

Partnership in an Environmental Monitoring Capacity Building Project - A case study in Indonesia

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1. Introduction

The World Summit on Sustainable Development in 2002 underlined the importance of capacity building in the Plan of Implementation and requested urgent actions. It also highlighted international cooperation to assist developing countries, in enhancing their capacity to address issues pertaining to environmental protection particularly in their formulation and implementation of policies for environmental management and protection. Urgent actions at all levels to improve their use of science and technology for environmental monitoring, assessment models, accurate databases and integrated information systems have been emphasized. The authors have participated in the recent developments of Environmental Monitoring System in Indonesia through the Environmental Management Center (EMC) project, which aimed at capacity building on environment management by linking the center of environmental monitoring with policy-decision makers under the support of JICA. The lessons learnt from a decade-long project were the importance of international partnership in capacity building.

2. First Stage (1993-1997)

2.1. Collaboration with other donors for basic capacity building

Basic Capacity building need:

With the rapid economic growth of Indonesia particularly in late 1980s and 1990s under the reign of President Soeharto, environmental pollution was becoming serious in many parts of the country. To cope with the rapidly expanding environmental problem, major international donors including the World Bank, AusAID and JICA provided substantial support to BAPEDAL (Indonesia Environmental Management Agency), which was established in 1990 as the governmental agency to promote environmental conservation. EMC was established as an institute in charge of environmental monitoring on water pollution, air pollution and toxic substances and finally aimed to become the reference laboratory of the national environmental laboratory network. At that time, BAPEDAL's major programmes included the National Environmental Monitoring Program under the support of the World Bank, and regional laboratories project with a loan from OECF (now JBIC) and AusAID for 60 local labs. EMC was expected to become the reference laboratory of the National Environmental Monitoring Network. BAPEDAL allocated about 80 staff to the EMC but most of them were young and very new to the laboratory work. There were a lot of needs for basic capacity building.

Partnership with other donor's team:

When the EMC project was designed, the conceived models were environmental institutes in Japan and their laboratories, which were common in prefectures and large cities, and helped the government develop environmental strategies with scientific data. As the EMC was designed to be a fully equipped laboratory with modern instruments, JICA advisors were nominated mainly from the experienced experts in such institutes. In the beginning, the advisors started with identifying and understanding the gaps in knowledge and experience between themselves and their counterparts, as the state-of-the art technology that they had taken from Japan could not applied directly. In order to fill the gaps, EMC actively invited other donors' supports. Training courses by native English speakers who also speak fluent Indonesian language helped the counterparts improve their skill in writing and reporting in English.

2.2 Challenges for Sustainable laboratory development

The gaps and constraints to overcome:

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When EMC expanded its work in analyzing samples of factories, a lot of claims damaged EMC's reputation as the clients often received abnormal data that were hardly anticipated. Errors in the laboratory were not checked enough before the testing reports were sent back to the clients. In addition to the problems in technological capability, a more serious problem that emerged was the financial constraints. The economic crisis, which hit Southeast Asian countries in 1997, involved Indonesia's economy and the conditions became worse and worse after January 1998. EMC could not stand away from the political and economic crisis and there were a lot of challenges for the sustainable laboratory development at EMC. Challenges for Sustainable laboratory development at EMC included (1) Financial constraints due to political and economic conditions after 1997, (2) Project's Accountability on capacity building, which needed ISO auditing, (3) Technical competence, which lead to the international accreditation on laboratory tests under multi-donor's collaboration with JICA's support, (4) Finding its national niche, which justified EMC to become the reference laboratory in the national environmental laboratory network, and (5)Renewal and up-grading of analytical instruments, which remains as the future challenge. After all, two years' extension of the JICA support was agreed between the governments in order to improve the sustainability of the management system.

3. Second stage (1998-2001)

New challenge for laboratory accreditation

When the second stage started in January 1998 by JICA's extended support for two years, EMC put its highest priority on sustainable capacity development with a focus on laboratory accreditation according to ISO 17025. This decision was a very big challenge not only for EMC staff but also for JICA advisors. Japanese laboratories have given priorities on internal laboratory management but their shifts to the international system of ISO had just been started at that time.

Partnership for international accreditation

Partnership was successfully developed with a Canadian laboratory for international accreditation. A special program of ISO 17025 accreditation for environmental laboratories was applied in EMC with a focus on water analysis parameters, which included pH, COD, BOD, Conductivity, Turbidity, Toxic Heavy metals (Hg, Pb, Cd), and Nitrate. ISO 17025 prescribes detailed technical requirements on the competence of testing services implemented by the testing laboratory. EMC successfully completed the laboratory accreditation of ISO 17025 in 2001.

4. Third stage (2002-)

EMC entered the third stage of its development in 2002 when JICA started the project for strengthening the decentralized environmental management system in Indonesia. The project also aims at strengthening EMC's implementation capacity for environmental management using environmental monitoring and surveillance data and its function to support local laboratories.

5. Conclusions

The successful achievements of the JICA EMC project are summarized as follows:

- (1) EMC's position's being directly linked with policy-decision makers,
- (2) Accountability on capacity development as demonstrated by its ISO 17025 accreditation,
- (3) Development of effective partnership with other donors, and
- (4) Promotion of technical transfer by laboratory experts with local language capability.

Key issues for sustainable capacity building in laboratories of developing countries are summarized as follows.

1. Step-wise supports are essential for development according to social and economic conditions,
2. Capacity building should retain middle and long-term perspective,
3. Ownership, partnership and international collaboration should be encouraged,
4. Capacity building of international quality should be explored,
5. Prioritized status of the laboratory and its close link with policy-decision makers will help develop sound environmental management.

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