



Conclusions - Vietnam

In the period from 1993-2006 a number of large cooperative projects were carried out, in Vietnam with Dutch expertise and financial support of the Netherlands Ministries of I&E and Foreign Affairs through its Embassy in Hanoi. This contributed significantly to the development and application of ICZM practice in Vietnam on both the national and regional/local levels. The main developments relate to the following topics:

- From vulnerability assessment to ICZM, introduction and development of ICZM;
- Practical ICZM applications at a regional level;
- Capacity building, awareness raising and education.

From vulnerability assessment to ICZM: introduction and development of ICZM

The Vietnamese contribution to the World Coast Conference – 1993, marked the beginning of a long lasting cooperation between Vietnam and the Netherlands. This was followed by the execution of the Vietnam Vulnerability Assessment (VVA) from 1994-1996. The VVA was undertaken according to the UN-IPCC Common Methodology. The VVA concluded that Vietnam is very vulnerable to a wide range of impacts and in a way is comparable to the small island states of the world. The Vietnam-Netherlands ICZM project (VNICZM - 2000-2006) supported by the Coastal Cooperative Program (CCP - 2001-2006) marked the next steps in coastal cooperation, with the VNICZM covering the national and provincial planning level and the CCP aiming at developments and projects at the provincial and local level. In the TTHue province several ICZM tools were introduced, monitoring programmes executed, awareness raised and capacity built.

The achievements of VNICZM include: a national and three provincial CZM Strategies and Action Plans (SAP); the establishment of a CZM Centre for Vietnam; improved accessibility of databases and GIS; capacity building and awareness raising. These national activities were simultaneously executed with the ICZM programmes in three Vietnamese provinces: Nam Dinh (Red River Delta), Thua Thien Hue (central) and Ba Ria Vung Tau (North part Mekong Delta). Pilot projects in these provinces included: coastal dynamics; ecotourism potential; lagoon management; commune level evaluation; subsistence fisheries; and oil spill contingency planning.

The CCP was involved with deepening of a number of ICZM tasks, focusing on Thua Thien Hue province and included a variety of tangible projects at the provincial and local level. The CCP – TTHue projects contained morphological, biological and chemical monitoring of the dynamic coastal system, RS&GIS hands-on training, awareness raising through an educational programme and lagoon ecosystem modelling. In addition, attention was paid to strengthening the relationship between the two national governments, and the local governments.

The cooperation program was involved with the whole range from ICZM planning to the first phase of implementation, establishing an integrated management framework and identifying adaptive coastal measures.

2) Practical ICZM applications on regional level

Remote sensing application in Thua Thien Hue province

Remote sensing (RS) techniques can provide valuable support to coastal planning by establishing ICZM databases (using Geographic Information Systems - GIS), the creation of maps of various types drafting zoning plans and for environmental and coastal monitoring. Thua Thien Hue province had limited RS knowledge and no practical experience with RS. The challenge was to provide the relevant TTHue provincial institutions with practical RS & GIS knowledge in possession of the national RS institutes of Vietnam and the Netherlands. Two intensive, hand-on training courses were prepared and organised in Hue and delivered a wealth of results dealing with various digital maps of the province, mapping of flooding, changes in land use, soil erosion, aquaculture and shoreline developments. All this information culminated in an integrated ecosystem lagoon model estimating the carrying capacity in relation the resource uses of the lagoon.

The RS results illustrate the potential for RS in combination with ground analysis, to be a very powerful and useful tool. However, the use of RS also requires adequate resources to be provided by the appropriate authority to ensure continuity in the application of RS.

Ecosystem approach to Tam Giang-Cau Hai Lagoon

An ecosystem approach was applied to Tam Giang-Cau Hai Lagoon in Thua Thien Hue province focusing on the assessment of the carrying capacity. It was based on a comprehensive description of the system combining the physical, biological, social and economic information into a framework for decision making. The framework was applied at various levels, addressing and facilitating communication between stakeholders, planners, managers and decision makers. The carrying capacity depends on the pressures inflicted by the various users (farmers, fishermen) and on the natural dynamics. Extensive consultation took place with local people in the fishery village Thuan An on the border of the lagoon. Tools were developed and applied to support a comprehensive model of the lagoon area (water balance model and 2D model of the lagoonal water quality). These valuable results were presented to and appreciated by the provincial authorities.

3) Capacity building, awareness raising and education

Capacity building, awareness raising and education are a necessity to ensure continuity in ICZM development and implementation. In the Vietnam – Netherlands coastal cooperation these elements were explicitly included on different levels and in different forms. A broad and multilevel training programme was included as an integral part throughout the programme. In addition, a number of specific activities were undertaken aimed at capacity building in hydraulics and coastal engineering and the education of children at primary school.

Awareness raising through practical education of children

With an eye to the future, children are important for raising awareness. They are also enthusiastic communicators, promoters and ambassadors. The most effective way of awareness raising in children is to train primary school teachers. This was the subject of an educational program in primary schools in Thua Thien Hue province as part of the Coastal Cooperative Programme (CCP), involving all the relevant educational institutions and four schools in TTHue Province. The program took place through direct involvement of teachers and children, their parents and included a drawing competition, the creation of an introductory booklet for teachers, the creation of two sets of comprehensive teaching material for training the teachers. This training manual is available through the CCC website.

Capacity building in hydraulics and coastal engineering

One of the requirements identified was the need for an adequate Faculty of Marine and Coastal Engineering in order to solve the problem of lack of staff with adequate knowledge of coastal issues. Cooperation between the Water Resources University (WRU) of Hanoi, the Technical University of Delft, Unesco-IHE and WL-Delft Hydraulics/Deltares enabled the establishment of a coastal engineering faculty at WRU. Following an inventory of specific demands, the focus of the new faculty was on sea dikes (flooding, typhoons) and estuaries (sediment dynamics) together with a number of other aspects like ICZM.

The training component within the ICZM cooperation program

The training activities within VNICZM involved over 500 people, aiming at both capacity building and awareness raising. The training program was set up as part of a continual process, with specific attention paid to 'training the trainers'. Training needs of various types were identified at all governmental levels focusing on civil servants. Types of training included training courses, career planning, on-the job training, feedback and practical experience, and role-playing. One example of a practical role-play exercise for decision making in coastal resource allocation, was based on a hypothetical situation of a tropical island ('Pesisir Tropicana'). The success of 'training the trainers' is demonstrated by the fact that the new trainers are now teaching the next generation ICZM managers of Vietnam.