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Stakeholder Consultation and Governability Analysis

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Work Package 6 Deliverable D6.4

Testing of CTAM as a Decision-Support Tool: Stakeholder Consultation and Governability Analysis

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Summary

This report presents the results of the three exercises conducted to test the utility of CTAM (Coastal Transects Analysis Model) software, particularly Phase II, as a tool to help facilitate discussion about multiple demands in coastal areas and to explore management policies. The first exercise was a stakeholder consultation aiming at introducing CTAM and validating and adding information for the 'Ban Don Bay' model, an estuary system on the lower Gulf of Thailand. The second exercise was a small-group and individual discussion with stakeholders to validate the 'Chao Phraya Delta' model, a delta system at the Inner Gulf of Thailand. The third exercise was specially conducted in conjunction with WP8 to link CTAM with EwE (Ecopath with Ecosim) in the exploration of policy options for the Gulf of Thailand Large Marine Ecosystem. The new algorithm, the 'governability index', is also described in this report. This addition aims to provide a simple analysis on how governable a coastal area is, given the characteristics captured in CTAM.

Stakeholder consultations

Stakeholder participation is considered one of the key factors facilitating the implementation of resource management policies. CTAM is developed as a decision-support tool to help meaningfully engage stakeholders in such discussion. The interactive features of CTAM are specially designed to enable a wide range of stakeholders to provide inputs and to contribute their opinion. The analysis of interactions and flows in coastal areas performed in CTAM Phase II aims to highlight the importance of the connectivity between human activities, particularly fishing, and the health and productivity of the fisheries ecosystem. It also helps generate discussion about the type of management measures and policy options that should be in effect to manage coastal areas.

Three stakeholder consultation exercises were conducted to explore the utility of CTAM as a decision-support tool. Given that CTAM can be used by individuals or by groups of stakeholders, two exercises took place in a group setting while one was done with individuals or in small-groups. Using CTAM as part of a group consultation is advantageous since it encourages stakeholders to exchange information, and share knowledge, discuss issues and negotiate positions. The basic data requirement in CTAM provides an entry point where common grounds can be easily found before other issues, including those not directly analyzed in the model, are raised.

All three stakeholder consultations were conducted in Thailand. The first one was conducted in Krabi Province, southern Thailand in August 2007, at the EU-funded CHARM Project Final Workshop. Twenty people from Ban Don Bay area participated at the consultation, including fishers, fish processors, the village head, housewives, teachers, university lecturers, government scientists and members of environmental organizations. A brief overview of the CTAM was presented by CDC at the beginning of the consultation. This is followed by the presentation of the preliminary Ban Don Bay model developed based on existing literature and field observation. Participants were asked whether they were in agreement with the data input at each step of CTAM and to make whatever changes necessary. When their opinion differed, the participations were encouraged to discuss their points of views and to eventually arrive at a conclusion of what data to use in the model.

In addition to validating the data, stakeholders were asked to express their opinion about CTAM as a tool. Some features of CTAM were highly favoured by the stakeholders. These include the use of images, and the emphasis on the connectivity between land and sea and natural and human systems. The stakeholders commented on the utility of CTAM to encourage dialogue between community members and government, and also as a tool to help highlight community needs. They also provided comments for future development of

CTAM, including the ability to update the models in order to monitor changes and the possibility of linking with other datasets such as water quality and other GIS-based data.

The second consultation was conducted at four villages in Samutprakarn Province where Chao Phraya Delta is situated. The Chao Phraya Delta model was built as four sub-models for the villages and the discussion with the key informants at each site focused on the validation of the model, as well as the comparison of the key features of each sub-area. The main model was also shown to the key informants for feedback. On a whole, the key informants liked the idea of having the sub-models for comparison.

Collaboration with WP8

The third consultation was a special workshop organized to explore the synergy between CTAM and EwE, especially in the use of CTAM to guide discussion about various policy options. This was also an exercise of collaboration between WP6 and WP8. The workshop was held in January 2008 in Bangkok. Twenty-five people participated in the workshop, representing government officials, university researchers, small-scale fishers, industrial fishers and members of environmental organizations.

The participants were first introduced to CTAM software and the Ban Don Bay model, which was used as the proxy for the Gulf of Thailand. After validating the model, the participants discussed some of the issues related to fisheries. They were specifically asked to suggest some possible options for management. Small-scale fishers wanted policies to be oriented towards conservation of fisheries resources, as well as some support from the government to set up credit and low interest loan system. Industrial fishers also asked for subsidies from the government to reduce the fishing cost. While they generally supported the designation of protected area, they wanted the closed season to be shortened in duration. The government officials focused their discussion on regulations and prohibition of highly damaging gears such as trawlers and push-netters. They were also supportive of the use of artificial reefs to provide protection to fish species and of coastal aquaculture. University researchers and environmental groups were similar in their opinion about the support that the government should provide to small-scale fishers and also to promote conservation.

Next, two suggested changes were applied in CTAM and also in the EwE model for the Gulf of Thailand, which was developed by WP8. These were reduction of trawlers and push-netters, and designation of a marine protected area. With CTAM, the analysis showed a slight increase in the fish biomass and an increase in income to coastal communities, if the number of small-scale fishing boats increased as a consequence of the reduction in large-scale fishing boats. The protected area scenario was captured by increasing the size of seagrass areas, which did not result in any major change. More detailed results, especially in the change in biomass of the key commercial groups, were obtained through the policy exploration routine in EwE. Participants discussed whether the change was acceptable and made further adjustment.

This exercise showed that CTAM could be used to explore some of the policy options, providing basic information that can be useful for further discussion and when used in conjunction with an ecosystem-based tool such as EwE.

Governability Index

The assessment of governability is conducted as a value-added product of CTAM. This is in addition to the use of CTAM to visualize coasts and to enable learning about the interactions and connectivity between natural and social systems. Governability, or the overall capacity to govern, is based largely on the characteristics of the natural and social systems. For example, a coastal area that is highly diverse, complex and dynamic is likely to be more

difficult to govern than an area that is less complex. The governability index is used to indicate the level of difficulty in the governance and thus suggests what management measures and policies could be formulated.

The governability index is calculated using the same algorithm in the analysis of the contribution of habitats to fisheries productivity and the negative impacts by fishing and other coastal activities. In the case of habitats, normally having high level of habitats could result in making the system complex and thus less governable. For the purpose of this exercise, habitats are considered as contribution to the fisheries productivity by providing resiliency to the system. In other words, having high degree of habitats will contribute positively the governance of the fisheries.

The following table shows how the governability index is determined.

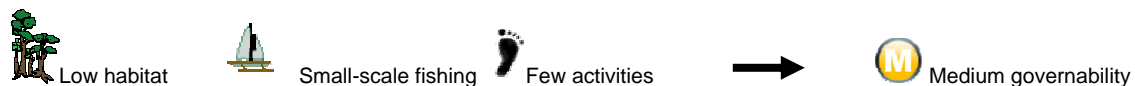
Type	Habitat	Fishing	Activity	Governability Index
1	H	B	H	L
2	H	B	L	M
3	H	S	H	M
4	H	S	L	H
5	H	N	H	H
6	H	N	L	H
7	L	B	H	L
8	L	B	L	L
9	L	S	H	L
10	L	S	L	M
11	L	N	H	M
12	L	N	L	H

H = High; M = Medium; L = Low
 B = Both small-scale and large-scale fishing operate in the area
 S = Only small-scale fishing operates in the area
 N = No fishing

The governability index is shown using symbols to represent each consideration. These symbols are placed below the final picture in CTAM (after the last page is completed). For example, coastal type 1 will be represented as:



For coastal type 10, the governability index will be represented by:



This concept of governability and governability index will be further developed and validated before incorporating into CTAM in May.