Eco-Efficient and Sustainable Urban Infrastructure Development
In Asia and Latin America

Evaluation Report
Bangkok, October 2011
## Contents

1. Introduction
   1.1 Background of the Evaluation
   1.2 Purpose and Objectives of the Evaluation
   1.3 Scope and Methodology of the Evaluation
2. Project Design and Implementation
   2.1 Planning and Formulation
     2.1.1 Situation Analysis
     2.1.2 Logical Framework
     2.1.3 Monitoring
   2.2 Management and Partnership Arrangements
3. Project Performance
   3.1 Achievements by Expected Accomplishments
   3.2 Assessment Based on the Evaluation Criteria
     3.2.1 Relevance
     3.2.2 Efficiency
     3.2.3 Effectiveness
     3.2.4 Sustainability
4. Overall Assessment of the Project, Lessons Learned and Recommendations
5. Management Response

Annex 1: Terms of Reference
Annex 3: Brainstorming Exercise: Project’s Strength and Weaknesses
Annex 4: Workshop Participants
1. Introduction

1.1 Background of the Evaluation

The project “Eco-efficient sustainable urban infrastructure development in Asia and Latin America” was approved for funding under Tranche 6 of the Development Account with a total budget of 753,000 US$ and an initial timeframe of 3 years (2008-2010). Development Account projects aim at capacity-building through sub-regional, regional and interregional economic and technical cooperation among developing countries, implemented as individual projects aimed at achieving distinct development impact. The project is jointly implemented by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) in partnership with the United Nations Human Settlements Programme (UN-HABITAT). The objective of the project is to improve the capacity of policy-makers, planners and decision-makers to increase the environmental sustainability of infrastructure development.

During an inter-agency meeting in Bangkok that took place in October 2008 it was agreed among the participating organizations to organize an evaluation mission. Furthermore the scope of the evaluation and modalities were discussed.

1.2 Purpose and Objectives of the Evaluation

The purpose of the evaluation was to assess the performance of the project and to derive lessons learned from implementation in order to formulate recommendations for follow-up activities to be carried out by ESCAP and partner agencies. The evaluation focused on three primary components:

i. An overall evaluation of the project vis-à-vis its logical framework, as a whole as well as in its Asia-Pacific regional component.

ii. Lessons learned from project implementation in how to install change in governance at city level.

iii. An analysis of the scope for follow-on activities to be carried out by ESCAP and partner agencies in the substantive areas object of the intervention.

The objectives of the evaluation were defined as follows:

i. To assess the relevance, effectiveness, efficiency and sustainability of the project in the Asia-Pacific region and as a whole;
ii. To formulate recommendations relating to the evaluation’s findings, on desired follow-on activities to be undertaken by ESCAP and its partners.

1.3 Scope and Methodology of the Evaluation

It was agreed to link the evaluation to the 3rd Asia-Pacific Mayors’ Forum on environmentally sustainable urban infrastructure in Suncheon, Republic of Korea and to organize after that event an evaluation workshop in Bangkok. This workshop was the main source for information gathering among project stakeholders and thus provided the qualitative data base for the evaluation. During the meeting in Suncheon the main product of the project, a jointly elaborated (ESCAP-ECLAC-UN-Habitat) set of guidelines for policy makers for the development of eco-efficient and sustainable infrastructure, was presented to a group of project beneficiaries (mayors and city planners). The participation in this meeting allowed the evaluator to get an overview of actual reactions of the beneficiaries on the guidelines presented. In the evaluation workshop in Bangkok project implementers, representatives of beneficiaries (trainees of training courses organized in the framework of the project, representatives of participating communities in research activities) and external consultants, who were involved in the implementation of project activities, participated. The organization of an evaluation workshop was identified as an innovative methodology to approach and carry out the evaluation. Within limited time the workshop methodology allowed for maximum participation of key informants. Furthermore, the evaluation workshop was complemented by a number of interviews with key informants and an analysis of project documents (planning documents, progress reports, etc.).

The scope of the evaluation was defined according to the DAC evaluation criteria: relevance, efficiency, effectiveness and sustainability. Based on those criteria a set of evaluation questions was defined that provided orientation for the facilitated discussion process during the evaluation workshop as well as for the substantive interviews:

- **Relevance**
  - To what extent project objectives and outcomes were consistent with governments’ development strategies and priorities and requirements of the target groups?
  - To what extent has a joint project enhanced the quality of the project?
  - To what extent the inter-regional dimensions of the project have added value to the regional components?

- **Efficiency**
  - To what extent human and financial resources were used in the best possible way to deliver activities and outputs, in coordination with other stakeholders?
• **Effectiveness**
  o To what extent outputs of the project have been achieved?
  o To what extent have project target groups made use of, or applied, capabilities (knowledge, understanding, skills, techniques, etc) built under the project?
  o How effective was the project in using primarily the human and other capacities of developing countries?
  o To what extent have partners involved in the project effectively and in a timely manner fulfilled their obligations to the project?

• **Sustainability**
  o What is the likelihood that the positive effects of the project will continue into the future?
  o To what extent has support from other UN partners, donors or other multilateral or national partners been obtained to take forward project outcomes?
  o To what extent are the concepts and methodologies promoted under the project appropriate to the environments (social, institutional, cultural, ecological, etc.) within which they are to be applied?
  o What follow-on activities could be carried out by the regional commissions and partner agencies in the substantive areas object of the intervention to support the positive effects generated by the project?
2. **Project Design and Implementation**

Regarding the project design, the key questions are to which extent:

1. A systematic project identification process was instrumental in selecting problem areas and setting priorities

2. The project had a clear thematically focused development objective, the attainment of which can be determined by a set of verifiable indicators;

3. The project was formulated based on the logical framework approach and included appropriate output and outcome indicators.

2.1 **Planning and Formulation**

2.1.1 **Situation Analysis**

The problem analysis that forms the basis for systematic project identification and justification is too narrow. Important problems were only identified at a generic level, thus a “real analysis” of which factors specifically contribute to the development of urban infrastructure in a non-eco-efficient manner were not specified. If the factors contributing to a problem are not clear, it cannot be assessed in how far a specific approach (e.g., concentration on the development of guidelines, capacity building, etc.) is actually relevant considering the overall problem context. Although it can be expected that capacity development is an important factor, a deeper analysis under which conditions improved knowledge and awareness of planners and decision makers concerning eco-efficiency would actually lead to improved, more eco-efficient development of urban infrastructure, would be necessary to prove that the overall approach followed with the project is relevant.

*Box 1: Problem Tree (Detail)*

- Segments of the population (e.g., the poor) do not have access to affordable goods and services
- Cities are locked into inefficient production and consumption patterns
- Infrastructure is developed in a non-eco-efficient and socially inclusive manner
- Capacities for the development of environmentally sustainable infrastructure are insufficient
2.1.2 Logical Framework

A Logical Framework is a planning tool that should provide a clear basis for project implementation and systematic monitoring and at the same time serve as a communication tool that allows different stakeholders to better understand what the projects wants to achieve.

The Logframe of the project evaluated suffers from a number of weaknesses. Therefore it could only partly fulfill its function as a management tool. The formulation and linkages between the (development) objective and expected accomplishments (outputs) are not fully coherent. The development objective and expected accomplishments place too much emphasis on improving the capacity of policy makers, planners and decision makers and neglect the level of actual application and changed performance.

The purpose of the project is more than just capacity building (strengthening abilities to do something). The ambition of the project is to positively influence actual performance (application of knowledge and skills resulting in better, more eco-efficient planning of urban infrastructure). This ambition is not clearly reflected at the different levels of the Logframe.

The project objective was not defined in a way that actual performance of beneficiaries is expressed. It emphasizes on improving the capacity of policy makers and decision makers to increase environmentally sustainable infrastructure development. Thus it describes the quality of an output rather than an outcome and is the mere summary of the conditions expressed at output (expected accomplishment) level.

What is lacking is a description of how the outputs should be used in future, by whom and what attributable benefits (short/medium-term) can be expected. This description would provide the missing link between what the project can do and achieve and the further higher level benefits that are described in the objective tree in the project document. Only the use of improved capacities (actual performance/application instead of capacities/ability to do) and resulting positive changes can actually justify the use of resources. Capacity development as such cannot justify a project, unless the question “what for?” is answered and specified with measurable indicators.
The logic of the indicators is not clear; they do not describe the quality and level of ambition expressed in the objective/expected accomplishment.

The indicator of EA 1 focuses on demonstration of knowledge and understanding. The means of verification was a questionnaire that was used by the end of workshops and in which the participants were asked about their self-assessment concerning the improvement of their ability to demonstrate what they have learned. The EA 1 mentions a number of very different things (enhanced regional knowledge management, enhanced analytical capacity, awareness, understanding, etc.). It is not clear if the desirable condition to be achieved at this level is improved knowledge (capacities) or already use of knowledge (application, applied knowledge management).

EA 2 emphasizes on enhanced capacities to adopt eco-efficient concepts. Again, the indicator for this EA goes already beyond the quality expressed in the EA by concentrating on an increased number of initiatives that already adopt eco-efficient concepts. This indicator would be useful at the level of the overall project objective, where actual application and use of capacities should be measured.

EA 3 emphasizes on enhanced capacities to participate in clean energy and energy efficient investment opportunities and in carbon markets. The related indicator just
speaks about increased awareness and commitment. This indicator is not an indicator at all; it is just a repetition of the EA using another wording.

Keeping these critical points in mind, a more coherent logic for the project’s result chain would look as follows:

**Box 4: Example – Intervention Logic (Chain of Results)**

<table>
<thead>
<tr>
<th>Project Objective</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy makers, planners and decision makers, qualified within the framework of</td>
<td>Increased number of concepts, plans, etc. that consider eco-efficient concepts, etc. at a specific point in time in selected countries elaborated with the participation of the project’s trainees</td>
</tr>
<tr>
<td>the project, <strong>apply and adopt</strong> eco-efficient concepts in planning, policy</td>
<td></td>
</tr>
<tr>
<td>formulation, decision making, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>EA 1</strong></td>
<td></td>
</tr>
<tr>
<td>Better knowledge, increased capacity for knowledge management, analysis, etc.</td>
<td>Test / feedback on increased knowledge by the end of trainings, meetings and ex-post feedback on trainings (e-mail surveys, etc.)</td>
</tr>
<tr>
<td><strong>EA 2</strong></td>
<td></td>
</tr>
<tr>
<td>Enhanced capacity (skills) to adopt concepts</td>
<td>Test / feedback on increased knowledge/skills by the end of trainings, meetings and ex-post feedback on trainings (surveys)</td>
</tr>
<tr>
<td><strong>EA 3</strong></td>
<td></td>
</tr>
<tr>
<td>Enhanced capacity to participate in carbon markets, etc.</td>
<td>Test / feedback on increased knowledge by the end of trainings, meetings and ex-post feedback on trainings (surveys)</td>
</tr>
</tbody>
</table>

The risks, as expressed in the Logical Framework, are not formulated specific enough to be useful for managing the project. The idea of formulating assumptions is to enhance the awareness of decision makers and managers of the project regarding factors that could negatively influence the performance of the project, in order to allow project management for timely reactions and adjustments of the project strategy, if certain risks materialize. To serve this function, assumptions should not only reflect the overall political and economic environment of the project, but should be related to project specific (external) factors. In this regard the project planning should ask:

- What are specific factors that could prevent planners, decision makers and policy makers from actually using in their specific fields of work what they have learned through their participation in project activities?

- What can the project do, to promote and ensure application and improved performance (use of guidelines, etc.)?
The Logframe should be the outflow of a systematic and comprehensive analytical process. In order to support such a process, the Development Account framework should be more flexible and should allow implementing agencies to revise objective, expected accomplishments, indicators and means of verification after the initial concept note is approved, at the stage of project document formulation. Moreover, flexibility to refine and improve the Logframe should be granted also at the inception of the project, when resources can be made available for implementing agencies to meet. Funds should be earmarked for this purpose.

2.1.3 Monitoring
Since the underlying development hypothesis of the project that links the expected accomplishments to the project objective is not as clear as it should be and furthermore the indicators that were defined are not precisely describing how the objectives can be measured in terms of quantity, quality, time and target group, systematic monitoring of project results was not entirely possible. Monitoring and information about project progress, as it was provided in project progress reports, is related to project activities (organization of meetings, etc.) only. Questionnaires that were used by the end of training sessions, meetings, etc. were the only source of monitoring (feedback).

It must be noted that a discussion of evaluation criteria was held in the planning stage. This is a very positive factor that demonstrated the awareness and willingness of project planners to consider the part of evaluation seriously. Unfortunately the evaluation exercise could only partly consider the dimension of results-achievement. The only source for collecting information about positive post-training effects of the project was individual feedback from the evaluation workshop participants. It would have been desirable to integrate, from the very beginning of the project implementation, categories (indicators) into the project’s monitoring approach that would have reflected actual application of skills and knowledge acquired during training activities. Such a monitoring approach would also have been useful to derive lessons learned and to get further ideas concerning updating of training materials.
2.2 Management and Partnership Arrangements

To what extent has a joint project enhanced the quality of the project?

To what extent the inter-regional dimensions of the project have added value to the regional components?

Concerning the management and partnership arrangements it must be understood that the project worked on a very limited budget. This fact had a strong influence on inter-regional and inter-agency cooperation. The project management was eager to minimize costs (see part on efficiency of the project) but nevertheless, with a bigger budget, cooperation among parties involved and partnership arrangements could have been intensified.

At the beginning of the project the partnership with UN-Habitat was not formalized. This resulted in unclear roles and responsibilities of the cooperating partners. Due to the cooperative attitude of all parties involved, good cooperation could be ensured. Nevertheless, a lesson learned from this project is that from the very beginning the roles and responsibilities of all partners taking an active role in project implementation should be clarified and captured in a formal cooperation agreement. With such an agreement it can be ensured that misunderstandings can be avoided and that all partners can officially handle the project within the framework of the rules and regulations of their organizations. A formalized cooperation agreement at the very beginning of a project should at the same time not prevent other partners to join the team of implementers, if project implementation shows that this is in the interest of results achievement.

For any cooperation project it must be understood that cooperation does not come for free. There are always additional transaction costs (communication, travel, etc.) involved. Cooperation among agencies must add value to the project; it must not be a purpose in itself or be driven from a hidden agenda. Cooperation should be based and start from shared and common priorities. For the project evaluated, it was good to have 3 implementing partners only (ESCAP and ECLAC as the 2 organizations representing the inter-regional dimension of the project and UN-Habitat as the substantive organization contributing with the substantive knowledge and experience of a specialized organization). More implementing partners would have resulted in further transaction costs and this would have been dysfunctional in terms of efficient and effective project management.

The management team found that from the very beginning the cooperating partners should all be considered executing agencies; the distinction between executing and contributing agencies under the Development Account did not make sense and resources should have been allocated to all partners in order to ensure effective participation and greater ownership.
3. **Project Performance**

3.1 **Achievements by Expected Accomplishments**

The achievements of the project, according to the project progress reports, are summarized as follows:

**Box 5: Major achievements vis-à-vis Expected Accomplishment 1**

<table>
<thead>
<tr>
<th>Expected Accomplishment 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced regional knowledge management, analytical capacity, awareness and understanding of eco-efficiency concepts, their contribution to the achievement of MDG 1 and MDG 7 and their application to infrastructure development</td>
</tr>
<tr>
<td>• From 6 to 10 October 2008, an inter-agency planning and coordination meeting between ESCAP and ECLAC was organized in Bangkok</td>
</tr>
<tr>
<td>• Nine analytical studies were prepared to review current practices and identify barriers and opportunities for integrating eco-efficiency criteria into infrastructure development patterns in Asia and in Latin America.</td>
</tr>
<tr>
<td>• The finding and studies were presented and discussed at the Expert Group Meeting on “Developing Eco-efficient and Sustainable Urban Infrastructure in Asia and Latin America” that was jointly organized by ESCAP, ECLAC and Un-HABITAT in Bangkok, Thailand, on 10-12 February 2009.</td>
</tr>
<tr>
<td>• A Regional Seminar for Latin America and the Caribbean took place in the cities of Santa Marta, Barranquilla and Cartagena in Colombia on 13-15 July 2009.</td>
</tr>
<tr>
<td>• ESCAP, in partnership with the City of Ulsan, Republic of Korea, organized the 2nd Asia-Pacific Mayors’ Forum on Environmentally Sustainable Urban Infrastructure organized on 27-29 October 2009.</td>
</tr>
<tr>
<td>• Training materials were developed and an International Training Course on Eco-efficient and Sustainable Urban Infrastructure was held at the International Urban Training Centre (IUTC), Gangwon Province, Republic of Korea, on 14-20 November 2010.</td>
</tr>
<tr>
<td>• At the 5th World Urban Forum, HABITAT, Rio de Janeiro, March 2010, a roundtable on eco-efficient infrastructure was organized under the project. 40 professionals participated from different countries.</td>
</tr>
<tr>
<td>• The project contributed to the organization of Diploma and Master programs in cooperation with various academic institutions.</td>
</tr>
<tr>
<td>• Training modules and case studies developed by the project were discussed and applied in conferences and training activities in Latin America</td>
</tr>
</tbody>
</table>
Box 6: Major achievements vis-à-vis Expected Accomplishment 2

**Expected Accomplishment 2**

Enhanced capacity to adopt eco-efficiency concepts, measures and criteria in policies, plans and decision-making relating to infrastructure development

- Based on the findings of the analytical studies and the discussions of the inter-regional workshop, the project developed a conceptual framework and methodology to assess the eco-efficiency of urban infrastructure and develop strategies to improve this. This framework and methodology was applied in the conduct of case studies/pilot projects in both regions.

- The findings of the analytical studies, the conceptual framework and methodology identified and the findings of the case studies/pilot projects were used to produce the “Guidelines for developing eco-efficient and socially inclusive infrastructure”. The publication is available in two formats (Executive Summary for mayors and Full Guidelines for city planners). Both publications include a CD-ROM with all the material developed under the project.

- The Guidelines and the key findings and best practices identified under the project were presented to target audiences at three major events organized under the project.

- The findings and results of the project were disseminated at various events.

- A website dedicated to the project was developed

---

Box 7: Major achievements vis-à-vis Expected Accomplishment 3

**Expected Accomplishment 3**

Enhanced capacity to participate in clean energy and energy efficiency investment opportunities and in carbon markets with programmatic and bundled Clean Development Mechanism projects related to transport, power and energy-intensive industrial infrastructure

- In a master program organized by ECLAC in Latin America 7 CDM projects in Chile and Colombia were prepared
3.2 Assessment Based on the Evaluation Criteria

3.2.1 Relevance

To what extent project objectives and outcomes were consistent with governments’ development strategies and priorities and requirements of the target groups?

The group participating in the evaluation workshop agreed that the project’s objectives are still valid and relevant, including the focus on local governments as the priority target group. Addressing local governments is particularly important because this supports decentralization efforts that are underway in many Asian countries. The focus of the project on capacity development remains relevant, but should be widened. The dimension of organizational development should be included in potential follow-up activities in order to address also issues that go beyond the qualification of individuals (removing of barriers in organizations that prevent staff to consider eco-efficiency in their work). At the same time it must be considered that in this regard interventions organized by the project have their limitations.

It would also be desirable to address further target groups, such as NGOs and private business representatives in future training activities, because those groups play an important role in urban development too.

From the viewpoint of relevance the project’s interventions must be seen in a broader problem context. Urban infrastructure is not developed in an eco-efficient way because of a number of factors: weak planning capacities, incentive structure in institutions not favorable to eco-efficient infrastructure development, institutions often resist change, short term orientation of decision makers, real costs of environmental degradation not calculated, etc. Keeping this overall problem context in mind the focus of the project is relevant and can still be justified although it is clear that other crucial factors must be addressed too, to actually make eco-efficient planning and urban infrastructure development work.

3.2.2 Efficiency

To what extent human and financial resources were used in the best possible way to deliver activities and outputs, in coordination with other stakeholders?

With regard to the efficiency of the project implementation the group noted that many activities were carried out with very limited resources. Close cooperation with other ongoing ESCAP projects and projects of other organizations (ADB, UNCRD etc.) were forged. Synergies could be realized. With regard to the organization of the mayors’ fora the hosting cities (e.g. Suncheon) took over considerable part of the costs.
In the field of training an intensive cooperation with UN-Habitat was developed. UN-Habitat included training on the guidelines in their regular training programmes, thus training organized did not need to be financed out of the project’s budget.

Other transaction costs were minimized by using modern communication tools (Skype, video-conferences) for exchange of information. Travel costs were kept to a minimum.

The project was successful in including its recommendations and finding in the agenda of international meetings. In many cases no additional costs were involved because cooperating institutions were interested to engage in cooperation with ESCAP and ECLAC.

Since the project was financed out of the Development Account no additional staff costs for project management were financed out of the project’s budget. The project was managed completely using regular ESCAP and ECLAC staff resources.

The project tried to minimize costs in many ways, e.g. all the printing of materials, including the material for Latin America, was done in Thailand because of the favorable prizes.

In terms of efficiency it was further noted that even more UN-Habitat support could have been leveraged, if UN-Habitat would have been included in the official implementing project structure based on a formal agreement already at the beginning of the project.

3.2.3 Effectiveness
To what extent outputs (Expected Accomplishments) of the project have been achieved?

To what extent have project target groups made use of, or applied, capabilities (knowledge, understanding, skills, techniques, etc.) built under the project?

In the context of the programme a number of knowledge products, such as case studies, training materials, etc. were developed. ECLAC and ESCAP published information and materials developed by the project on websites. In terms of effectiveness it remains a challenge to ensure that these products can actually be used and actively applied by the various target groups.

With regard to CDM the group found that the overall context had changed; given the uncertain progress of negotiations for a post-Kyoto climate regime, CDM was no longer considered to be an important mechanism for financing development initiatives focusing on eco-efficiency.
The project used human and other capacities of developing countries to organize research activities, case studies, etc., thus the effectiveness of project implementation was strengthened by following a learning-by-doing approach.

One example that illustrates how target groups have made use of procedures, instruments, etc. that were developed by the project, is the case study (research project) that was organized in the Philippines in the city of Rodriguez. Communities learned how to make their own plans and how to voice their own interests in dealing with municipal administration.

The Guidelines were presented at the 3rd Asia-Pacific Mayors Forum on Environmentally Sustainable Urban Infrastructure in Sunchon, Republic of Korea. This allowed target groups to learn about the existence of this product, but was not enough for them to really understand and discuss in detail the content of the Guidelines. While it is understood that any event targeting mayors cannot be too lengthy given their busy schedule, intensive discussion with the participants would have been useful to get feedback. Such feedback is essential in deciding in which form future training and dissemination activities should be organized in order to ensure that the guidelines can actually be used and applied. Such feedback was to a certain extend gathered in the course of the pilot trainings organized and it is recommended that upcoming training activities do ensure that such feedback is properly collected.

3.2.4 Sustainability

What is the likelihood that the positive effects of the project will continue into the future?

To what extent has support from other UN partners, donors or other multilateral or national partners been obtained to take forward project outcomes?

From the outset, the project had taken a number of steps to ensure sustainability of project interventions. Discussions were held with key partners to ensure that the project build on past and existing similar initiatives. Meetings and training activities were organized jointly with other organizations in order to make sure that the project results are carried forward after completion. In particular, the close involvement of UN-HABITAT as the main partner in the project is expected to ensure sustainability, by integrating the outcomes of the project in its regular activities.

In particular, training activities under the project were designed and organized in partnership with UN-HABITAT and the International Urban Training Centre (IUTC) in Gangwon Province, Republic of Korea. Following a successful pilot training, UN-HABITAT and IUTC have decided to include the course on eco-efficient and sustainable urban infrastructure in their regular yearly curriculum, finance it through
their budget and make use of the materials developed under the project. The next training is scheduled for 19-25 November 2011.

ESCAP, ECLAC and Columbia University signed a tripartite MoU to establish cooperation in the promotion of sustainable and inclusive urban development in Asia and the Pacific and in Latin America and the Caribbean, which aims at developing an institutional framework to facilitate the realization of joint activities in this respect. Within the lifetime of the project this partnership mainly focused on the development of the Guidelines for developing eco-efficient urban infrastructure. After the completion of the project, the partnership is intended to further the work carried out under the project.

In order to ensure intensive use of the Guidelines they will be translated into Spanish.

Spain has already agreed to finance case studies to apply the Guidelines in a number of cities in Latin America. Furthermore a 4-month course in cooperation with the Government of Chile (Ministry of Public Works) using the Guidelines was already agreed upon. In Latin America there is an ongoing initiative to build a network to promote eco-efficiency. ECLAC and the Ministry of Environment signed an agreement to disseminate the Guidelines and case study experiences. In 2 initiatives (low carbon urban services and urban economics of climate change) eco-efficient infrastructure will be reinforced in Latin America.

There are a number of effects that are the outflow of the research project that took place in the city of Rodriguez in the Philippines. Community level projects that were defined in the framework of research activities financed by the project are being implemented. UN-habitat decided to include the city of Rodriguez in the City and Climate Change initiative. The Homeless People Federation in the Philippines, a NGO working at national level, will scale-up experiences and findings from the Rodriguez case study to make use of them in other cities of the Philippines.

It should also be mentioned that the promotion of sustainable urban infrastructure was identified as a priority area to be reflected in work programmes of ESCAP and ECLAC for the years 2012/13 and 2014/15.

Beyond these ongoing initiatives and activities the evaluation team developed ideas what else should be done in future in order to maximize positive impact of the project and to ensure sustainability. The following activities were identified:

- The full cycle of the guidelines as it is explained in the strategic planning process should be applied in a number of cities to further test the guidelines.

- The findings of the project should be integrated into ongoing projects such as ESCAP’s Low Carbon Green Growth Road Map.

- The guidelines should be further disseminated using the ASEAN Working Group on Environmentally Sustainable Cities and other training institutes and universities
in Asia and Latin America, such as the Asian Institute of Technology (AIT). Partners to organize training at local government level should be identified.

- Capacities to apply the guidelines should be developed at national level.
- Opportunities to organize training-of-trainers at national level should be assessed.
- Avenues to translate the Guidelines into key local languages should be explored.
4. Overall Assessment of the Project, Lessons Learned and Recommendations

Overall assessment

Summarizing the assessment of the overall performance of the project, it can be stated that the project was successful in producing important products such as guidelines, research findings, training materials, etc. These materials were successfully disseminated in a number of events like conferences, meetings and training programmes that were organized in cooperation with an impressive number of cooperating partners.

Given the limited budget of the project it is a success.

Although, in terms of plausibility, there can be concluded that the guidelines meet an existing demand and will be used in future by a number of target groups (politicians, planners, administrators, decision makers, etc.), the dimension of application of products is not sufficiently covered. The project, given its focus on research, concentrated more on the delivery of outputs, albeit with a learning by doing approach, rather than on their actual use.

It would have been desirable to capture the level of actual use of outputs (Guidelines) based on a clearer set of expected accomplishments and related results-oriented indicators. Starting from a clear description of who should use and apply the Guidelines in which way, it would have been easier to focus some project activities on supporting application of products, beyond organizing training and meetings. Results-based monitoring would have helped to emphasize during project implementation more on the dimension of actual application and change in performance of target groups that eventually justifies any project. More resources should have been allocated to ensure the adoption and utilization of the knowledge products produced. In this regard, the project could have benefited from a larger budget, as initially proposed.

The main observations of this evaluation, based on the evaluation workshop and document reviews, are summarized in the table below:

<table>
<thead>
<tr>
<th>Strength/Achievements</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Products were developed that can feed into a number of future activities, projects, etc.</td>
<td>• Requirements (research) and budget of the project and work on the ground were difficult to be combined: People were eager to implement findings of research at community level but project stopped with analysis (normative project – implementation beyond its scope)</td>
</tr>
<tr>
<td>• A broad range of countries, beneficiaries, organizations and sectors were involved</td>
<td>• Some initial studies very academic and</td>
</tr>
<tr>
<td>• Networking, capacity building, policy advocacy took place among important stakeholders</td>
<td></td>
</tr>
<tr>
<td>Strength/Achievements</td>
<td>Weaknesses</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• Concentration on the development of guidelines ensured that the project had a</td>
<td>time consuming and weak integration of sectors: water, energy, waste, etc.</td>
</tr>
<tr>
<td>practical focus</td>
<td>• Too many small activities that were not entirely linked together</td>
</tr>
<tr>
<td>• Awareness among partners in the public sector about eco-efficiency was raised</td>
<td>• Little involvement of national governments</td>
</tr>
<tr>
<td>• Different sectors under a common (urban) agenda were brought together</td>
<td>• Asia Pacific and Latin America very far apart, little interaction</td>
</tr>
<tr>
<td>• Training of participants facilitated networking and exchange of experiences and best</td>
<td>• Monitoring framework not fully elaborated and not entirely results oriented</td>
</tr>
<tr>
<td>practices</td>
<td></td>
</tr>
</tbody>
</table>

Derived from these strength and weaknesses of the project the following lessons learned and recommendations can be derived:

**Lessons learned and recommendations**

(1) The project was not based on a specific and detailed needs (problem) analysis. Therefore the priorities of the project were not as clear as it would have been desirable considering the limitations of the project (focus on research, limited budget, etc.)

**Recommendation:**
In preparing for a project a clear (specific) problem analysis should be elaborated. Such an analysis should aim to identify specific bottlenecks for a desirable development process that can be addressed by an intervention. Stronger emphasis on such an analytical process would help to clearly identify future project priorities, according to needs and demand. It would further provide a clear basis for understanding the project’s limitations.

(2) The planning logic of the project, particularly with regard to the indicators, is not fully consistent. Thus the planning (Logframe) could not provide an entirely clear results-orientation for project implementation

**Recommendation:**
The Logical Framework is an important tool to manage project implementation. Only if there is a set of results-oriented indicators project management clearly understands how project success can be described in measurable terms. In order to provide this orientation, stakeholders should agree at the beginning of the
project what project success actually means by defining indicators for the project objective and the expected accomplishments. The Development Account framework should allow implementing agencies to revise objective, expected accomplishments, indicators and means of verification after the initial concept note is approved.

(3) Project monitoring should have been more results-oriented.

**Recommendation:**
Monitoring that focuses on feedback regarding actual application of the guidelines should be introduced if follow-up activities can be organized. For this purpose the use of modern communication tools (website forum, e-mail surveys, etc.) is recommended. In that regard it must be understood that the mere production of guidelines and training on guidelines cannot be an end in itself. Unless the actual application and use of guidelines by target groups cannot be demonstrated, the relevance and justification of the project as a whole remains questionable.

(4) The focus of the project was too much on developing guidelines and not enough on training and ensuring the use of the guidelines

**Recommendation:**
In follow-up activities the main emphasis should be on organizing training and further information exchange on the guidelines. In that regard it should be ensured that the national level that forms the main target group for ESCAP and ECLAC is not neglected. There should not be any further pilot or research activities. Research results of other agencies and organizations on eco-efficiency could be used to further update guidelines and related training programmes wherever necessary. Implementation of pilot programmes as a follow-up to reach activities should not be the focus, keeping in mind that other organizations have comparative advantages in implementing activities on the ground.

(5) Capacity development at a national level remains a challenge.

**Recommendation**
In order to facilitate intensive use of the guidelines, it should be assessed in how far national training capacities should be developed using a training-of-trainers approach. Follow-up activities should concentrate, while organizing training on the guidelines, on qualification of national trainers too. Thus, an important contribution to the future sustainability of project outcomes could be made.

(6) Guidelines were developed and published meeting professional standards
**Recommendation:**
Guidelines for developing eco-efficient and socially inclusive infrastructure were made available. It should be further assessed which channels could be used to further disseminate the guidelines and integrate the guidelines into regular training activities of national and international (national training institutes, universities, UN-Habitat) training providers.

(7) Many activities were carried out in cooperation with relevant stakeholders (UN-agencies, training organizations, universities, etc.). This has led to a broad discussion of the project’s initiatives and products.

**Recommendation:**
There is a high demand among the project’s main target groups (urban planners, decision makers, politicians, etc.) to exchange experiences pertaining urban infrastructure development. Follow-up activities should consider this demand and concentrate on, apart from training, organizing international information exchange.

(8) The full cycle of the guidelines as it is explained in the strategic planning process should be applied in a number of cities to further test the guidelines.

**Recommendation:**
Follow-up activities should include further testing and application of the full cycle of the guidelines (10 steps) in pilot cities. This again could be combined with training activities.

**5. Management Response**

ESCAP, UN-HABITAT and IUTC have already agreed to continue training activities based on the materials developed under the project, after the lifetime of the project. Moreover, ESCAP is and will continue to explore other opportunities to integrate the Guidelines into regular training activities of other partners and stakeholders. In particular, preliminary discussions were held with CITYNET. The Guidelines have been widely disseminated making use of ESCAP’s broad network of partners, including regional networks of cities, such as UCLG, ICLEI and CITYNET. ESCAP intends also to develop proposals for follow-up activities and seek funding to implement them. As suggested by this evaluation, such follow-up activities will concentrate on: (1) national-level capacity building and training activities based on the Guidelines using a training-of-trainers approach and translation of materials into local languages; (2) testing and application of the full cycle of the Guidelines in pilot
cities, and (3) regional and inter-regional information exchange using modern communication tools.

ECLAC is currently developing a project based on the findings and knowledge of the project. Financed by the Government of Spain, this new project on “Low carbon urban services” will focus on the implementation of the guidelines developed. Arrangements and MOUs in case studies in Chile, Colombia an Peru are already being discussed. Meanwhile this new project is financing the translation of the guidelines into Spanish, so it can be widely disseminate in Latin America and the Caribbean. Moreover, a new project on “Green urban economy and low carbon path for cities in LAC” is being discussed with UNEP and UN-Habitat. It will use the methodology and then main outputs of the DA project and will emphasize institutional and financial proposals for the development of a new urban management approach for sustainability.
Annex 1: Terms of Reference

**UN ESCAP**

### 1. Background

The project Eco-efficient and sustainable urban infrastructure development in Asia and Latin America” (ROA101) was approved for funding under Tranche 6 (2008-2011) of the Development Account, with a total budget of US$ 753,000. The project is jointly implemented by the ESCAP and ECLAC in partnership with UN-HABITAT. The objective of the project was to improve the capacity of policy-makers, planners and decision-makers to increase the environmental sustainability of infrastructure development. An evaluative review of project is required. The main purpose of the evaluation is to (i) assess the performance of the project and to (ii) derive lessons from implementation and to put forward related recommendations.

### 2. Objectives

The evaluation has the following objectives:

- To assess the relevance, effectiveness, efficiency and sustainability of the project in the Asia-Pacific region and as a whole;
- To formulate recommendations relating to the evaluation’s findings, on desired follow-on activities to be undertaken by ESCAP and its partners.

The evaluation has the following primary components:

- An overall evaluation of the project vis-à-vis its logical framework, as a whole as well as in its Asia-Pacific regional component.
- Lessons learned from project implementation in how to install change in governance at city level.
- An analysis of the scope for follow-on activities to be carried out by ESCAP and partner agencies in the substantive areas object of the intervention.

The following main indicative evaluation criteria and sets of sub-issues will be addressed in the evaluation of the project:

- **Relevance**
  - To what extent project objectives and outcomes were consistent with governments’ development strategies and priorities and requirements of the target groups?
  - To what extent has a joint project enhanced the quality of the project?
  - To what extent the inter-regional dimensions of the project have added value to the regional components?

- **Efficiency**
  - To what extent human and financial resources were used in the best possible way to deliver activities and outputs, in coordination with other stakeholders?

- **Effectiveness**
  - To what extent outputs of the project have been achieved?
  - To what extent have project target groups made use of, or applied, capabilities (knowledge, understanding, skills, techniques, etc) built under the project?
  - How effective was the project in using primarily the human and other capacities of developing countries?
  - To what extent have partners involved in the project effectively and in a timely manner fulfilled their obligations to the project?

- **Sustainability**
  - What is the likelihood that the positive effects of the project will continue into the future?
  - To what extent has support from other UN partners, donors or other multilateral or national partners been obtained to take forward project outcomes?
o To what extent are the concepts and methodologies promoted under the project appropriate to the environments (social, institutional, cultural, ecological, etc) within which they are to be applied?

o What follow-on activities could be carried out by the regional commissions and partner agencies in the substantive areas object of the intervention to support the positive effects generated by the project?
<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Topic</th>
<th>Methodology</th>
</tr>
</thead>
</table>
| 09.00 – 10.30 | Introduction | • Purpose, objectives and participatory approach of the workshop  
• Introduction of participants and evaluator  
• Introduction to set of questions to be clarified  
• Individual brainstorming on programme achievements and results  
• Discussion of individual feedback on programme performance as a whole | • Group discussion  
• Individual exercise  
• Presentation and discussion of individual perspectives |
| 10.30 – 10.45 | Break | | |
| 10.45 – 12.30 | Session 2 | Relevance | • Consistence of programme results with partner countries priorities, needs, requirements?  
• Contribution and positive effects of interagency cooperation and inter-regional dimension to results achievement/programme quality | • Visualized group discussion along the Logframe |
| 12.30 – 13.30 | Break | | |
| 13.30 – 15.30 | Session 3 | Effectiveness | • Achievement of outputs, etc.?  
• Use of outputs, application, etc.? | • Visualized group discussion along the Logframe |
| 15.30 – 15.45 | Break | | |
| 15.45 – 17.00 | Session 4 | Efficiency | • Efficient use of resources  
• Results achieved vis-à-vis inputs/resources allocated?  
• What was actually done (major activities) and how were resources used | • Visualized group discussion along the Logframe |
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Session 1</strong></td>
<td></td>
</tr>
<tr>
<td>09.00 – 10.30</td>
<td><em>Sustainability</em></td>
<td>• Visualized group discussion along the Logframe</td>
</tr>
<tr>
<td></td>
<td>• What are positive effects?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• How likely is it that those effects will</td>
<td></td>
</tr>
<tr>
<td></td>
<td>continue in the future?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What has the project done to ensure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sustainability?</td>
<td></td>
</tr>
<tr>
<td>10.30 – 10.45</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Session 2</strong></td>
<td></td>
</tr>
<tr>
<td>10.45 – 12.30</td>
<td><em>Project Management and Planning Logic</em></td>
<td>• Visualized group discussion</td>
</tr>
<tr>
<td></td>
<td>• What are experiences with project planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and management?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What are experiences with the inter-agency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and inter-regional dimension of the project</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with regard to project planning,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>management and implementation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• How was collection of base line information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>organized?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Experiences with project monitoring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>including post workshop feedback, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(questionnaires)?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• In how far has the project been successful</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in using national (human) resources of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>participating developing countries?</td>
<td></td>
</tr>
<tr>
<td>12.30 – 13.30</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Session 3</strong></td>
<td></td>
</tr>
<tr>
<td>13.30 – 15.30</td>
<td><em>Project Management and Planning Logic</em></td>
<td>• Visualized group discussion along the Logframe</td>
</tr>
<tr>
<td></td>
<td>(cont.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fulfillment of partner obligations?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cooperation with other un-partners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Etc.</td>
<td></td>
</tr>
<tr>
<td>15.30 – 15.45</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Session 4</strong></td>
<td></td>
</tr>
<tr>
<td>15.45 – 17.00</td>
<td><em>Lessons Learned Recommendations</em></td>
<td>• Visualized group discussion along the Logframe</td>
</tr>
<tr>
<td></td>
<td>• What are important lessons learned</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What are lessons learned from the perspectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of different beneficiaries/stakeholders?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recommendations for follow-up, replication,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Closing of workshop</td>
<td></td>
</tr>
</tbody>
</table>
Annex 3: Project’s Strength and Weaknesses
(Result of brainstorming exercise during the evaluation workshop)

Strength

ESCAP’s mandate and inter-agency / regional cooperation

- Broad range of countries, beneficiaries organizations and sectors involved
- Project highlights multi-disciplinary approach according to ESCAP’s holistic nature
- Consistent with ESCAP’s priorities
- Strong inter-agency and inter-regional component (partnerships, collaboration)
- Contributes to South-South cooperation
- Scope for closer cooperation between 3 UN partners
- Networking, capacity building, policy advocacy
- Project results can feed into other projects / initiatives
- Rather a programme than a project
- Demand-driven and participatory
- Project gave flexibility to try something new

Deliverables / outputs

- Opportunity of holistic implementation of sustainable urban development (SUD)
- Good number of well documented activities
- Attractive documents
- Practical focus, guidelines and cases
- People know what is best for their community
- Covered different levels: exploration (bottom-up), conceptualization, good practice write-ups, training/capacity building
- Concrete outcome was delivered
- Chance to use project’s results for further activities (future projects)
- Not about more infrastructure but about quality of infrastructure
- Introduction of new assessment methodologies (how much are we losing if eco-efficiency is neglected)

Awareness raising

- Opens up the mind that communities must do something for their poor population
- Awareness among partners raised
- Bringing eco-efficiency from the private to the public sector
- Motivation of partners in developing guidelines and training

Conceptualization of eco-efficiency in an urban context

- Considering benefits for the poor and for the environment
- Advancement on the concept of efficient energy use
- Bringing together different sectors under a common (urban) agenda
- Development of a framework for applying eco-efficiency to urban infrastructure
Training

- Training provided exposure of participants to know different ideas concerning eco-efficient urban infrastructure development
- Training helped in implementation of projects at city level
- Training participants formed eco-group to exchange best practices

Weaknesses

Research or practice orientation

- People were eager to implement findings of research at community level but project stopped with analysis
- Requirements of development account project (research) and work on the ground difficult to be combined
- Initial studies very academic
- Eco-efficiency too broadly defined – lack of focus
- Normative project – implementation beyond its scope
- Weakness in learning from failures
- Due to limited time and funds guidelines could not be applied from A to Z
- The research took more time than expected
- Some consultants not meeting the demand
- National level idea of national team undertaking study was good, though it did not achieve results it could have

Lacking focus of the project

- Too many small activities that were not entirely linked together
- Weaknesses in linking multi-sectoral experiences
- Could have had better integration of sectors. Water, energy, waste, etc. in pilot studies
- Asia Pacific and Latin America very far apart, little interaction
- Weak highlighting of social co-benefits

Project partners and management

- Limited role of UN-Habitat
- More information sharing among partners during project implementation would have been beneficial
- M&E framework not fully elaborated at the beginning
- Little understanding of green growth approach among partners
- Little involvement of national governments who are ESCAP’s main partners
- Hard to approach local governments, they often do not give priority to pro-poor and eco-efficient urban development
- Sharing of experiences could have been enhanced if inter-regional study tours would have been possible (funding)
## Annex 4: Workshop Participants

**Eco-Efficient and Sustainable Urban Infrastructure Development in Asia and Latin America**

**Evaluation Workshop, Bangkok 5-6 September 2011**

**LIST OF PARTICIPANTS**

<table>
<thead>
<tr>
<th>NAME</th>
<th>AFFILIATION</th>
<th>ROLE IN THE PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rolando Palacio</td>
<td>Management Committee, Philippine Action for Community-led Shelter Initiatives Inc. (PACsII)</td>
<td>Focal point for the pilot project “Pro-poor eco-settlement in Rodriguez, the Philippines”.</td>
</tr>
<tr>
<td>2. Analiza Serrano</td>
<td>National Secretariat, Homeless Peoples Federation Philippines Inc. (HPFPI)</td>
<td>Focal point for the pilot project “Pro-poor eco-settlement in Rodriguez, the Philippines”.</td>
</tr>
<tr>
<td>3. Krishna Kumar Shrivastava</td>
<td>Project Manager, Municipal Corporation of Gwalior, India</td>
<td>Trainee of the International Training Course on Eco-efficient and Sustainable Urban Infrastructure, held on 14-20 November 2010</td>
</tr>
<tr>
<td>4. Bernhard Barth</td>
<td>Human Settlements Officer, Training and Capacity Building Branch, UN-HABITAT</td>
<td>Project Focal Point, UN-HABITAT and Coordination, International Training Course on Eco-efficient and Sustainable Urban Infrastructure</td>
</tr>
<tr>
<td>5. Ricardo Jordan</td>
<td>Economic Affairs Officer, Sustainable Development and Human Settlements Division, ECLAC</td>
<td>Project Coordinator, ECLAC</td>
</tr>
<tr>
<td>6. Masakazu Ichimura</td>
<td>Chief, Environment and Development Policy Section, Environment and Development Division, ESCAP</td>
<td>Project Manager</td>
</tr>
<tr>
<td>7. Edgar Dante</td>
<td>Programme Officer, Programme Management Division, ESCAP</td>
<td>Programme Officer reviewing project proposal, project document, progress reports, monitoring and evaluation</td>
</tr>
<tr>
<td>8. Lorenzo Santucci</td>
<td>Environmental Affairs Officer, Environment and Development Policy Section, Environment and Development Division, ESCAP</td>
<td>Project Coordinator, ESCAP</td>
</tr>
<tr>
<td>9. Kelly Hayden</td>
<td>Associate Environmental Affairs Officer, Environment and Development Policy Section, Environment and Development Division,</td>
<td>Focal point for the pilot project “Energy Efficiency in public buildings in Dushanbe, Tajikistan”.</td>
</tr>
<tr>
<td></td>
<td>ESCAP</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>10</td>
<td>Natalja Wehmer</td>
<td>Associate Environmental Affairs Officer, Sustainable Urban</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Development Section, Environment and Development Division,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ESCAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focal point for the pilot project “Pro-poor eco-settlement in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rodriguez, the Philippines”.</td>
</tr>
<tr>
<td>11</td>
<td>Joris Oele</td>
<td>Consultant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assist in project implementation – in particular development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of the Guidelines and the Training Course</td>
</tr>
<tr>
<td>12</td>
<td>Helmut Blaufuss</td>
<td>Independent Consultant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluator for the project, Facilitator of the workshop</td>
</tr>
</tbody>
</table>