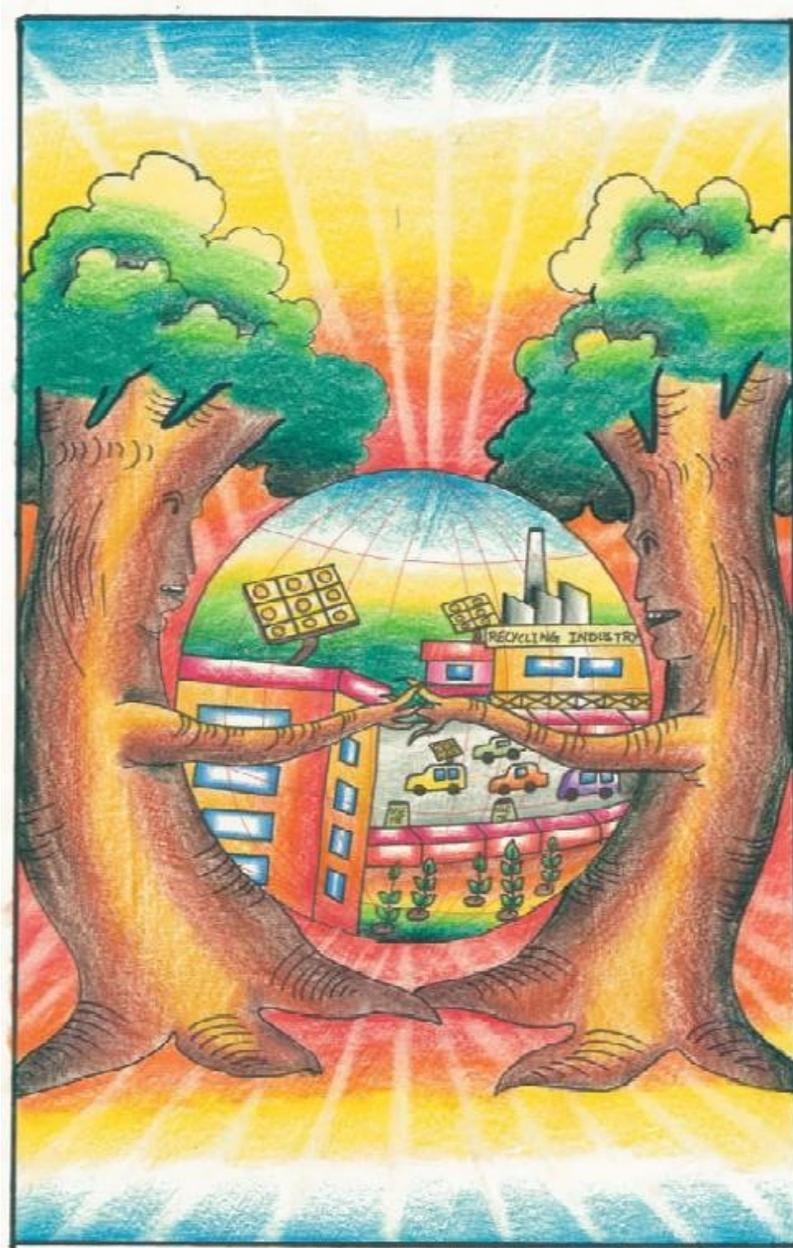


# CleanNet: A Network of Climate Innovation Centres



◆ Let Us Change Living Style Not Climate

Award-winning painting by Prateek Samantray, 4<sup>th</sup> Grade,  
St. Xavier's High School, Bhubaneshwar, Orissa; National  
Energy Conservation Painting Competition, 2007



Government of India

April, 2009

## Climate change and technology innovation

A key challenge for both developed, as well as developing, country Parties to the UNFCCC is how to develop the technology pillar to deliver, in a reasonable time-frame, climate change solutions. This challenge translates into two inter-related objectives:

- Using technology to align development and economic growth imperatives, both in developed as well as developing countries, with climate change compulsions; and
- Using technology to align energy security imperatives with climate change concerns. This too is equally applicable to both developed and developing countries.

A more nuanced examination, though, reveals that developing countries have very specific and urgent energy and climate needs – increasing energy access, upgrading energy systems, introducing modern energy services, and adapting to potentially severe climate impacts. Technology offers a way to meet these needs but developing countries often have limited innovation capabilities to realize the potential of these technologies, and even if these capabilities exist, institutions for coordinating them are weak or absent.

In this context, it is proposed to set up an international network of Climate Innovation Centers (CICs) as vehicles for enhancing technology innovation in developing countries to accelerate and scale-up deployment of technologies that can

help these countries meet pressing energy and climate challenges while advancing sustainable development.

Thus, these CICs will represent a major international collaborative effort that leverages global capabilities and is shaped by, and responds to, the needs of developing countries. By locating the CICs in developing countries, their innovation activities will be better informed by, and linked to, the local context and institutions, which will enhance the potential for successful innovation as well as capacity building within developing countries and in regional networks.

### **Climate Innovation Centres - Scope of Activities:**

Each CIC would focus on key locally-relevant technology products that help meet climate and energy challenges facing developing countries in different regions of the world. This would involve the identification, development and/or modification, and dissemination of these products.

On the technical front, this might involve adaptation of a technology for local conditions (e.g., wind turbines and components for extreme weather conditions or poor wind regimes), the development of a product around an existing technology (e.g., the development of PV-based lighting systems to provide a robust and cost-effective solution for rural areas), or the development of technologies that meet specific local needs that will not be serviced by global technology markets (e.g., improved cookstoves to provide higher-efficiency and lower-polluting cooking option). Note

that in each of these cases, some local technical capabilities and solutions may exist. However, the application of cutting-edge global expertise likely would yield far better solutions.

But the development of a technology or a product is only the first step. Successful innovation requires paying attention to all elements of the innovation chain. Thus, depending on the specifics of the technology and the local context, the CIC could be involved, as needed, in product demonstration, market creation activities, design of delivery models, incubation of enterprise, and development of appropriate policy regimes.

Thus, the CICs will be very different from R&D centers: these will be multidisciplinary efforts that will bring together the technical, business, policy and other expertise from Annex-I and non-Annex-I countries to provide end-to-end support for innovation.

Thus, CIC activities may involve, *inter alia*:

- Technical research to ensure the availability of technology solutions.
- Supporting the development and piloting of appropriate business models to overcome lack of ‘traditional markets’.
- Incubating enterprises through training and provision of finance and other support to entrepreneurs.
- Identifying and helping overcome the diverse range of regulatory and policy barriers to the development and diffusion of such products.

#### 4 CleanNet: A Network of Climate Technology Centres

- Providing a platform for sharing of best practices and advanced experience including through “learning by doing”.
- Promoting capacity building in technical areas, policy analysis, business, and entrepreneurship within developing countries as well as through strengthening regional networks.

In the initial phase, the strategy of the network could be to focus on technologies that not only have broad relevance but also offer the potential for significant leapfrogging. These include, for example, solar-energy, biomass energy, and energy-efficiency-enhancing solutions as well as particularly relevant adaptation technologies. Promotion of sustainable agriculture, as a significant climate mitigation and adaptation initiative, could also be included with local variations corresponding to different agro-climatic conditions.

- .

### **Climate Innovation Centers – Governance and Operations**

A few broad principles for the governance and management of the CICs are enunciated below; they are neither comprehensive, nor final, but a starting point for discussion.

- Each CIC would be governed by a Board consisting of representatives of the host country, donor Governments and funding agencies, industry and civil society representatives, and management, technical, and policy experts.
- Each CIC should be professionally managed, and headed by international administrators with a proven

## 5 CleanNet: A Network of Climate Technology Centres

track record of managing technology development and dissemination. The CIC's staff should include researchers from both Annex-1, as well as non Annex-1 Parties (both from the host country and from other non Annex-1 countries) to enable state-of-the-art knowledge (on technology, business models, and market formation) to be applied to local contexts as well as to develop local capabilities.

- An essential feature of each CIC has to be a formal structure of interaction with the private sector which is expected to be the user(s)/manufacturer(s) of the product(s) under development. This interaction is essential to inform the performance and price goals in the product design, provide feedback at various stages of product development, testing and market introduction, and enable the transfer of the product to the market through these companies.
- Similarly it will be important to ensure that the CIC has interactions with other research institutions, NGOs, and policy-makers on other aspects of the innovation process. This will help not only enhance the robustness of the innovation but also the development of local capabilities and networks.

This document briefly describes the CIC concept. The scale and scope of the proposed CICs, the legal structure of the CICs, issues relating to IPRs generated the financing and manning of these CICs will be done in the context of specific needs of the parties interested in promoting the concept.