td></td>
<td>Climate change adaptation in industries</td>
<td>GUJ</td>
<td>GCPC</td>
</tr>
<tr>
<td></td>
<td>Implementation of “Ecoprofit” Tool in Hotels (Ecocity-Ecobusiness Programme) (Tirupati, Shimla)</td>
<td>AP, HP</td>
<td>UNIDO / MoEF</td>
</tr>
<tr>
<td></td>
<td>Implementation of Ecoprofit Tool in Industries (Bhiwadi, Rajasthan)</td>
<td>RAJ</td>
<td>BMA</td>
</tr>
</tbody>
</table>

As a part of the development and planning stage, objectives, indicators and timelines, elaboration of major work packages and milestones for the pilot project are specified and methods/tools/instruments to be adopted are developed. While developing methods/tools/approaches for application in the pilot project activities, the existing practices in India will be looked into through a discussion process with stakeholders. Accordingly, the applicable methods/tools/approaches will be developed to ensure that these are used by the target group/agencies. Special attention shall be given to the cross cutting issue of gender balance and poverty alleviation. Synergies with other programmes/missions (national or international supported) and activities of KfW and other GIZ programmes have to be considered.

Pilot projects will be implemented by the selected partners with the technical support from IGEP. During the implementation of the pilots, capacity development will be undertaken including training of the staff of the implementing partner agency.

The implementation and monitoring process shall be documented and results monitored. The knowledge generated from the pilot will be shared during its progress with the relevant stakeholders within the pilot state, and at appropriate times with the stakeholders from the other states, municipalities or industry associations. Policy dialogue will be undertaken for development of nationally or locally relevant standards, rules, policies etc.

Up-scaling shall take place under full responsibility of the partners. IGEP coaches the process and offers technical assistance, if required. The programme also advises on how to monitor the impact.
of the up-scaled development measure. The applied up-scaling strategy is demand driven and will allow all interested States across India to get involved in the activities through workshops, awareness programmes etc.

For **policy integration**, feedback from the practical experience flows into the formulation/review of policy guidelines (standards, rules, policies, etc.) at national/state/local level. In order to achieve the favored combination of policy approach and practical requirements, a continuous communication and cooperation among the different thrust areas is needed. Policy guidelines have to be accompanied by reflecting real needs and vice versa.

The activities related to Capacity Building, Climate Change and Gender Mainstreaming will cut across all the above pilots. The activities will be taken up under different pilots as per requirement. Such activities will be reflected in the Operational Plan.

**Capacity building** activities will encompass:
- development of tools and methodologies for improving the planning, designing, and monitoring of the training and capacity building programme.
- supporting the identified training institutes in planning and delivery of trainings as well as assessment of their effectiveness and impact.
- developing training materials and handbooks.
- disseminating information about the projects activities and their impacts through channels like website, bi-annual newsletter, handbooks, brochures and publications.

IGEP will provide advisory services on the design and implementation of Climate Change and Low Carbon Growth policies. The implementation of Climate Change policy is an important cross cutting issue in IGEP and takes place in the urban and industrial sectors.

**Climate change** activities encompass:
- Mechanism for financing low-carbon infrastructure
- International climate policy dialogue related to urban and industrial development
- Monitoring of impacts of climate relevant activities

**Gender mainstreaming** will focus on integrating gender into the planning and implementation of the pilots of the programme in such a way that outputs lead to a perceptible positive impact on gender equality.
- Developing gender-sensitive pilots in cooperation with the partners.
- Generating outputs which lead to impacts wherein gender equality can clearly be measured.
- Producing reports and brochures which share the results achieved with regard to gender-equality and cite best practices adopted.
5. Programme Management and Coordination

Programme Steering

The IGEP Programme will have a Steering Committee which will be the apex body to guide and oversee all activities under the project, to assess and review the progress/performance of all the activities on periodical basis and to suggest ways and means to optimise the project strategies to achieve the programme goals. This Steering Committee will be headed by the Joint Secretary (International Cooperation) of MoEF. The IGEP Programme may have subject-specific Technical Standing Committees, as may be necessary, for ensuring results and impacts of various activities. The composition, mandate, periodicity, etc. of these committees shall be decided mutually between GIZ and MoEF.

The Programme Steering Committee will approve the overview of the Phase 1 of IGEP and its detailed plans of operation for the first year (3/2012 – 2/2013). Overviews for all the Components depicting major work packages across the core topics are provided in the Annexure 2.

Monitoring and Reporting

GIZ and MoEF will periodically monitor and report the progress of results to the Steering Committee. For this purpose, IGEP will support in preparation of progress reports which will be based on Result Based Monitoring (RBM) system which is a management strategy focusing on performance and achievement of outputs, outcome, and impact. RBM has to be translated into improved programming and service delivery for the end users. The means-to-end relationship (Causal Chain) for Technical Cooperation (TC) projects usually encompasses the following four main levels (beginning from the bottom) as shown in the Fig. 5 on the next page.
Since stakeholders’ participation is crucial for ensuring a ‘living’ RBM system, MoEF will play an active role in intervening with the implementing partner agencies, wherever necessary, for ensuring proper progress and success of the activities. The periodicity of monitoring and reporting may be mutually decided between MoEF and GIZ.

**Evaluation**

GIZ and MoEF may undertake an evaluation of the Programme during or after the implementation of the first phase of the IGEP programme. To this end, GIZ will second experts/ appraisers to the Programme. MoEF will participate in the evaluation. GIZ and MoEF will in all cases assist the expert(s) in their work and allow them to examine all the necessary documents. The results of the evaluation shall be brought out in the form of a report.

**Agreements with individual implementing organisations**

For proper planning, execution, progress and success of various project activities, GIZ may enter into project activity specific agreements, at the start of the project activities, with the identified
implementing partners (e.g. on the basis of a plan of operations). In the case of the components of Sustainable Urban Habitat, wherein a close cooperation of the Ministry of Urban Development (MoUD) and Ministry of Housing and Urban Poverty Alleviation (MoHUPA) may be required, GIZ may enter into project/activity specific agreements in consultation with these ministries (e.g. Note of Cooperation, NoC). Contents of such agreements will be mutually decided between GIZ and the implementing partners. However such agreements shall be within the framework of the present Implementation Agreement, including duration, reporting etc.

Training and travel abroad

GIZ will provide training in line with the ‘Activities’ of the IGEP Programme. The travel of Indian officials/participants abroad for training, conference participation etc. that are financed through the contribution of Germany under the IGEP Programme shall be governed by DEA’s “Guidelines for Overseas Travel.”

Main Role of MoEF

MoEF will play an active role for success of the IGEP Programme and will provide contributions in kind, as below.

a) Project coordination

- MoEF shall provide in kind support for setting up a Project Coordination Unit at MoEF for providing coordination of the contributions of MoEF as well as other related State/Local level entities involved in the IGEP Programme, as well for providing backup for ensuring proper overall steering, coordinating and periodic review of the IGEP Programme. The Unit shall have at least one qualified Programme Coordinator and up to two junior programme managers. The qualifications and other criteria of the staff shall be jointly decided by GIZ and MoEF.
- MoEF shall set up Steering Committee.
- MoEF shall play an active role in coordinating and intervening with the implementing partner agencies at national/state/local level, wherever necessary, for ensuring proper progress and success of the activities.
- MoEF shall coordinate the programme with other agencies and donors as may be relevant to implementation.

b) Project facilitation

- MoEF shall provide suitable office rooms in the Ministry of Environment and Forests for the Project Coordination Unit and other support teams of experts from GIZ, as may be necessary.
- MoEF shall ensure availability of resources from MoEF itself or implementing partner agencies at national/state/local level to leverage and anchor technical cooperation.
- MoEF shall support the national and international experts by providing the required background material, information and documents, as may be necessary.
c) Costs

MoEF shall ensure that the costs to be specified in the Plan of Operations are budgeted in due time by MoEF itself or the identified partner agencies at national/state/local level.

**Main role of GIZ**

- The project funds provided by the Government of the Federal Republic of Germany will be dealt with by GIZ.
- GIZ will make available professional expertise in the form of national and international long and short term experts.
- GIZ will provide materials and equipment for equipping the technical infrastructure, up to a total value of Euro 150,000.
Annexure 1
Programme and Component Objectives and Indicators

Programme Objectives and Indicators

The overall objective is: Decision makers at national, state and local level use innovative solutions for the improvement of urban and industrial environmental management and for the development of an environment and climate policy that targets inclusive economic growth decoupled from resource consumption.

Indicators

1.) At least six pilot measures for sustainable urban and industrial environmental management and climate protection are implemented in a gender-sensitive manner by urban local bodies (ULBs) and industrial enterprises. Each pilot measure is replicated at least once outside the project area (JNNURM documentation, annual reports by industry partners, publications of external partners).

2.) Three legal regulations and policy level initiatives (guidelines, laws, strategy papers etc.) at national and state level, that have received substantial advisory services from GIZ, support the dissemination of innovative solutions for sustainable environmental management (GIZ input in minutes, draft regulations).

3.) An analysis (including assessment of impacts due to policy level decisions) confirms the national relevance of these pilot measures and policy decisions for the enhancement of resource efficiency, reduction of environmental stress and mitigation of greenhouse gas emissions (external evaluation).

Objectives and indicators of the Components

Component 1: Sustainable Urban Habitat

Component objective: Selected cities provide financially sustainable environmental services to their citizens.

Indicators

1.) At least three selected cities in different states provide newly conceived innovative, gender sensitive and financially sustainable environmental services (e.g. in the areas related to solid and liquid waste management, sustainable construction, climate friendly urban development, etc.) (Documentation, Service Level Benchmarks; Baseline: situation analysis and course of action of the cities).

2.) Additional six cities from selected states replicate these innovations (documentation of ULBs)

3.) Urban environmental services for female and male residents have improved in at least two slum areas of the selected cities (gender-sensitive responses of residents, reports by RAY)

4.) Three policy documents at urban, state and/or national level refer to the implemented measures for the improvement of services (policy documents).
Component 2: Sustainable Industrial Development

Component objective: In selected industrial areas, financially sustainable environmental improvements are piloted and replicated with a broad impact and the design of new industrial parks serve as nationwide models.

Indicators
1.) For three pilot measures in selected industrial areas, innovative and financially sustainable solutions for environmental problems are being demonstrated (e.g. resource efficiency, industrial wastewater management, environmental management systems) (baseline, documentation of SPCBs, publications).
2.) Experiences from pilot measures, especially their economic sustainability, are documented and their actual replication is independently verified in 10 industrial areas or individual industries of different states (external examination).
3.) In the design of a new industrial park, aspects of resource efficiency, integrated environmental monitoring and management structures for eco-friendly production, as well as gender aspects, are taken into account (planning documents).
4.) The results of planning new industrial parks/areas or modernizing existing industrial parks/areas are considered in new strategy papers/guidelines of the Indian government and/or of industrial associations (strategy papers of the partners).

Component 3: Policy for Environment and Climate

Component objective: Policy level actions related to topics of inclusive growth, Green Economy and climate change are being implemented.

Indicators
1.) The advisory services of the programme for inclusive growth, Green Economy, sustainable consumption and climate change are reflected in four cases in the implementation of measures under the Twelfth Indian Five-Year Plan (monitoring reports of the national and state planning commissions).
2.) Four legal regulations and environmental policy initiatives (bye-laws, guidelines or technical norms) are being accepted by political and/or technical decision making bodies due to significant inputs by the programme, or are in the legal decision making process (publications for regulations by the government, minutes of specific meetings).
3.) Expert knowledge of new concepts and technical solutions for environment and climate protection, which has been generated through the programme, is being brought into continuative policy dialogue processes by the partners on the various levels of intervention (comparison of ad-hoc-consultation with publications/speeches of the partners, workshop documentations, and discussion forums).
**Annexure 2**

**Overviews of Components 1, 2 and 3**

Component 1 has five pilots and three supportive modules under three core topics. Under this component, a perspective plan depicting the work packages has been developed for each individual pilot and supportive modules.

**Pilot 1: HP Solid Waste Management System**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development &amp; planning</strong></td>
<td><strong>Implementation &amp; Monitoring</strong></td>
<td><strong>Up-scaling</strong></td>
<td><strong>Policy integration</strong></td>
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</tbody>
</table>

WP 1: Support data management for Service Level Benchmarks (Performance improvement plans & Information system improvement plans)

WP 2: Concept development for addressing SLB indicator gaps

WP 3: Support for city level MSW action plan

WP 4: Support implementation of measures addressing SLB gaps

WP 5: Support to district MSW plan

WP 6: Support to state of HP for city level MSW action plan

WP 7: Support to development of DPR

WP 8: Support to tendering

WP 9: Support development of state-level MSW management by-laws

WP 10: Support development of state-level MSW strategy

**State level HP =**

**City level Shimla =**
Pilot 2: Landfill System in Hilly Areas

Development & planning

WP 1: Support tendering process of technical design developed

WP 2: Implementation and monitoring support

Implementation & Monitoring

Up-scaling

Policy integration

WP 3: Integrate in MSW strategy (state level)

WP 4: Integrate in manual for MSW of MoUD (national level)

Support development for hilly area municipal solid waste landfills

Support to regional landfill

Facilitate transfer of innovation to other hilly cities

State level HP =

City level Shimla =

Support to regional landfill
Pilot 3: Solid Waste Management System, Tirupati

Model development for an integrated SWM system for small/medium
urban areas

WP 1: Support to city level MSW action plan
WP 2: Support tendering process
WP 3: Implementation and monitoring support
WP 4: Support to state of AP for city level MSW action plan
WP 5: Integrate in MSW strategy (state level)

State level AP =
City level Tirupati =
Pilot 4: Holcim Public Private Partnership

Co-processing of dry-waste fractions of MSW in cement industries for better economic and environmentally sound utilization of RDF (as element of a SWM system)

State level MAHA =
City level Nashik =

WP 1: Triarty cooperation agreement
WP 2: Trial burns of dry-waste fractions
WP 3: Results study and documentat ion
WP 4: Roundtables and Workshops with stakeholders

Depending on recommendations: MoEF and MoUD upscaling and policy

Year 1
Development & planning

Year 2
Implementation & Monitoring

Year 3
Up-scaling
Policy integration
Pilot 5: Slum Upgrading

- **Development & planning**
  - WP 1: Formation of RAY technical cell in ULB
  - WP 2: Creating baselines and gap identification
  - WP 3: Community participation and needs prioritization
  - WP 4: Formulation of DPRs

- **Implementation & Monitoring**
  - WP 5: Support to tendering of ULBs
  - WP 6: Support implementation (through community contracting and petty builders)

- **Up-scaling**
  - WP 7: Monitoring and documentation of learnings
  - WP 8: ULB and SUDA/MEPM A roll-out pilot approach in other slums
  - WP 9: Integration in slum-free plan of action

- **Policy integration**
  - WP 10: Other cities in CG/AP adopt similar approaches
  - WP 11: By-laws and regulations adapted at city/state level
  - WP 12: Feed experiences back into RAY/MoHUPA

Selected slums in Raipur / Tirupati = Municipal level Raipur / Tirupati = State level CG / AP =

Slum upgrading (various participatory and infrastructure measures) through national mission and standard processes
Pilot 6: Slum-free Prevention Strategies

Improved basic services and neighbourhood green spaces through formulation and implementation of Slum Free City Plan of Actions (SFCP-oAs)

WP 1: Creating baselines and gap identification on city level

WP 2: Support to the National Technical Committee for preparation of SFCP

WP 3: Support to the National Steering Committee under the SFCP Scheme

WP 4: Formulation of SFCP

WP 5: Data updating and management

WP 6: By-laws and regulations adapted at city/state level

WP 7: State (SUDA/MEP MA) roll-out pilot approach in other cities

WP 8: Monitoring and documentation of learnings

WP 9: Feed experiences back into RAY/MoHUPA

City-level Raipur/Tirupati = State level AP, CG = State level AP/ Central level
State level AP/CG Central level =
Pilot 7: Academic Project

**Academic project:** "Slum Free Cities: Shaping Cities in the Times of Climate Change"

**Development & planning**

WP 1: Enter into an MoU with JNFTU and review the present course curriculum from Climate Change lens of the MSc architecture students.

**Implementation & Monitoring**

WP 3: Carrying out the design module (that is to prepare a DPR for carrying out upgrading in a selected slum in Tirupati.)

WP 4: Carrying out training programmes for students on Climate Change issues with respect to built form.

**Up-scaling**

WP 5: Carrying out training programmes for TMC, RMC, local builders and professors, mentors on Climate Change issues.

**Policy integration**

WP 6: Prepare an advisory note to strengthen the existing course curriculum from Climate Change perspective in JNFTU.

WP 7: Monitoring and documentation of learnings by JNFTU
Pilot 8: City Action Plan for Climate Change

WP 1: Sensitization training for Cities and Climate Change

WP 2: Vulnerability Assessment for Nashik

WP 3: Climate Action Plan for Nashik

State level (NRTC) =

City level Nashik =

WP 4: Support to NRTC for Vulnerability Assessment

WP 5: Support to NRTC for Climate Change Action plan
Component 2 – Sustainable Industrial Development (SID) has three major pilots supported by 14 smaller modules under three core topics (Table 3). A perspective plan depicting broad work packages has been developed for all pilots / modules.

### Pilots under SID

- **Development & planning**
  - Situation analysis/baseline assessment
  - Stakeholder consultations/knowledge exchange (national level)
  - Pilot selection, strategy design

- **Implementation & Monitoring**
  - Pilot implementation
  - Stakeholder consultations/knowledge exchange (cluster level/state level)

- **Up-scaling**
  - Documentation of pilot experience/results
  - Stakeholder consultations/knowledge exchange (national level)

- **Policy integration**
  - Policy/Strategy/Guidelines/rules/procedures etc.

Shift in focus over time of implementation

Pilot specific approaches

Generic approach
Component 3 – Policy for Environment and Climate (PEC) focuses primarily on the legal and political ties of the change processes initiated by the first two thematic components. At the same time, it links the components (1) and (2), which are acting more on the local implementation level, and addresses the overarching issues related to climate change, environmental economics, and policy as well as respective bottlenecks.

### Core Topics under PEC

<table>
<thead>
<tr>
<th>Core topics</th>
<th>Time</th>
<th>Year 1</th>
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<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Fiscal Reforms</td>
<td></td>
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<td>Dialogue and dissemination</td>
<td>Submit draft to relevant department/ministry</td>
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<td>Agenda Setting</td>
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</tr>
<tr>
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