

# **“THE PHILIPPINE APPROACH TO THE ISSUE OF DEVELOPMENT AND TRANSFER OF TECHNOLOGIES UNDER THE UNFCCC”**

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## **I. INTRODUCTION**

The Philippine approach to the issue of development and transfer of technologies under the UN Framework Convention on Climate Change is taken fully within the context of principles, commitments and obligations in the Convention. The first principle of the Convention is that of common but differentiated responsibilities in which it is recognized that “developed country Parties should take the lead in combating climate change and the adverse effects thereof.”

The Philippine country paper also bases itself upon Article 4.5 of the Convention and all previous decisions on the issue taken by the Conference of the Parties, and not merely Decision 4/CP.4. This is because Decision 4/CP.4 is a compromise position taken by developing country Parties in the light of inaction that followed the previous decisions on technology transfer. It however places the burden on developing country Parties instead of on developed country Parties that have the commitment for technology transfer. It also shifts the burden of responsibility for the transfer mainly on the private sector and market-driven forces, undermining the provisions of the Convention, and recommendations for action made in the previous decisions.

The Philippines considers that Decision 4/CP.4 takes a step backward in the operationalization of Article 4.5 of the Convention, but perhaps a necessary one. The Philippine country paper focuses on putting responsibilities back to where they belong as provided for in the Convention, as based on country experience. The paper therefore likewise takes fully into consideration relevant provisions of Chapter 34 of Agenda 21 of the UN Conference on Environment and Development (UNCED), and their subsequent elaboration in the Programme for Further Implementation of Agenda 21 in June 1997.

In this light, the paper has made adjustments on titles of different sections of this paper. For example, a distinction is made between barriers and constraints to transfer of environmentally-sound technologies (ESTs).

Constraints are determined by long-term processes such as biogeological evolution, culture, history, and political and socio-economic factors, primarily in user countries. Barriers are determined by short and medium-term goals, policies, systems and institutions put up mainly by developed country holders of technology and their Governments. The major constraint for the Philippines is its 40% poverty level, while a major barrier is the series of conditionalities attached to official development assistance which currently constitute a main source for technology transfer.

Providing the “enabling environment” referred to in the decision is a responsibility of both developed and developing country Parties. However, current activities on technology transfer, such as projects by international financing institutions and regional development banks are focused on facilitating market access for developed country technologies through adjustments of the regulatory framework. Local conditions are altered to suit technologies, rather than the other way around. In order for technology transfer to be effective, the “enabling environment” should already be present in the country of the holder of the technology, and technologies developed to suit user country conditions. Suggestions are likewise made at the end of the paper to address this anomaly.

One saving grace of the current consultative process is that identification and assessment of technology needs is led by the developing country Parties themselves. Previous inaction on this issue placed this responsibility in the hands of unidentified consultants and on international entities, or from a limited roster of experts chosen through a process which lacked transparency. A consultative process however is a two-way process, not the current one-sided pressure for action, and suggestions are made at the end of the paper to ensure that this is rectified.

Also under the balance of responsibilities under the Convention, adaptation is the major concern of developing countries, most vulnerable to adverse effects of climate change. Mitigation, the focus of whatever technology transfer activities are taking place, is not the priority for the Philippines for technology transfer under the Convention, and this is reflected in the paper as well. It must be kept in mind that Article 4.5 provides for actions to be taken by developed countries for the transfer of and access to ESTs and know-how to developing countries **to enable them to implement the provisions of the Convention.** It thus covers all provisions under Article 4, in particular Article 4.1, subject to “common but differentiated responsibilities, and their specific national and regional development priorities, objectives and circumstances.”

Capacity-building needs, in line with Article 4.5 and the decision presented by developing countries in the Convention, focus on development and enhancement of endogenous capacities and technologies.

The UNFCCC addresses a major global environmental concern. Scientific evidence has shown where responsibilities lie for climate change and its adverse effects. The operationalization of technology transfer and development under the Convention should likewise be focused on this environmental concern, and not on short-term profit motives or shifting of responsibilities.

## **II. EST Needs Assessment**

There are two categories of climate related ESTs: adaptation technology that would address the adverse impact of climate change, and mitigation technologies which to avoid emission of GHGs. In this section, several of these technology needs are identified:

### Adaptation Technologies

- vulnerability assessment of adverse effects of climate change
- disease vector control approaches
- flood defense systems
- energy efficient desalination
- coastal protection that preserve ecosystems
- seed bio-technologies to develop heat or pest resistant varieties
- vaccines against tropical diseases
- public health surveillance and epidemiology

### Mitigation Technologies

- transport and household uses of natural gas
- geothermal energy for communities
- development and commercialization of clean fuels
- Demand Side Management
- non-conventional / renewable energy technologies (ocean, solar, and wind)
- efficient heating/cooling equipment and other home/building appliances and fixtures
- reduce vehicle energy intensity through improved fuel quality and body/engine designs
- new industrial technologies and processes (e.g. co-generation plants or GHG prevention in manufacturing such as decarbonization of flue gases)
- efficient methane recovery

## **III. Endogenous Capacity Needs**

It is recognized that in the identification and assessment of technology needs, transfer of technology need not occur from developed to developing countries but within the user country itself. Hence, support for acquiring the

necessary resources and skills through local competencies to produce and maintain various technology needs is suggested. Capacity needs are outlined below:

- local area simulation tools which range from 100 to 10 kms. grid resolution
- development and implementation of climate warning systems
- public awareness through information campaign and database centers
- cooperative research and development efforts to locally adapt technologies
- technology and know-how diffusion through training, seminar, workshop and cross plant visits
- assessment capacity for system assembly, market, consumer behavior survey and end-use impact
- developing quantitative and qualitative performance indicators

#### **IV. Constraints and Barriers to Technology Transfer**

As mentioned earlier, constraints are user-country generated hindrances to technology transfer. Whereas barriers are imposed by the technology owner, usually a developed country. Below are some of the constraints and barriers that can be identified:

- conditionalities attached to development assistance for EST transfer
- restrictive business practices
- low social acceptability by affected communities to the recommended technology
- legal instruments not market conducive
- technologies not suited to local conditions and materials

#### **Suggested Initiatives to Remove Developed Country Barriers**

Some suggested initiatives to address these constraints and barriers are as follows:

- developing country participation on research and development of climate related ESTs
- concessional financing on access to and transfer of ESTs
- support for commercial-scale technology applications

#### **V. Ongoing and Planned Technology Transfer Initiatives**

Presently through the cooperative efforts of the government and private sector, the Philippines has carried out or proposed to carry out activities which are conducive to technology transfer through some of the following initiatives:

### On-going activities

- promotion of clean fuels (natural gas, geothermal, ocean, solar, and wind)
- local climate change action planning
- commercialization of NREs in rural areas

### Proposed activities

- cooperative research and development of fuel cell technology
- commercialization and promotion of energy efficiency and renewable energy technologies
- vulnerability analysis and adaptation assessment

## **VI. Key Elements for Effective EST Transfer**

In retrospect, the success of the initiatives done on the transfer of technology or know-how depended on several key elements mentioned below:

- smooth implementation of project schedule
- timely release of project funds
- full cooperation and assistance of local government units in national government projects
- stakeholders' preparedness and technical competence
- evaluation of proponent's capability and resources
- sustainability

## **VII. CONCLUSIONS AND RECOMMENDATIONS**

1. As stated in Article 4.5, developed country Parties are committed to take steps to operationalize the transfer of, or access to, ESTs and know-how. Following therefore the three regional workshops in developing countries, there must be a separate workshop mainly for developed country Parties, with developing country participation, for exchanging information and sharing of experiences on the implementation of Article 4.5. Country papers, along the same lines as the suggested outline given for the consultative process, should be presented.

This would balance the dialogue on this issue and provide the necessary inputs for the SBSTA Chairman's paper. This would also allow all Parties to identify the next steps to be taken on Article 4.5. The work programme attached to Decision 4/CP.4 would then be fully undertaken.

2. Financing is essential for effecting transfer and access to ESTs. As stated in paragraph 90 of the programme for the Further Implementation of Agenda 21,

“new ways of financial intermediation for the financing of ESTs, such as ‘green credit lines’ should be examined. “ For privately-owned technology, governments and international development institutions should make further efforts to facilitate transfer on concessional terms to developing countries. The use of the Global Environment Facility for the purpose should be fully in accordance with decisions on guidance taken by the Conference of the Parties. Conditionalities which dictate the use of foreign (donor-country) consultants, purchase of their equipment, use of their contractors, etc... should be re-examined and fully consulted with the user country. The use of local consultants and contractors would not only facilitate transfer but likewise enhance endogenous capacities.

3. Previous COP decisions, chapter 34 of Agenda 21 (para. 34.18) and the Programme for Further Implementation of Agenda 21 (para. 91) on publicly-funded research and development for ESTs should form the basis for action, in particular by developed country Parties. The involvement of the developing countries from the R and D stage would ensure that the technologies are workable and useful in the user countries, and would meet their needs and suit their conditions. Cooperative activities should be undertaken along these lines to implement Article 4.5.
4. There must be a recognition, both by developed country Parties and by international and regional financing institutions, that adaptation is the primary concern of developing country Parties under the Convention. Adaptation is urgent and necessary, and in the long run, would also serve the interests of developed country Parties. Changes in worldwide agricultural patterns and in the frequency and intensity of extreme weather events affect all Parties. Attention should be focused on adaptation technologies, their research and development, and transfer and access to these technologies. Endogenous capacities and technologies for adaptation could be fully utilized and developed. Concrete suggestions for fields of activities are given in this paper.