

# **BEST PRACTICE/CASE STUDY PORTFOLIO**

For the Implementation of Kitakyushu Initiative for a Clean Environment

United Nations Economic and Social Commission  
for Asia and the Pacific (UNESCAP)  
Environment and Natural Resources Development Division,  
Environment Section

Makoto KATO, Research Assistant

December, 2001

# Table of Contents

<b>1. Introduction</b> .....	1
<b>Some Issues and Views</b> .....	5
<b>2. Selected Case Studies</b> .....	9
<b>2.1 Air Quality Control</b>	
Yokkaichi's Air Pollution Control .....	10
<b>2.2 Wastewater Management</b>	
Minamata Disease and Water Pollution Control .....	15
The Ecology: A 'Natural Kidney' for Urban Wastewater in Calcutta .....	21
<b>2.3 Cleaner Production</b>	
Fuyan Chemical General Works Cleaner Production .....	23
Taiyuan Chemical Plant .....	26
<b>2.4 Solid Waste Management/Waste Reduction</b>	
Chicago Public Housing Buy-Back Program .....	28
Semi-aerobic Landfill/Fukuoka Method .....	30
Volume-based Collection Fee System of Solid Waste .....	34
<b>2.5 Transportation</b>	
JBIC Assistance Project for Metro Manila Traffic Improvement .....	36
Singapore's Transportation Policy .....	39
<b>2.6 Human Settlements</b>	
Jakarta's Kampung Improvement Programme (KIP) .....	41
Orangi Pilot Project .....	46
Urban Slum Improvement in Visakhapatnam .....	49
<b>2.7 Comprehensive Programmes</b>	
Benxi's Sustainable Development Demonstration Zone .....	53
Kurashiki's Environmental Recovery Efforts (Mizushima Industry Complex) .....	56
Seoul's Air and Water Pollution Control .....	59
<b>2.8 Others</b>	
Environmentally Friendly Hotels in Bali And Replication Practice in Hua Hin, Thailand .....	64
Energy Policy/Carbon Dioxide Reduction Strategy.....	66

<b>3 Other Ongoing Efforts</b> .....	70
China, People’s Republic of.....	71
India .....	73
Indonesia .....	73
Iran .....	74
Japan .....	74
Korea, Republic of .....	75
Lao,PDR., .....	75
Malaysia .....	75
Mongolia .....	76
Philippines, the.....	76
Samoa .....	77
Sri Lanka.....	77
Thailand.....	78
Turkey .....	79
Uzbekistan .....	79
USA .....	79
Viet Nam .....	79
European Union .....	80
<b>4. Useful Websites Index</b> .....	82
Bilateral Assistance Agencies and their Programmes .....	83
International Organizations and their Programmes .....	85
Initiatives of Local Governments .....	88
National Programmes for Local Governments .....	89
Research Institutions / NGOs/ Others .....	90
Selected Cities .....	93

## **Introduction**

### **Purpose, Scope and Structure of ‘Best Practice/Case Study Portfolio’**

The purpose of the present ‘Best Practice/Case Studies Portfolio’ is to assist the 1<sup>st</sup> phase of the implementation of the Kitakyushu Initiative for a Clean Environment’. On 20-21, November, 2001, the first Kitakyushu Initiative Network Meeting was held and Kitakyushu Initiative Network was formally established. This Portfolio, bearing in mind that the envisaged Network’s activities in the future, purports to provide information and brief analysis on the best practices/case studies of environmental improvement efforts mainly conducted in the Asia and Pacific region. And it is intended to serve as a part of basic studies, for possible project activities to improve urban environmental situation of the member cities (in addition to this basic study, further research should be conducted by the Institute for Global Environmental Strategies (IGES), a key research organization, which was also decided to conduct administration of the Network by the conclusion of the 1<sup>st</sup> Kitakyushu Initiative Network Meeting).

The Portfolio is an aggregation of Internet-based information on the best practices/case studies in urban areas of ESCAP member states (with some exceptions) conducted primarily by local governments. Its scope is limited to those projects, which are regarded as ‘successful,’ proven with quantitative indicators (for Selection Criteria in detail, see below). Therefore, it should be noted that the Portfolio does not include projects that are regarded as not ‘effective’ or those without quantitative indicators. In other words, the analysis concerning how a given project succeeded is provided (measures taken, and impact as well as their background), but the analysis concerning how a project failed is not available. However, the study on the latter cases may also provide significant inputs as lessons learned, or feed back. Accordingly, in the end of this chapter, ‘Some Issues and Views’ is attached, which includes suggestion by the present author for further desirable activities of the envisaged Kitakyushu Initiative Network.

The structure of the portfolios comprise of 3 parts; Selected Case Studies (21 cases), Other Ongoing Efforts (101 cases) and Useful Websites (78 sites).

## **Selected Case Studies**

### **1. Selection Criteria**

The selection criteria of the ‘Selected Case Studies’ closely relates with the purpose and nature of Kitakyushu Initiative Network activities. To realize region’s sustainable development in urban context, mitigating urban environment degradation, the Initiative’s implementation features are characterized by; promoting ground-level activities to achieve tangible improvements in urban environmental quality; monitoring improvement by quantitative indicators/targets; encouraging transfer of ‘best practices’; strengthening local initiatives and enhance partnership; and sharing experience through action-based Network. Accordingly, ‘Selected Case Studies’ must meet the following criteria;

- Projects/programmes were conducted by local government(s) primarily.
- The relation between measures taken and their impact is clearly presented.
- Case studies are equipped with quantitative indicators.
- Relevant projects are in completed status, or at least mid-term evaluation (with quantitative indicators) is available to assess their impact.

### **2. Sectors of Activities**

The Kitakyushu Initiative for a Clean Environment was adopted by the Ministerial Conference on Environment and Development in Asia and the Pacific 2000, as a core mechanism of the Regional Action Plan for Environment and Development in Asia and the Pacific 2001-2005, particularly dedicated to promote national and international efforts in improving urban environmental quality. In this regard, the present portfolio provides compiled information on the following sectoral activities;

- Air Quality Control
- Wastewater Treatment
- Cleaner Production
- Solid Waste Management/Waste Reduction
- Transportation
- Human Settlements
- Comprehensive Programmes
- Others

Although the Selected Case Studies are generally categorized in the abovementioned, some projects sectors are inter-related or in cross-cutting manner, and those categorization may not be squarely applicable.

### **Other Ongoing Efforts**

Since most initiatives/programmes concerning urban environment improvement were launched in the mid 1990s through 2000, following to United Nations Conference on Environment and Development (UNCED) in 1992 and United Nations Conference on Human Settlements (UNCHS) in 1996, many projects are still at their primitive stage (except those conducted by international development assistance agencies, and launched by some local governments individually). For this reason, in most cases, project results are not yet assessed. Especially, project evaluation with quantitative indicators is hardly available. However, considering the significant impact of those projects on region's urban environment improvement, reference should be made.

This section provides the list of ongoing efforts in cities in the region by country. Although the listed projects usually have project documents or other in-depth information sources, the quality and quantity of information available through the provided Internet websites vary in degree.

### **Useful Websites**

Amongst many websites for initiatives/programmes making efforts in improving urban environmental quality, those listed may be useful in terms that they provide relevant in-depth information. The most desirable are ones providing direct information on their input and result of projects clearly, i.e., project documents and impact evaluation reports. Such websites are quite rare, and generally limited to those of international organizations conducting operational activities, such as the United Nations Development Programme (UNDP), or international financial institutions, as the Asian Development Bank (ADB).

Nevertheless, in other websites, other significant information is also available. For instance, some provides links among several initiatives/programmes and others provides background information for environmental project, such as geography, national legal and administration arrangement, and economic, social and cultural infrastructure in a given project site.

## **Some Issues and Views**

In collecting Internet -based best practices/case studies, some of which are provided in the following section, issues are raised inside/outside of the scope of this portfolio. Although the list of the issues raised below is not in exhaustive manner, they are thought to be significant in developing the activities of the Kitakyushu Initiative Network. Also, the views include suggestions for the envisaged Kitakyushu Initiative Network Administration for ensuring desirable coordination and further facilitating cooperation among the cities in the Asia and Pacific region.

### **Trends of Internet-based Databases information**

As seen below, there are a number of initiatives/programmes to improve urban environmental problems currently, including the Kitakyushu Initiative Network. They are generally categorized 6 in groups; bilateral assistance agencies and their programmes, international organizations and their programmes, initiatives of groups of local governments, national programmes for local governments, initiatives for individual local governments, non-governmental organizations/research institutions and others.

Since UNCED in 1992 and UNCHS in 1996, the significance of environmental efforts in the context of local government have been widely recognized by international community. In response to these two events, many international cooperation initiatives/programmes were launched. Along with them, and for further facilitating international information sharing, Internet-based information databases on best practice/case studies have been developed. Generally speaking, these internet-based databases are useful, in promoting awareness-raising and expanding publicity. However, many of them are not clear and sometimes lacking in the information on project input and results with quantitative indicators, which are regarded to be of paramount importance in the framework of the Kitakyushu Initiative Network activities.

## **Project Congestion**

It should be noted that some cities seem to have difficulty or are in failure in maximizing positive effect of environmental efforts, especially when they participate in several initiatives/programmes, and many similar projects are being conducted simultaneously.<sup>1</sup> In such cases repeated efforts were made on the same issues both on donor and recipient side, investing great amount financial resource, however, its favorable impact did not appear in quantitative indicators.

Amongst the reasons, most serious phenomenon here is pointed out as ‘project congestion’ or lack of donor coordination. Although the primary responsibility for donor coordination lies in a project site city and/or recipient national government, many of them are incapable or unaware of these issues, due to the shortage of human resources and/or the lack of institutional arrangement. Therefore it is important to recognize that amount of financial investment or the number of intervention does not necessarily coincide with positive results. For this reason, it would be suggested that without prejudice to participant cities willingness, this issue be put in consideration and carefully monitored by a possible Kitakyushu Initiative Network Administration (IGES), if its role for supervision or recommendation is envisaged.<sup>2</sup>

---

<sup>1</sup> The present portfolio is an aggregation of case files by project, and analysis or diagnosis by city is not available here. However, the author received an impression, while compiling cases that in some situations serious problems are posed in terms of ‘project congestion’, so that it is suggested that further consideration be given to ensure effectiveness of each respective project.

<sup>2</sup> In the case of development assistance activities by international organizations, such as United Nations agencies, or World Bank, the donor coordination is being made at country level in cooperation with the relevant recipient government, through UN Resident Coordinator System and its Common Country Assessment (CCA)/ United Nations Development Framework (UNDAF) or similar arrangements. Also country donors meetings are normally held by the relevant recipient government, inviting bilateral development assistance agencies, or embassies. However, such coordination efforts are usually made at national government level, not at the level of local governments.

In the case of some initiatives/programmes by a group of local governments, since inter-city cooperation activities are initiated upon the request of project site cities to partner cities, whether directly or indirectly, coordination issue is normally not raised in view of respecting the project cities’ proposal and friendly relations. And in such cases, none of institutional function to mitigate donor congestion is equipped in those initiatives/programmes themselves, except consideration by recipient cities.

### **'Match-making' of Partner Cities**

As envisaged, the Kitakyushu Initiative Network would provide opportunities for cities to improve their urban environment quality, in cooperation with other cities (partner cities). This kind of arrangement have been actually sought in other initiatives/programmes, such as Asia-Urbs as a sub-programme of CITY NET, funded by the European Commission, which currently faces with some difficulty in 'match-making' of partner cities.

One of the reasons for this difficulty is pointed that there was no pre-existed information compilation by the initiative/programme secretariat, and shared by participating cities, concerning which cities could offer what kind of assistance. In this case, when a recipient city makes an application for an assistance project to the relevant secretariat, a partner cities would be chosen among other cities, which may wish to assist recipient cities, regardless of what kind of technology or experience could be provided particularly by those assisting cities. Accordingly, it is strongly suggested that an arrangement should be made inside Kitakyushu Initiative Network Administration to carefully consider the needs of recipient cities and service of assisting cities. For instance, besides a database of case studies/best practice, compiling information on technologies or experience to be provided (preferably with cross-reference by cities and sectors) may be useful.

### **Involvement and Ownership of Final Beneficiaries**

As often pointed out, the involvement and ownership by project recipient bodies are of importance, in many aspects. Here, it is suggested that the post-project environmental management and its sustainability by themselves should be ensured. As in some cases, after project completed and assistance provider left the project site, the recipient bodies are not able to maintain provided environmental facilities, for technical or financial reasons, and the environmental situation goes back to the status before the project was launched. This may be because in the project process the transfer of knowledge based technology is not sufficient or facilities are too expensive for the recipient to maintain and/or renew.

In this kind of case, it is suggested that the cost for purchasing facilities should be primarily covered by the relevant recipient (so that in most cases, introduction of

extraordinarily expensive facilities is not recommended)<sup>3</sup> and the maintenance technique should be fully transferred by involving staff from the recipient bodies in the whole project process.<sup>4</sup>

### **National Government Support to Local Initiatives**

While the Kitakyushu Initiative for a Clean Environment is a mechanism which primarily encourages urban environmental efforts and mutual cooperation in the local government context, it is also emphasized the importance of support provided by national governments. In many cases, a specific environmental problem may lie physically close to the relevant local governments, so that it may comprehend the factual situation more clearly than the national governments. In order that it takes counter measures, it is necessary that the local governments are legally entitled to access the relevant issues.<sup>5</sup> For instance, in a case where unplanned land use caused environmental degradation, to tackle this problem, the relevant local authorities must have a competence to make a decision concerning re-zoning of those lands. However, in some countries, local authorities do not have competence in this respect. In this regard, it is hoped that the relevant national governments would assist their local governments to further facilitate in making access to those environmental problems.

---

<sup>3</sup> However, it is also pointed out this might raise another question. When conducting technology transfer, provider cities may wish to designate their local private sectors as facility providers for financial benefits. Considering provider cities' motivation for international cooperation (i.e. their local benefits, in financial, cultural and social aspects), such phenomena may not be simply criticized.

<sup>4</sup> See the case of 'Orangi Pilot Project'

<sup>5</sup> In case of Japan, the Basic Environmental Law provides that local governments have authorities to set their own standards for regulation of pollutant emission, or effluent etc. This concept has also been replicated in the Basic Environmental Law in the Republic of Korea, which seems to be quite supportive to their local governments in making environmental efforts. See, the case of 'Seoul Metropolitan City'.