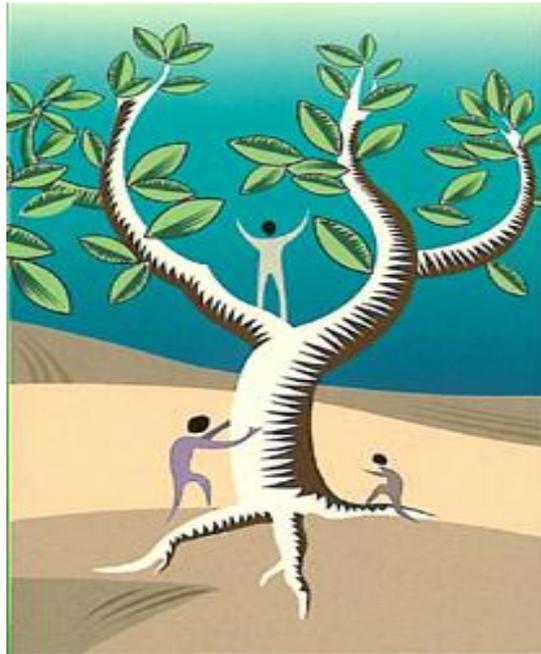


Training Need Assessment & Capacity Building Plan



ICZM Project, Orissa State

May, 2009

by



**Xavier Institute of Management
Bhubaneswar**



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Executive Summary

The assignment was undertaken with the objectives of identifying the training needs of the major stakeholders/implementing agencies of the ICZM Orissa project and to develop appropriate training modules for every stakeholder. It is expected that by training stakeholders in required skills, project implementation would be efficient and effective.

The major stakeholders of the training need assessment and training modules were Department of Water Resource, Orissa State Disaster Mitigation Authority, Wildlife Wing of Department of Forest & Environment, Tourism Department, Fisheries Department, Chilika Development Authority, Industry Department, Paradeep Municipality of Urban Development Department, Culture Department and Orissa State Pollution Control Board.

To identify the training need (gap between expected and available competency), a three pronged approach was followed. The competency gaps of each stakeholder in the context of their role in the project were analyzed from three different perspectives, namely training experts', self, and nodal agency's. To collect the information from all the stakeholders training need analysis workshop was conducted when every stakeholder had its separate session. The purpose of the workshop was made clear to every participant well in advance and the required information was collected through facilitated discussions. The information so collected was further corroborated by the individual discussions with the representatives of each agency and also during the sessions when the representatives of all implementing agency were present. Collected information was analyzed by the training experts and was shared with the nodal agency and representatives of each department and the major areas of training were identified.

To develop the training module the components like, broad area, content, level of officers, format, frequency of training, and institution/ location were considered. Separate training modules were developed for each stakeholder and then general training modules were developed where two or more stakeholders are expected to participate in common. The module also made clear whether training programme should be conducted in training format, workshop format or through exposure visits format.



It was found that the stakeholders perceived the project and its implementation procedures as demanding and were of the opinion that the project needs professional and efficient approach to meet the objectives. The training need varied from technical training for the development related department related (like Water Resource, OSDMA), awareness/sensitization training for the policy makers, community empowerment skills, to modern management techniques for the members of project monitoring unit. There was overlapping of the areas of training among different stakeholders particularly which have common interface.

The technical skills training were found to be quite pertinent for the department of water resource, and disaster mitigation for their scientific activities in the project. Community empowerment skills were identified to be important for the tourism department, wildlife wing, and fishery, also in some amount for the pollution control boards. The sensitization training program was much preferred by the personnel of the tourism department. The management and documentation skills were major area of training need for monitoring units of all the agencies involved in ICZM Project.

The study suggests training modules for each participating department/ agency and also the modules for workshop and thematic lectures which are intended for the capacity building of the different stakeholders of the participants. The report also suggest possible facilitating institutions and tentative budget each activity. Some suggestions (in the form of follow up) to make the training more effective for the entire project have also mentioned in the study report.



1. Introduction

1.1 Background:

Developing capacity in coastal and marine issues is an important activity, given the present growing and projected pressures on the coastal and marine resources. The State of Orissa located on the east coast of India, by the Bay of Bengal, has a coastline of about 480km, bestowed with diverse marine wealth and a substantial amount of its population depending on coastal resources for their livelihoods. Witnessing the existing resources, the Integrated Coastal Zone Management (ICZM), by an integrated approach is aimed at coordinating activities of various stakeholders for the sustainable usages of the coastal natural resources with maintenance of the natural environment. Thus, there is an important need of increasing not only the number of competent and well trained coastal management practitioners with respect to the various aspects of ICZM project, but also facilitate the creation of enabling environments for the same. There is an important need of building skills of the individuals/ officials of various implementing departments to knowledgeably and competently achieve the development and management of coastal resources in a sustainable and consultative manner. This report aims in this direction in identifying the skills to be imparted/ enhanced for the activities of the project.

1.2 The Training Need Analysis

Training, in general, indicates totality of instructions with planned circumstances and directed activities to which all stakeholder of ICZMP is subjected to induce learning and subsequently applying it during the implementation of project. In the case of ICZMP, it is expected that training can contribute by (1) preparing concerned professionals for higher responsibilities, (2) adding into self awareness, achievement motivation, interpersonal skills and other related behavioral attributes, (3) developing job related abilities, (4) enabling individual to cope with technological and organizational changes, (5) helping in bring professionalism in the implementation of the project.



It was encouraging to note that CDA and SPPC has taken a proactive role on identifying the training needs of various professionals representing various participating departments so that project can provide required trainings before or during the project implementation. Proactive training recognizes the heterogeneity of key training target groups and the variety of functions and tasks that need to be performed in the implementation of this multi-stakeholders project. The range of knowledge and skills required differ from department to department and also within the department among various officers depending upon their exact roles in the project.

1.3 Objectives:

Training to be relevant should include content that appeal to most of the participants, methods to match participants' background and output which help participants and ICZMP to attain the objectives of the project. Thus, training need analysis is collection/ gathering and analysis of information on existing behavior and capabilities of participants and to identify the required behavioral attributes which need to be corrected, improved, or instilled in participants so that they perform to the best of their capability and complement others in achieving the overall objective of ICZMP. An effective need analysis armours trainers to hit the target exactly. The need analysis shall not only ensure that the training addresses the 'gap' in expected and existing capabilities but shall also ensure effective planning of resources. Keeping the above in mind a study was undertaken with the objective of:

1. Identify the training needs in context of the role of each stakeholder (state departments) in the ICZM project.
2. Develop the training module and capacity building plan for the ICZM Project.

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2. Methodology

First of all, to understand and appreciate the required behavioral attributes which would facilitate the successful initiation, implementation, and follow up of the project the project document (State Project Report, 2008) was studied. This was followed by the discussions with the team members from CDA who are involved in the project. Discussions helped us in understanding boundary, objectives, operational mechanism, different stakeholders and their respective roles, types of workforce to be employed, their positions and respective roles in project implementation. It is important to note that every participating department has already appointed a nodal officer and has submitted their respective proposals to the CDA about their respective roles in the project.

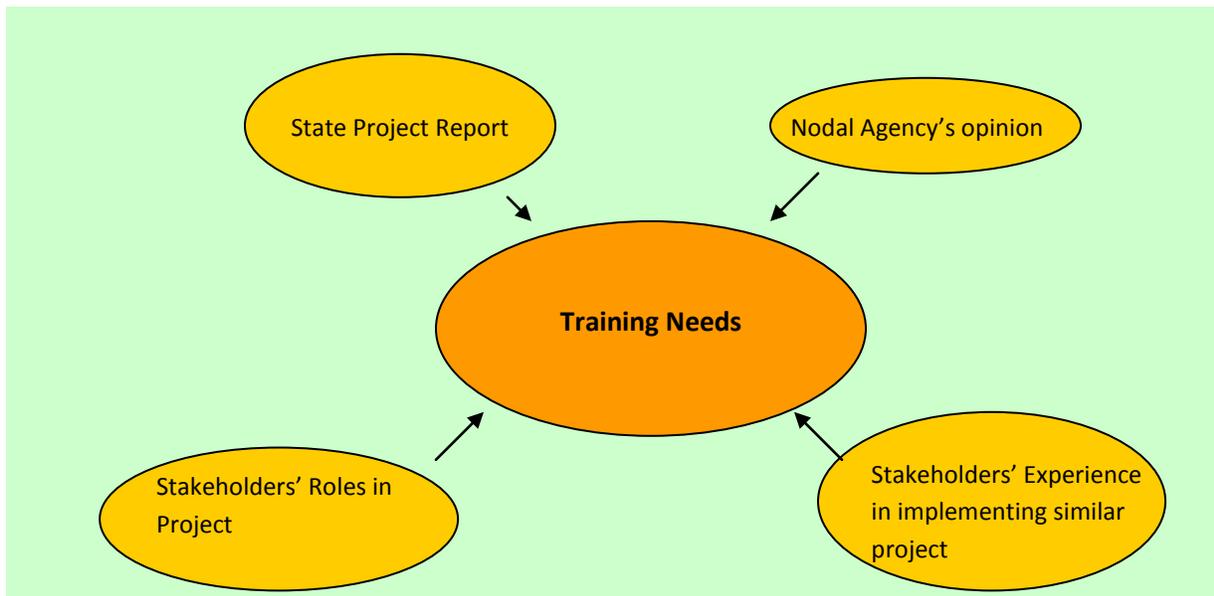


Figure 1: Factors Considered while conceptualizing Training Needs of Project stakeholders



2.1 Major Stakeholders:

For the successful implementation of ICZM-Orissa project, it is important that all the stakeholders have not only clear understanding about the project objectives, implementation procedure, their respective roles, but also should have required knowledge and skills to play their role efficiently. The major stakeholders/ implementing agencies identified whose roles were supposed to be direct and crucial for the success of the project are as follows:

2.1.1. The State Pollution Control Board: The OSPCB holds its stake in the development activities in the context of monitoring the pollution in and around the coastal region. Its role would be vital both in the initial phase as well as in implementing the activities.

2.1.2 Department of Water Resources: In the context of the concerned issues of the coastline protection and development of the ICZM Project, the Department of Water Resources and its personnel (engineers and technicians) are considered as one of the major stakeholders. It is the nodal department for executing the activities of the project in construction of sea wall for the shoreline protection.

2.1.3. Department of Environment and Forest (Wildlife Wing): Today, the very resources that have provided towards the foundation for economic development in the coastal region are in jeopardy. Considering this aspect the role of the Wildlife Wing of the Department of Environment and Forest become very important in the project activity. The forest officers ranging from the top hierarchy to the guards and local communities are important stakeholders for the proposed activity in the conservation of bio-diversity.

2.1.4. Department of Fisheries: Owing to the rich marine resources present and the opportunity of providing livelihood options the role of the Fishery Department becomes very important. The different hierarchy personnel of the department have a major stake in implementing the developmental activities of the project.

2.1.5 Department of Culture: Looking at the great cultural heritage inherent in the coastal stretch, the personnel of the Culture Department are important stakeholders in the project. Their role is vital both during the project and also after the work for the maintenance activities.



2.1.6 Department of Tourism: The panoramic view of the coast attracts tourist all over. For enhancement of the tourism activity and its sustenance, the Tourism Department has major stake for the activities included in the project. This department also has a task of involving and developing the community of the concerned region.

2.1.7 Orissa State Disaster Mitigation Authority under the Revenue Department: Considering the natural forces threatening habitat in the coastal region, the personnel of the OSDMA are important stakeholders of the project. Their activity would involve the NGOs and the community and thereby becomes vital both during initial phase as well as in implementation of the proposed measures against the vulnerability to disasters.

2.1.8 Department of Industries: Looking at the livelihood options available in the various activities of the project, the department of industries has been considered as one of the important stakeholders in the project activity. Their role is vital in developing the community by the earning options by business from the tourists.

2.1.9 Department of Housing and Urban Development: Looking at the requirement of the waste management and its optimum utilization, the stake of the municipality department becomes pertinent in the project.

2.1.10 Chilika Development Authority: The CDA at present being the major coordinator of the ICZM project is the major stakeholder of the project. Their role is vital in the context of both implementing the activities and also developing the species research of the projected area.

2.2 TNA Approach:

A three pronged approach was adopted to study the training needs of different stakeholders.

- Self Analysis of stakeholder's :- own capabilities in context of job requirement under the project
- Analysis by nodal agency (CDA):-about the stakeholder's capability to implement the responsibilities and coordinate with other stakeholders.
- Analysis of overall requirement of KAS (knowledge, attitude, and skills):- the expected roles and responsibilities of the stakeholder in the project, and the skills available with given stakeholder. This was done by the training experts at XIMB

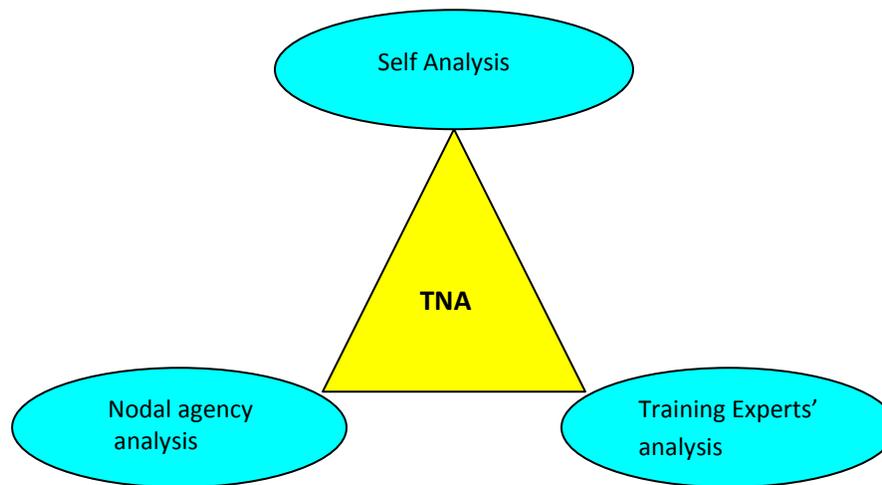


Fig 2: Three pronged approach of Training Need Analysis

Three pronged approach not only provided the information about the ‘training needs’ but also helped in intensity of each need. It also provided an idea whether the need is felt or unfelt by the given stakeholder; the ‘need’ of a stakeholder is affecting the works of personnel of the same department or it is affecting the work of some other stakeholders; whether the need has direct effect on the execution of a task or it affects the working environment of the project.

As all the stakeholders’ departments had already submitted their proposals and discussed the same with other stakeholders on many occasions, it was realized that workshop approach would be appropriate for the data collection. In consultation with the nodal agency every stakeholder were informed about the two days training need analysis workshop. To understand the each stakeholder’s role and understanding about their respective roles and capabilities, (in context of TNA) each stakeholder was asked to prepare the presentation under following headings:

- Overall objective of the project (as seen by the department)
- Role of the department in the project
- How the department proposes to play the role (proposed activities)
- Capabilities (expertise) available with the department
- Capabilities department wants to add on for effective implementation of the project
- How the department intends to seek cooperation from other departments (name the department and support to be sought)



The Chief Executive, CDA explained the objectives of ICZM Project and specific expected roles and responsibilities of each stakeholder.

Accordingly, the workshop was held on 2nd and 3rd March, 09 at Xavier Institute of Management where representatives of all the stakeholders were present. During the inauguration of workshop, the Project Director emphasized the role of each stakeholder and suggested that networking and team-building would be the basic tenets for the success of such project. Dr. S. Panda, IFS, CEO, Chilika Development Authority, a nodal agency for project formulation requested participants to evaluate their capabilities in context of their commitments and expected roles in the project and then suggest areas of improvement. He also informed that project has enough resources to provide all types of training to the concerned officers on diverse areas of subject which supplement project objectives.

After the presentation of CDA, every department was asked to make the presentation incorporating suggested headings. Presentations were discussed among the participants. Workshop discussions were properly documented and later on discussed with the representatives of CDA. Based on the presentations by various stakeholders, discussions after every presentation, inputs from the CDA representatives and expectations from the project broader areas of training and expected contents were identified. Further, suggestions like, level of officers to be trained, duration of the training programme, possible institutions for the training were considered to suggest a comprehensive and workable training module. The training needs and the draft plan were circulated twice amongst the participating Departments/ Agencies for further suggestions and additions. All the suggestions received from them have been incorporated in the present document.

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3. Findings

A synthesis of information acquired on the existing capacity and project requirements through the literature review, workshop presentation and subsequent discussions with the team members give a picture of the training needs for the personnel of different implementing agencies of the project. The findings have been summarized for each of them in the subsequent literature. Apart from the specific training needs, every department/stakeholder is required to be well groomed for the general information on the project policies, procurement of the necessities and report preparation, etc.

3.1 Water Resource Department:

3.1.1 Agency's expected role in the project: The increasing threat of erosion effect in the coastal region with saltwater intrusion has been a major area of concern. In order to protect the coasts from the erosion effect, the water resource department has proposed for the construction of seawalls using modern and effective technology. The department is expected to mainly contribute by finding and implementing the new technology to reduce coastal erosion in the identified coastal stretches. The specific tasks which the department will like to undertake under the project are:

- Preparation of suitable technical design in the context of protection measures of the coastline from erosion.
- Timely and efficient execution of the proposed activity at the identified site.
- Periodical monitoring and evaluating the effectiveness of the work done.

3.1.2 Capacity and competence status: The department has manpower possessing the skills to tackle with the problem of coastal erosion and they have experience of working on similar assignments. However, it was agreed that the project team needs to be trained in advanced scientific methods of shoreline protection. The technology which they have been using for the



shoreline protection is although effective but not considered par with recent innovations in technologies on the subject.

Engineers were also found lacking not aware of modern scientific developments in the subjects broadly studied as ‘oceanography’, cyclone forecasting, costal stabilization, beach nourishment, sediment transportation, and flood mapping.

They also expressed lack of adequate knowledge on watershed management approach to control coastal erosion.

Further, it was also found that the project must give emphasis on maintenance and sustenance of physical structures and the efforts they undertake to work on coast-line conservation and maintenance. So training in quality assurance and monitoring both during the execution of the works and after the works have been completed.

3.1.3 Training suggested: Analyzing the existing capacity of the department and comparing them with those required for achieving the proposed objectives, following are being suggested in which department would like to upgrade its capability:

- Awareness on coastal erosion and measures of control
- Technical skills related to sea coast-line management, and beach management and nourishment.
- Technical skills related to sediment management, and plantation in the coastal area.
- Management skills in people’s participation, quality management, and monitoring & evaluation.
- Skills in watershed management in coastal areas.

3.2 Orissa State Disaster Mitigation Authority(OSDMA):

3.2.1 Agency’s expected role in the project: The natural forces of cyclone and other disasters have been quite pertinent and the ICZM project cannot afford to ignore the protection measures



for the coastal region in this context. Thereby the disaster mitigation authority has been selected to cater to the protection measures against natural disasters like, cyclone and flood in the concerned area. Subsequently, the department proposes to construct the cyclone shelters in the region. Their responsibility covers the following heads:

- Evaluating the technicalities of the land and designing the construction models suiting the sustainability in the concerned region.
- Efficient execution of the activity and its periodical quality assurance
- Efficient conveyance of the use of the cyclone shelter to face disasters and for relief works.
- Awareness and formation of committees for maintenance and other beneficial utilization the buildings by the coastal people.

3.2.2 Capacity and competence status: The disaster mitigation authority coordinates the pre and post disaster preparedness programmes through the involvement of the district officials, NGOs, and other agencies and providing training on disaster mitigation. It has proven its expertise constructing cyclone shelters in the state. However, it was felt that the department lacked skills in designing earthquake resistant structures. As the department outsource the construction works of disaster resistance structures to private construction companies, it was considered prudent that along with the engineers of the department, engineers of few reputed construction companies (services of which are being sought) need to be trained in designing and constructing disaster resistance structures.

Although, not directly related to the project objective, it was considered useful that department officials should be trained in developing bid-document, and bidding procedures (pre and post).

Department works in tandem with local community and it was found necessary for the project that community needs to be trained in early risk forecasting and disaster preparedness. The former was considered very important for those fishermen who venture in deep sea for fishing.

The department encourages multiple usages of the cyclone shelters during the normal period, hence the project should also train the personnel of this department so that they can device community oriented mechanism of various possible usage of this building which would not only



be properly managed but also become a community centre where they meet frequently. Secondly, these centres can also be used to raise awareness about the various aspects of the project.

Seeking community participation and making it work is an art and requires specific skills and attempts by any agency. As the department plans to pass on the maintenance and usage of different disaster shelters to the community, it is imperative for the department to know and master the skills of community mobilisation, organization, and facilitate the smooth transfer of responsibilities.

3.2.3 Training suggested: The major areas for training suggested are as follows:

- Technical skills in designing and constructing disaster resistant structure for the engineers of the department and also for the engineers of partner construction companies.
- Detailed knowledge about bidding procedure for the officers of the department.
- Technical and management skills in early risk forecasting and disaster preparedness for the community and also the project team of the department.
- Community mobilisation, organization, and institution building process for the officers of the department.
- Institution building and management skills for the community members.

3.3 Wildlife Wing of Forest Department:

3.3.1 Agency's expected role in the project: The project sites of ICZM project are crucial for the survival of many important wild flora and fauna species. It is particularly very important for the sea turtles and crocodiles. Besides conservation oriented responsibilities, wildlife department has to play the crucial roles in the livelihood security and better livelihood opportunities for the



people living in and around the project areas (by facilitating eco-tourism), and in prevention of coastal erosion. Specific responsibilities of the department are as follows:

- Enhancement of afforestation by mangrove plantation and simultaneously preserving the coastal banks from the tidal influences.
- Protection of the breeding ground of the rare species.
- Developing ecotourism in collaboration with tourism department
- Generation of the resources in the region to provide livelihood security.

3.3.2 Capacity and competence status: The wildlife and forest departments are involved in biodiversity conservation and coastal afforestation. It not only creates awareness about the mangrove plantation but also encourages coastal communities to do the mangrove plantation and conserve biodiversity. However, it was realized that the department lacks specific skills required for the nursery raising and plantation appropriate for the mangroves.

A highly specialized training in management of turtle habitat, and satellite based tracking of turtles' migratory routes was found the need of the time. Training on similar subject keeping crocodiles in consideration was also found equally important. Identifying possible means and ways of minimizing the man-animal conflict in the project area was another area where department was found lacking.

Although Orissa forest department has been one of the pioneer states in accepting and promoting people's participation in forest management, wildlife wing has not been able to do it so effectively because of various reasons. It was found appropriate those concerned foresters are trained in community based bio-diversity conservation. For the community too, training in community based conservation was considered important.

Promoting eco-tourism is one of the important components of the project, training guides in issues related to wildlife and biodiversity has also to be undertaken. Besides, there are some common topics on which project team of this department will undergo joint training with the personnel of tourism department.



3.3.3 Training suggested: Keeping in view the issues of conservation of biodiversity and the activity of the department in promoting eco-tourism, following training needs have been identified for the department personnel.

- Awareness on bio-diversity conservation, planning, operation and management of the interpretation centre.
- Technical and management skills in beach management particularly in context of habitat management of sea turtles and crocodiles to the officers of forest department.
- Nursery raising and plantation techniques in mangrove forest areas for foresters of wildlife division
- Technical skills in satellite tracking of migratory routes of sea turtles and crocodiles, analysis of collected data for the better management of habitat of the animals.
- Training in ways and means of minimizing man- animal conflict in project area. The subject is important for both foresters and also for the community.
- Community based biodiversity management; both for community and foresters
- Training in operation issues in ecotourism; both for the department and community
- Training of local community members to work as the guide of the tourists.

3.4 Tourism Department:

3.4.1 Agency's expected role in the project: ICZM project stretch includes some of the famous tourists' favorites. The tourism department has decided to promote eco-tourism in Chilika and Tampara (two tourists' spots) by providing innovative ways of recreation to the tourists and other facilities. Such venture of tourism department will also provide varied additional livelihood options to the locals. The department has set following objectives for itself under the ICZM project:



- Development of eco-camps, food joints, handicraft and souvenir centres, amusement parks, water sports, accommodation facility, etc and other methods of recreation.
- Involving the local community for livelihood earning in various avenues.
- Promote infrastructure developmental work in the region.

3.4.2 Capacity and competence status: Department of tourism is spearheading the development of tourism in the State and creating awareness about eco-tourism. Even though keen to promote eco-friendly infrastructures and eco-tourism, the department lacked adequate knowledge on eco-friendly methods for the same. Further, the department has considerable experience in the sector but they lacked the professional skills to promote the tourism. Although, known to the officials, ecotourism remains an unexplored and virgin field for the officials of the department. It was noted that officers were not very clear about involving different stakeholders (like, community, forest department) in the planning and executing ecotourism.

Tourism department was also not knowledgeable about various materials to be used in infrastructure development and serving tourists. Secondly, disposal of waste was one issue for which their desire to undergo a training cum exposure visit appeared valid. However, it is important to mention that training on similar issues is also required for community and other stakeholders.

If the tourism department is planning to play lead role in promoting ecotourism under the project it also needs to be trained in networking and negotiation skills so that no stakeholder (including tourists) would ever feel that one is being exploited. Further team members will require basic management skills including marketing skills (of the concept of ecotourism and also of the village and other rural products like, handicrafts, souvenir selling) . Livelihood based enterprise is not a concept on which tourism industry has been focussing in Orissa, however project gives considerable emphasis on widening sustainable livelihood opportunities. All stakeholders, particularly tourism department, need special training in this approach.



3.4.3 Training suggested: Considering the tourism potential at the proposed project areas and assessing the department's capacity, following needs emerge to be addressed through training training module have been designed.

- Sensitization training program on ecotourism, and livelihood oriented enterprise for all levels of officers of the tourism department.
- Training workshop for all the major potential players dealing with eco camps, food joints, handicrafts centres, jetties and country boats, amusement parks, water sports complex, eco parks, floating cottages, restaurants etc. on the issues like use of nature and people friendly materials and approaches in developing the infrastructure and in running the business.
- Management skills of networking, team-building, and stakeholders based business.
- Knowledge and understanding of livelihood oriented enterprise.
- Management skills of marketing particularly of green marketing.
- Waste management in the context of cleanliness of tourist areas.

3.5 Fisheries Department:

3.5.1 Agency's expected role in the project: The coastal region is bestowed with rich marine wealth and a majority of the population depends on the resources for livelihood. The fishery department has proposed to cater for the livelihood provision to the communities of the selected coastal stretches and for achieving the same their responsibilities in the project would be the following:

- Initiating the development of SHGs.
- Developing alternate livelihood options through crab fattening, pisciculture, etc



3.5.2 Capacity and competence status: It was found that fisheries department has both skills and capability of encouraging and supporting potential farmers to take up the pisciculture as the alternative source of livelihood. However, the organization was not very clear about its role and how it can network or collaborate with other departments which have some interest in fisheries, like, Chilika Development Authority in context of the project.

It was also found that scientists were not very clear about the scientific methods of calculating and forecasting the fish production, determining about optimum level of fish caught during a given period in a given area. Also some new innovations of increasing fish production both in marine and fresh water. Value addition at producer level was another key suggestion which came during the workshop, and it was realized that the department did not have much scientific research based knowledge and enough experience in various value addition possibilities. Crab fattening and promoting culture of short duration and high yielding fish species were some suggestions on which department agreed to work on but wanted some specific trainings.

It was found that fishermen are still using traditional methods of fishing or sometimes such gears which are adversely affecting the population of fish and other species. There was also a concern that increased pressure (more harvesting than its reproduction capacity) on the same area has affected both the quality and availability of fishes. There is a need to educate the fishermen about the limitations of given water body to produce more and more quantity of fishes, about the impact of a given fishing gear on the quality of catch and its impact on other species.

As the project gives emphasis on exploring and promoting alternative livelihood option, it was considered wise to promote animal husbandry (like, dairy, goatery) among the community members.

Formation of SHGs, and promotion of livelihood through SHGs among the potential farmers were another area where department wanted field based training. Marketing linkages for the produces where they wanted external help to ensure that farmers get right price of their produces.

3.5.3 Training suggested: Training in following areas will help Fisheries department to contribute significantly in the project:



- Technical skills for the officers of the department in pisciculture (appropriate in context of project areas) with special emphasis on introduction of new species which can give high yield and disease control in fishes.
- Technical training for both officials of the department and also for the community in value addition options like, crab fattening, fish drying, and market linkages for their products.
- Awareness programme regarding carrying capacity and fishing gears for sustainable availability of fish in given area.
- Awareness among the community members about the possible options in animal husbandry for increased livelihood security and then management skills for making such practices a profitable venture.
- Management skills in community organization, institution formation, SHGs formation and functioning.

3.6 Chilika Development Authority(CDA):

3.6.1 Agency's expected role in the project: The core area of concern for CDA would be biodiversity conservation in the context of dolphins and birds' species along with research activities for development. It is also the nodal agency for the ICZM plan for the State. Its activities would encircle the following:

- Protection of dolphins and birds in Chilika
- Conducting advanced research on up gradation of wetland.
- Formulating the ICZM plan



3.6.2 Capacity and competence status:

It was found that CDA was mainly responsible for the protection of flora and fauna (with special focus on migratory birds and dolphins) and also for the conducting research in wetland management, habitat management and improvement for the dolphins and birds. It was concluded that CDA by improving the infrastructure of its Wetland Research and Training Centre at Chandraput (Balugaon), it will be able provide appropriate facilities for the research. However, it was found that the organization lacked the specialized technical skills in handling sophisticated equipments required for conducting such researches.

It is also suggested that to CDA should be given training in professional management of project of this magnitude.

3.6.3 Training suggested: Looking at the management role of the department as a nodal agency for the project and its responsibility towards biodiversity conservation, following suggestions are being made:

- The officials involved in the project should be trained in project management skills.
- Equipment operating training needs to be given to the scientists and laboratory officials.
- The scientists are to be given specialized technical training on making advanced studies on flora and fauna available in Chilika with special emphasis on dolphin and birds.

3.7 Industry Department:

3.7.1 Agency's expected role in the project: The department of industry would help in providing alternative livelihood opportunities to the local community. The specific roles of industry department in the project would be;



- Facilitating training and capacity building of coastal communities in coir making and its marketing.
- It will also provide alternative livelihood option to the fishing community along Chilika – Gopalpur stretch.

3.7.2 Capacity and competence status: During the TNA exercise it was reported that the department conducted various training programmes for rural artisans and communities in the activities like, food processing and coir making and other possible options of livelihood. The department also promotes SHGs for such trainings. However, most of the trainers have not been exposed to the training pedagogy and also in adult education. Secondly, sometimes department hires the services of outside resource person; effectiveness of such resource persons varies considerably.

As the department is responsible for providing alternative source of income to the local people, it is important that provision of training for the local communities in making local handicrafts, souvenirs (which are of tourists' interests) is also made.

3.7.3 Training suggested: Based on the responsibilities and competencies available with the department, the following suggestions have been made:

- Skill training to the local community in handicraft making for tourists.
- Management training to the coir industry owners for adopting more worker oriented business model, and marketing skills. Also training to the coir industry labourers so that they can increase their working efficiency.



3.8 Paradeep Municipality:

3.8.1 Agency's expected role in the project: Faster pace of urbanization, particularly in the port city of Paradeep has been necessitated the scientific management of solid wastes. In the ICZM project the major responsibilities of the Paradeep Municipality is as follows:

- Applying suitable model of solid waste management in Paradeep municipal area.

3.8.2 Capacity and competence status: The municipality has been doing the work of solid waste management and has adopted some innovative techniques for the collection and disposal of waste management. However it was found that the department completely lacked modern techniques of urban solid waste management being followed in different parts of the country. The department needed training in different models available for solid waste management so that the municipality can decide upon the best one suited for it. They also need basic idea about segregation of waste (at source and other level), recycling of wastes particularly those coming from fish processing.

For the success of municipality efforts, the community and other major waste generators like, hospitals and industries also needs to be educated about the various aspects of waste management.

3.8.3 Training suggested: Project should provide following capacity building opportunities to Paradeep municipality so that they will be skilled oriented to contribute towards the objectives of project.

- Exposure (to administrative staff) and technical training (to technical or executing staff) in appropriate solid waste management techniques. Training should be given in window process of solid waste treatment and also in suitable techniques of waste segregation and waste recycling.
- Awareness among community, hospitals, industries (within and around the municipal areas) about the importance of proper waste management, waste segregation, and use of degradable materials.



3.9 Cultural Department:

3.9.1 Agency's expected role in the project: Available of many historical and cultural monuments and structures and immense tourism potentials, the Cultural department of the state has also been made partner in the ICZM project. The cultural department has been assigned with following responsibilities:

- Identification, protection and development of monuments and heritage sites of the project area.
- Create alternative source of income for the local people.

3.9.2 Capacity and competence status: Cultural department has been successful in identifying some of the monuments and heritage sites which were in dilapidated conditions and working on them and restoring those to the considerable extent. It was reported that there are many such structures within the project area which are of great historical and cultural importance and can be restored to the extent that it will not only become a heritage for us but can also become revenue generator for the people living in the area where these structures are existing.

It was also reported that the department has some experience of conservation techniques but because the sites under the project are situated near the sea shore, required special conservation treatment.

Most of the historical sites are temples which have special architecture and getting artisan trained in such architectural skills has been a big problem for the department.

The department till date has not focused much on people's participation in their effort nor the publicity and advertisement of the historical sites with the objective of increasing tourism.

3.9.3 Training suggested: The cultural department will look after the preservation and protection of important cultural heritages along coastal region. Considering their strength and expectations from the project following suggestions have been taken place:

- Technical skills of conservation of historical monuments.
- Training of artisans in local architectural skills.



- Management skills, like networking, collaboration, marketing and publicity and people's participation in monument preservation and in promotion of cultural tourism.

3.10 Orissa State Pollution Control Board (OSPCB):

3.10.1 Agency's expected role in the project: The State pollution control board would execute the monitoring of environment pollution in the proposed region and has proposed for a laboratory to control and coordinate the same. Their tasks include the following:

- Setting up of a standard coastal monitoring laboratory for monitoring physical, chemical and biological parameters.
- Examining the industrial projects in the zone and recommending pollution control measures, and take corrective actions.
- Authoritative actions for the activities of grant/cancel/etc on wastes treatment.

3.10.2 Capacity and competence status: Orissa Pollution Control Board (OPCB) has a group of trained scientists to monitor the pollution levels, their sources and suggesting the measures to check the pollution. The board limits its jurisdiction up to the inland waters and due to lack of manpower and other laboratory facilities. However, project also expects them to conduct studies of coastal waters and then take necessary action accordingly. As far as the technical expertise is concerned, the department is having basic skills to take up those responsibilities. However, they need trainings in establishing and running a laboratory and also required many management skills.

Community awareness about causes and indicators of pollution would be of great help to the laboratory in monitoring the state of pollution across the entire stretch of project, and also when the results are shared with community, community role becomes very vital.



3.10.3 Training suggested: As the board is expecting to set up a laboratory, their main requirement were related to the laboratory establishment and function.

- Establishment and certification of specialty laboratory keeping project broader objectives in consideration will require that while setting the objectives and priorities for the laboratory a workshop of all major stakeholders like, CDA, pollution control board, funding agency, state department of forests and environment, state department of science and technology.
- Management issues in establishing and making a scientific laboratory fully operational will demand specialized and experienced inputs for the leaders of OSPCB.
- As the board is going to take up the work on working on coastal waters and environment, it needs technical skills in conducting tests (designing, conducting tests, maintaining quality of research output, monitoring, reporting back to the concerned agencies, and publishing the research findings in appropriate publications).
- Writing project reports, documenting results of continuous monitoring, and recording and managing such reports require specialized skills and pollution control board will require training in these skills.
- The board deserves a detailed training in procurement procedure and fund management, this is very important as board being a government institution may have to follow up the accounting and reporting procedures as desired by funding agency.
- Awareness among the community about the causes, symptoms, and impact of coastal pollution.

3.11 Project Management Unit (PMU):

3.11.1 Agencies' expected role in the project: The ICZM project is an integrated approach towards the development of the coastal regions in the State of Orissa. Consequently it involves



the coordinated activities of various departments/ implementing agencies for its varied developmental objectives. The project will have a project management unit (PMU) at the state level to coordinate and carry out various activities of the project. The project management unit will be responsible for efficient and timely coordination and facilitation of works. It will also be responsible for the reporting of the project development with the funding agency and also to the government. The PMU will also be responsible for reporting to the government of Orissa and for liaising with various departments of the state and other non state agencies for the effective implementation of project.

3.11.2 Training Suggested: The following trainings shall add in to the professionalism and efficiency of the project.

- In order to start the project involving integrated approach, a workshop for understanding the fundamentals, objectives of the project and the participating agencies is essential for the unit members.
- Training in project management skills and skills required for networking, collaborations, and team building will equip the PMU team for the project implementation.
- Finance being one of the major components for the project implementation, adequate knowledge on the finance management as per the World Bank's guidelines should be passed on to the concerned officials of the unit. This shall include the entire process of procurement, bidding, and to the allocation of the funds and their monitoring also.
- Monitoring and evaluation are important constituents of any projects. PMU, being the apex institution for project implementation should be well versed with the monitoring techniques so that they can implement the project as it has been planned and with same effectiveness, it is expected to be. The same applies for the evaluation skills.
- Documentation is must for the any project of this level. It not only helps in reporting but also serves as the learning tools for all concerned with the project.



3.12 General (Common to all the stakeholders)

3.12.1 Agencies' expected role in the project: It is important to note that the project is being implemented in project mode. The project has got specific objectives, procedures for implementation, and has been prepared in specific context.

- As it was reported during the workshop that all stakeholders are very much clear about the context, objectives, and procedures of the project, it would be prudent that there should be a workshop of all the stakeholders for a day where they discuss each one's role in detail and also how one how the stakeholder can benefit other/s or be benefitted by the works of the other. Since it was realized that getting all the 'real' operational heads for a meeting on a given day is very difficult, it is suggested that a very senior officer (like, chief secretary, principal secretary, Forest and Environment, Minister, Forest and Environment) calls and presides the meeting.
- It was also evident to all the stakeholders that networking among the stakeholders is must for the successful implementation and completion of project. Even if there is an agreement among all the players of the project, networking of executives would be required. For establishing networks, keep the network functional and effective professional skills are required. This is applicable for all the participating stakeholders; however, it is more important for the coordinating agency, specially in the case for CDA.
- Responsibilities/ tasks of each department under the project will be executed in the format of a project which (project management) in itself is a management skill and the project should ensure that all the concerned / nodal officers should have the skill of project management.
- Agencies involved in the project need to follow the set procedure which are agreeable to the central project implementation team and also to the funding agency regarding some activities like, requisition of funds, funds management, accounting and financial reporting, bidding process to outsource some works. The project needs to identify all such activities and then train all the concerned officers of each participating agency.



- Project documentation, preparing project reports, writing success stories are very important for any project. It becomes more important when project is one of the magnitudes of the present ICZM project, and also when there are many stakeholders involved in it. The project is required to arrange a common opportunity for all the stakeholders.
- Community involvement and project implementation through the community have not been the common practice for many of the participating departments. Community based project implementation requires changing the set institutional mindset, official procedures of many departments, and specialized training in community organization and institution building. Such changes are imperative, and the project needs to work sincerely on it.
- During the TNA exercise what emerged most crucial pre-requisite for the success of the project was the support of higher decision making authorities. It was conclusively argued that unless we ensure the support of local political bosses (MLAs, MPs), manage a clear direction from state administration (meaning that the project is being monitored), and have friendly media, the project will get more hurdles than the supports. In this context, a workshop of local political leaders and very senior officers in the state administration along with the entire project team will serve the purpose to a considerable extent.

3.12.2 Training Suggested: Following will help in creating a conducive administrative and field condition, in smoothening the process of project implementation, and creating a mass awareness about the project among all stakeholders including communities:

- Monitoring workshops of all stakeholders under the leadership of a very senior officer or concerned minister.
- Management training in creating and managing of stakeholders' network for the successful implementation of the project activities.
- Management training in project management, monitoring and evaluation.
- Knowledge about the finance and account management and some of the project related administrative procedures as per World Bank guidelines.



- Written communication skills in documenting, reporting, and management skills in managing, publishing and information storage and retrieval.
- Community organization and institution building process.
- Workshop of external stakeholders like, political leaders, state administration, media about the project in the context of its objectives, methodology, and expected outcome.

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4. Training module

Training module for each participating department constitutes the broad topic of the training programme, tentative contents, type or level of officers, mode of the training, duration of the training programme and suggested institutions. All care have been taken to make appropriate suggestions on various aspects of the training modules, however, “the complete perfection” and “the all inclusiveness” cannot be claimed. Institutions suggested against each module are only indicative and do not represent ‘the only and the most suitable institution’ for the given subject. Secondly, duration and sequence of each training do not indicate the ‘coverage’ and importance of the respective subject and it should be construed in the context of the project only. (Please see next page onwards).

In the final chapter of conclusion a consolidated list of suggested trainings has been prepared by considering contents of each training module. If similar training has been suggested to two or more agencies, they have been combined together in one. The consolidated list, presented as in the summary of training modules, has also the columns indicating intended department/s’ number of expected participants, and expected cost of trainings in addition of the columns in the training modules. These costs are based on the average of existing commercials across the Indian training institutions. However, this may vary from institution to institution and sometimes training to training as well. Travel allowance and daily allowance too are based on average. The PMU will have the freedom to use the savings of one training for another if such need arises.

The report contains summary workshop and thematic lectures modules also, which too are expected to be added in the capacity building plan for the project team.



4.1 Suggested training module for Water Resource Department:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Coastline / Beach Management	Sensitization training on coastal erosion and alternative control measures Advance in shoreline management; Costal Stabilization Sediment Management; Geo-tube Technology	Local bodies(GP) Scientific Team	Integrated coastal and Marine Area Management Project Directorate, Chennai; IIT, Madras	Training & On-site training	12 days Supervisory support for one year
Flood Mapping and forecasting sea behavior	Flood mapping Use of remote sensing and GIS information for forecasting	Scientific Team	NRSA, Hyderabad	Training	5 days
Watershed management approach	Fundamentals of watershed management in context of Coastal area strategies for quick drainage in residential and agricultural areas in case of flooding by sea water	Officials	Central Water and Power Research Station, Pune	Training	5 days
Training in Monitoring & Evaluation	Monitoring process Evaluation (formative and summative) of project work Total quality Management (TQM) in context of Coastline management	Scientists and Officials	XIM, Bhubaneswar	Training	One Week



4.2 Suggested training module for OSDMA:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Disaster Management	Disaster management particularly in context of disaster preparedness; Preparation of disaster risk index (DRI), Scientific modeling for early risk forecasting of cyclone and other disasters	Officials / Engineers; Communities; NGOs	NRSA	Training	5 days-officials 1 day-communities
Flood mapping and prevention	Using tools like remote sensing and GIS as a part of disaster mitigation strategies; Construction of suitable strategies for quick drainage in residential and agricultural areas	Officials / Engineers; Contractors Community	NRSA, Hyderabad	Training	5 Days 2 – 3 days for community
Designing of multipurpose disaster resistant shelter	Architectural and engineering skills in designing disaster resistance shelters	Officials / Engineers; Engineers of construction companies; Architecture	IIT, Roorkee	Training	2 weeks
Tender Procedure	Bid preparation, Invitation Evaluation, Finalization and Quality Assurance as the bid	Program managers; Engineers of construction companies	Local, (in consultation with funding agency)	Training	2 days
Community Mobilization and Institution Building	Organization of Community, Formation and Functioning of village based institution	Program manager(s); NGO's Representatives Community	Xavier Institute of Management, Bhubaneswar	Training	5 Days 1 week
Shelter Management	Fundamentals of shelter Management	Officials	Rev. & DM department, Maharashtra / Gujarat	Exposure visit	One week



4.3 Suggested training module for Wildlife Wing of Forest Department:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Sensitization programme	Awareness training on bio-diversity conservation	Officials Executive officers, local communities, NGOs and Eco groups	Wild life Institute of India, Dehradun Local Forest Officials	Training	3 days
Habitat Management and Mangrove Management	Habitat development, conservation, of mangroves and marine animals (particularly in context of Sea turtles and Crocodiles Life cycle and of Sea-turtles and crocodiles (in context to species and habitat available in project site); Satellite Tracking of migratory route and their food habits Species selection, nursery raising and plantations techniques appropriate for the mangroves under the project site	Scientists / Foresters;	James Cook University, Australia (contact person: Dr. Mark Hamann) Mangrove Research Facilities at Queensland, Australia Crocodylus Park, Darwin, Australia	Training	2 weeks;
Eco-tourism	Ecotourism: Concept and Operational Issues; Partnering and collaborations for ecotourism	Scientists / Foresters; Community	Jungle Lodges and Resort (Karnataka)	Training and Exposure visit	One week
Biodiversity Management	Bio-diversity enrichment and conservation in mangrove and coastal areas	Foresters	KFRI	Training	1 week



4.4 Suggested training module for Tourism Department

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Ecotourism	Ecotourism: Concept and functional and operational Issues;	Managers,	JLR, Bangalore	Training and exposure visit	5 days
	Livelihood oriented ecotourism enterprises	Managers, Community	To be decided		5 days
Services and facilities for ecotourism	Establishment and management of various infrastructural facilities required for ecotourism	Managers and Partners including communities	Indian Institute of Tourism and Travel Development, Gwalior	Training workshop	3 days
	Guide training	Local youths			2 days
Management skills	Green Marketing;	Managers	IIFM, Bhopal	Training	5 days
	Networking, team building and negotiation skills		XIMB		5 days
Waste management	Solid waste management, disposal of wastes and cleanliness of tourist areas	Senior manager, Asst. Director, Officials	Kerala – State Pollution Control Board	Training	5 days



4.5 Suggested training module for Fisheries Department:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Fisheries management	Disease control in fishes Productivity and carrying capacity Selection of appropriate fishing gears Disease management in Cattle, Goats	Officers and scientific team Community	Central Marine Fisheries Research Institute, Cochin High security animal disease laboratory, Bhopal	Training	5 days
Value additions and market linkage	Crab fattening, culture of mullets, fish habitat management, drying of fishes, Crab fattening	Officers, scientific team Community	Central Institute of Brackish water Aquaculture, Chennai	Training (both on and off site)	One week
Alternative Livelihood Opportunities	Alternative livelihood options for fishermen and other coastal communities Training on goatery, diary, etc	Community	To be decided	Training/ Workshop	3 days
Community Organization; SHGs formation and Functional Issues	Organization of Community, Formation and Functioning of village based institution	Program Officers; NGO's Representatives; Community	Xavier Institute of Management, Bhubaneswar	Training	5 days



4.6 Suggested training module for CDA:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Project management	Project Management Skills, Networking and Team Building, Fund management, Monitoring and Evaluation,	Project Team	XIMB NRSA	Training	5 days
Advanced research skills	Advanced research skills in wetland management; Researches on flora and fauna of Chilika with special emphasis on migratory birds and dolphin	Research Team	Sonkhla lake Authority, Thailand	Training + Exposure visit	15 days



4.7 Suggested training module for Industry Department:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Alternative livelihood options for community	Coir fabricating, handicrafts and souvenirs making	Community	Coir training centre at Teisipur, Puri; Some local training institutions, Kerala Coir Board	Training Workshop; Hands on practices Exposure visit	2-3 days
Management skills	Basic management skills with special emphasis on worker oriented business, marketing of products, networking(linking with market both inside states and abroad)	Owners of coir industries	XIMB	Training	5 days



4.8 Suggested training module for Paradeep Municipality Department:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Solid waste management	Models of solid waste management; Operational and functional issues in managing urban wastes Waste segregations, waste recycling	Officers; Scientific team Concerned staffs	JUSCO, Jamshedpur, Surat Municipal corporations; Any other	Training (both on and off site)	10 days
Awareness about waste management	Importance of waste management; Waste disposal methods; Use of degradable and environment friendly techniques	Community; Hospital managers; Industry owners Local NGOs, CBOs	Paradeep municipality	Training; Workshop	2 -3 days



4.9 Suggested training module for Culture Department:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Preservation of historical monuments	Technical skills of preserving historical monuments. Techniques to minimize the influence of salinity in atmosphere on those historical structures with special importance on chemical conservation	Officials	Archeological Survey of India, GoI. INTACH.	Training/ exposure visits	5 days
Training in local historical architectural skills	Design and architecture of historical monuments in coastal Orissa	Artisans	Local Expert Artisans	Training/ Hands on experience	10 days x 3
Management Skills	Networking, Collaboration and negotiation skills, and basic marketing and publicity skills, People's participation; Landscaping and beatification of historical monuments	Officers	Indian Institute of Tourism and Travel Development, Gwalior	Training Training + Exposure visits	5 days 3 days



4.10 Suggested training modules for OSPCB:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Objective Setting workshop	Objectives and priorities of the proposed laboratory.	Officers from CDA, CPCB, DoEF, DST (state departments)	Facilitated by OSPCB	Workshop	1 day
Research and Testing skills	Designing / planning research or tests. Sample collection, analysis of specific pollutants, Validation, statistical analysis, reporting and storing. Monitoring of project area.	Project Team	NIO, Goa	Training	7 days
			Bureau of Indian /statistics, N. Delhi	Training	7 days
Coastal Pollution	Causes, Symptoms, Impact, and ways to minimize the pollution	Community	OSPCB	Workshop	One day
Software training and management	Air quality/ water quality modeling Pollution prediction modeling	Scientists	IIT(Kharagpur)- Air IIT, Madras NIO, Goa		



4.11 Suggested training module for PMU:

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Integrated coastal Zone Management	Fundamentals of Coastal Project Management	PMU Team	James Cook University	Training	Two weeks
Project Management	Project Management, Monitoring and Evaluation	Consultants and Officers	IIM, Ahmedabad	Training	One week
Networking and Collaboration	Networking, Collaborations, Team Building	PMU team	IIMA, IIM C	Training	One week
Office Procedures	Fund Management, Accounting, Procurement plan, Bidding, Financial reporting, Report writing as per World Bank guidelines	PMU Team	World Bank	Training	3 - 4 days



4.12 Suggested training module (General, Common for all):

Training Title	Tentative Contents	Participants	Facilitating Institution	Pedagogy	Duration
Understanding each other's role	About the project; Specific expectations from each stakeholder; Opportunities for networking, collaborating;	Most senior officers + project team from each stakeholders	Facilitated by CDA	Workshop	1 day
Networking and Collaboration	Networking, Collaborations, Team Building, Experience sharing	project team from each stakeholders	To be decided	Training	2 days
Project Management	Project designing, implementation, deciding milestones, monitoring, evaluation	project team from each stakeholders	XIMB PMU	Training	5 days
Office Procedures	Fund Management, Accounting, Procurement plan, Bidding, Financial reporting, Report writing as per World Bank guidelines	project team from each stakeholders	State Project Management Team(Orissa)	Training	3 - 4 days
People's participation	Community mobilization, Building of village based institutions, making them functional and making them sustainable	project team from each stakeholders	XIMB	Training	5 days
Project awareness	ICZM Project concept, objectives, Methodology, Expected outcome, Type of support expected	Local and state level political and administrative leaders; All officials of implementing agencies	Facilitated by XIMB, PMU	workshop	½ day

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5. Other Capacity Building Tools:

5.1. Sensitization workshops for the stakeholders:

The ICZM project, an environment conservation based development project, is unique in many sense. It not only envisages a multi-departmental integrated approach but also gives considerable weightage on people's involvement and empowerment during the project implementation. Not only the objectives of the project are multi-faceted (coastline protection, disaster preparedness, wildlife habitat conservation, preservation of historical monuments, socio-economic development of the community, promotion of eco-tourism), but the implementation strategy too is multi- multi-stakeholders based. Because of such unique characteristics of the project, it is important for the project management team to sensitize all the concerned decision makers, officials, and communities about the project objectives and implementation procedures. Sensitization workshops will be organized by the PMU for all the three levels of stakeholders, i.e., (1) for decision makers (political and administrative heads), (2) for the implementing teams (concerned officers of the all the participating departments / agencies; (3) and for the community and their representatives.

5.2. Experience Sharing Workshops:

Experience sharing workshops will be organized by the PMU once in a year with the objectives of sharing the wide and diverse experiences on the subject and issues related to the project. During the first year of project implementation, PMUs will organize the training workshops where the experts from outside the project team will share their experiences with the objectives of making the project team aware about the possible challenges and improvised ways to take care of those challenges. These workshops will be mainly intended for the project team who will be responsible for the implementation of the project. The subject of workshop can vary from general (like, project management) to specific and technical (wildlife habitat conservation).

Project management unit will also organize experience sharing workshops after two years of project implementation where every participating organization will share their experiences with



the other participating departments and with the representatives of PMU. Such workshop will not only help participating departments to know how much they have made progress in comparison with what was expected from each of them but also how they have done in comparison of other departments. Also, such workshops will provide opportunity to the participating agencies to learn from each others' experiences, and indentify the need and scope of collaboration with other departments. The frequency of such workshop would also be annual. In addition of above, every department/ implementing agency will also organize its own workshop with its respective clients and partnering organizations at least once in a year to keep the motivation alive of all the members and to monitor the ongoing activities. However, no extra budget shall be allotted for this and every department has to manage on its own.

The venues of the first two types of workshop will be decided by the PMU; however, departments will have the freedom to decide the departmental workshops. The PMU may decide to increase the frequencies or repeat similar workshops to different locations, if it feels that it will add in the effectiveness of workshops and serve the objectives of project better.

5.3. Thematic lectures:

The ICZM project has the provision of thematic lectures to add the qualitative and enriching information in the existing knowledge and skill base of the project. PMU will organize lecture sessions of identified and distinguished national and international experts. The sessions would cover the subjects related to the project objectives. Thematic lectures will not only benefit the project team but will also help the common man to appreciate the need and objectives of project more critically. PMU will organize such thematic lecturers twice in year.

5.4. Exposure visits:

Apart from the trainings and lecture sessions, exposure visits of the project team members and also the community members to the successful cases or sites of similar project implementation are required. This will help the participants to see and experience the successful application of



technologies and will provide opportunities for on site learning. Exposure visits being one of the effective methods of capacity building, has been recommended as part of the training module where ever considered appropriate; however, PMU can arrange exposure visit for the selected members of project team to the selected site. Individual departments are also encouraged to conduct exposure visit particularly of the field level staff and community members from their own departmental budget

The tabulated form of the above capacity building tools has been shown (please see the next page). The table (5.5.) indicates the different tools, their duration, frequency, participants/trainees and the facilitating institutions.



5.5. Other Capacity Building Tools

Sl. No.	Capacity building tool	Duration	Frequency (no. of times in a year)	Facilitating institution	Participants	Cost (Rs. lakh)	
						Training fee	Travel/ DA
1	Workshop for decision makers (political and administrative heads)	1 day	Once in the 1 st year only	PMU	MLAs, MPs, Political decision makers	2.5 x 5	0.5 x 5
2	Workshop for the implementing teams (concerned officers of the all the participating departments / agencies for understanding each other's role)	1 day	Once in the 1 st year only	PMU	Implementing agencies	2.5 x 5	0.5 x 5
3	Workshop for the implementing teams (concerned officers of the all the participating departments / agencies)	1 day	Twice	PMU	Working manpower of the implementing agencies	5 x 5	
4	Experience sharing workshops	2 days	Once	PMU	Concerned officers of the implementing agencies	5 x 5	
5	Individual department workshop	1 day	Once	Individual departments	Concerned officers of the implementing agencies		
6	Thematic lectures		Twice	PMU	Working manpower of the implementing agencies		
7	Exposure visits	As required	Once in two years	PMU and individual departments	Concerned officers of the implementing agencies		
8	Individual department exposure/ on site visits	As required	Once in two years	Individual departments	Concerned officers of the implementing agencies		

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6. Follow Up and Conclusion

6.1 Follow Up Procedure:

The nodal agency will explain the expected deliverables and level of participants for the training. They will also share the specific course module developed by the training institution with the potential participants. If the module requires some initial readings and some experience in working on given subject, the nodal agency will inform the participants and request the concerned departments to facilitate the prior learning/experience.

The nodal agency will develop a feedback form, where the learnings from the training and their application in the project work would get considerable weightage. Participants would be requested to be very specific while filling the feedback form. The participants' feedback form will be forwarded to the respective departments.

After certain interval (the duration of intervals to be decided by nodal agency), the nodal agency will seek the feedback from the department about the applications of the training and also about the other areas of further training.

6.2 Summary of Trainings Recommended:

In the end there is a summary of suggested training module which may serve as the ready reference for the PMUs. As the process of developing training module every effort has been made to suggest the most appropriate institution as the facilitating institution. However, project management unit can certainly look for better institutions which can take interest in developing tailor-made training programme for the project. Suggested budgets for trainings are tentative and these may vary from institution to institution and also from subject to subject.

6.3 Conclusion:

The training need analysis of the various stakeholders has brought out three major areas of training on which the ICZM project would need to focus in order to achieve its objectives most efficiently. The first one is related to technical skills for which every respective department has been created and the department has been working successfully. The project expects a bit more



qualitative delivery within the smaller period of time, which in turn will require more technically sound and efficient workforce within each department. However, it was evident that most of the departments are lacking awareness and their respective capabilities for using most modern and scientific tools and techniques for the project.

Secondly, the completion of project under the ‘project mode’ requires management skills. The project expects a very efficient manpower, competency management, financial management, project management, marketing management and management of available resource without compromising with the sustainability of natural resources and the quality of outputs. Such management skills, of which types and level may differ from department to department, have been found very much needed for various stakeholders.

Thirdly, the project proposes participatory and livelihood based interventions to meet its objectives. These two, although well heard by the participants have still not been fully incorporated in the functioning of various stakeholders. The participants were fully convinced that these are the need of time and they just cannot ignore these. The participants accepted that the required attitude and skills were not available with many of the stakeholders. Hence, recommendations were made to provide training through which the gaps can be catered. Apart from the individual departmental recommendations in the training module, other capacity building tools (workshops, thematic lectures, exposure visits) have also been specified in the report. Further, a follow up action has also been recommended for the nodal agency for analyzing the effectiveness of the trainings towards the desired objectives. Tables following next provide the summarized forms of the training modules and the capacity building tools along with the estimated budget to be allotted and the total estimated cost for the training programmes in the ICZM project has been presented successively.

Without claiming “the complete perfection” and “the all inclusiveness” it can be said that the needs identified are quite closer to the reality and does reflect the ‘crucial gap’ in the capabilities of the stakeholder and, if worked upon, it will not only fill those gaps but will also add in the existing capabilities of the larger project team. It is recommended that while working on the nuances of each of the module, the stakeholders are once again consulted and the objectives of the project revisited.



6.4.1. Summary of Training modules:

Sl. No.	Training subject	Participating Department/ Agencies	No. of officials to be trained	Resource Institution	Duration	Cost (Rs. Lakh)		Phase
						Training Fee	Travel / DA	
1	Geo-tube technology	Water Resource Department; OSDMA	15 (5+5+5*)	IIT, Chennai	2 weeks	10	3	1st
2	Flood mapping and forecasting sea behavior	Water Resource Department; OSDMA	15 (5+5+5*)	NRSA, Hyderabad	1 week	5	2	1st
3	Watershed management	Water Resource Department; CDA	15 (5+5+5*)	Central Water and Power Research Station, Pune	1 week	5	2	1st
4	Disaster Management	OSDMA; Water Resource Department	10 (5+5*)	NRSA, Hyderabad	1 week	5	2	1st
5	Designing of multi-purpose disaster resistant structures/ shelter	OSDMA	10 (5+5*)	IIT, Roorkee	2 weeks	10	3	2 nd
6	Habitat Management and mangrove management	Wildlife Wing of Forest Department; CDA	15 (5+5+5*)	James Cook University; Mangrove Research Facilities at Queensland, Australia; Crocodylus Park, Darwin, Australia	1 week	7	8	2 nd
7	Eco- tourism	Wildlife Wing of Forest Department; Tourism Department; CDA	15 (5+5+5)	Jungle Lodges and Resort (Karnataka)	1 week	5	2	1 st
8	Fisheries management; Disease control in fishes, Increasing productivity in Fisheries Selection of appropriate fishing gears	Fisheries Department; CDA	15 (5+5+5*)	Central Marine Fisheries Research Institute, Cochin; High security animal disease research laboratory, Bhopal	1 week 1 week	5 5	2	2 nd
9	Advanced research skills in Lake management (in context of Chilika)	CDA	10 (5+5*)	Sonkhla lake, Thailand	2 weeks	7	6	2 nd



Training Need Analysis for ICZM Project



10	Solid waste management	Paradeep Municipality Department; Tourism Department	15 (5+5+5*)	JUSCO, Jamshedpur; Surat Municipal corporations, Surat; Kerala- State Pollution Control Board	2 weeks	10	3	1 st
11	Alternative livelihood options in Project Area	Industry Department	10 (5+5*)	EDI, Ahmedabad	1 week	5	2	1 st
12	Preservation of historical monuments	Culture Department	10 (5+5*)	Archeological Survey of India, GoI. New Delhi; INTACH	1 week	5	2	2 nd
13	Services and facilities for ecotourism	Tourism Department; Culture Department	15 (5+5+5)	Indian Institute of Tourism and Travel Development, Gwalior	1 week	5	2	2 nd
14	Research and Testing skills of Air quality/ water quality	OPSCB	10 (5+5*)	NIO, Goa; Bureau of Indian Statistics, New Delhi; IIT Kharagpur	1 week	5	2	2 nd
15	Basic management skills	PMU All agencies	50	XIMB; IIM A; IIM C; World Bank	1 week x 3	15	6	1 st
16	Networking and Collaboration	Project team from each stakeholders	30	XIMB	1 week x 2	10	1	1 st
17	Office Procedures	Project team from each stakeholders	30	State Project Management Team(Orissa)	1 week x 2	10	1	1 st
18	People's participation	Project team from each stakeholders	30	XIMB	1 week x 2	10	1	1 st

*: Five trainees will be nominated by PMU depending upon the requirements of project.



6.4.2. Summary of Workshop modules:

Sl. No.	Workshop subject	Participants (Departments/Agencies/etc)	No. of participants	Resource/ Facilitating institution	Duration / Frequency	Cost (Rs. Lakh)		Phase
						Training Fee	Travel / DA	
1	Workshop for decision makers to make them aware about the project (political and administrative heads)	MLAs, MPs, Political decision makers		PMU	1 day / Once in 1 st year	2	1	1 st
2	Workshop for the implementing teams (concerned officers of the all the participating departments / agencies) to understand project's objective, methodology and appreciate each other's role	Implementing agencies		PMU	2 days / Once in 1 st year	4	1	1 st
3	Experience sharing workshops	Concerned officers of the implementing agencies		PMU	2 days/ Once in a year	2 x 4	1x4	
4	Individual department workshop	Concerned officers of the implementing agency, and participating community		Individual departments	1 day/ Once in a year	2 x 4	1	
5	Thematic lectures	Concerned professionals / officers and general concerned intellectuals including press		PMU	Twice in year	(0.50 x 2)x 4	---	
6	Exposure visits	Concerned officers of the implementing agencies and PMU		PMU and individual departments	As required / Once in two years	5	2	
7	Individual department exposure/ on site visits	Concerned officers of the implementing agencies		Individual departments	As required / Once in two years	Costs to be met by individual department		



6.4.3. Summary of Capacity Building in ICZM Project

Total No. of Trainings : 18

Total No. of workshops : 06

Total No. of Thematic Lectures : 08

6.4.4. Overall Budget for Capacity Building in ICZM Project

Head	Amount(Rs. Crore)
Training Fee (28 weeks of training)	1.39
Travel and Daily Allowances for Training	0.50
Budget for the Workshops (27 days of workshop)	0.27
Travel and Daily Allowances for workshop	0.09
Thematic Lectures (8)	0.04
Total Budget	2.29



Appendix Ia
Training Need Assessment on Capacity Building Workshop under ICZM Project, State
Project Preparation Cell, ICZM Project Orissa organized by Xavier Institute of
Management, Bhubaneswar

Date: 2nd & 3rd March' 09

List of participants:

Sl. No	Name	Designation	Department
1	Bhagirathi Behera	Director	
2	Dr. S. Panda	Chief Executive	CDA
3	Chittaranjan Mishra	Asst. Chief Executive	CDA
4	Subrat Kumar Pati	Cons. Procurement Specialist	ICZMP Orissa
5	P. Krishna Mohan	Conservator of Forests	Wildlife o/o PCCF
6	Dr. Debashish Roy		Deptt. Of Env. Scientist, Govt. of Orissa
7	Dr. Ananta Ku. Sahu	Consultant Ecologist	ICZMP
8	Ishaque Khan	Principal	Fishery Training Institute, Balugaon
9	Hemanta Kumar Dash	Lecturer	Fishery Training Institute, Balugaon
10	Anil K Tripathy	Sr. Div. Manager	CBPI-I OTDC
11	Satya Padhiari	Consultant, Planner	ICZMP
12	Biranchi Mishra	Consultant	Orissa tourism
13	P K Bisoi	Junior Engineer	Aul Embankment /division
14	K C Bisoi	Shelter Coordinator	OSDMA
15	S K Chatterjee	Engineering consultant	OSDMA
16	Avaya Kumar Nayak	DGM	OSDMA
17	Trilochan Mallick	Asst. Engineer	
18	Sashadhar Nayak	Executive officer	Paradeep Municipality
19	Dr. B. K. Misra	Member Secretary	SPCB, Orissa
20	Bibekananda Bhol	Sr. Env. Scientist	SPCB Orissa
21	Rajkishore Ghadei	EE	Aul Embankment Division
22	Aswini Ku Sathpathy	Asst. Curator	Orissa State Archeology
23	Dr. C. B. Patel	Supritendent	Orissa State Archeology
24	Bansidhar Swain	AE	Pentha



Appendix Ib

Programme schedule:

Dt: 02.03.09

Time: 09:30 am to 06:00 am

Component
Participating Departments

: Livelihood
: Tourism, Wild Life, Industries (Directorate of
Handicraft & cottage Industry), Fisheries

Component
Participating Departments

: Bio-diversity conservation
: Wild Life, CDA

Dt: 03.03.09

Time: 09:30 am to 06:00 am

Component
Participating Departments

: Infrastructure and Asset development
: Orissa State Disaster Mitigation Authority,
Water Resource, Wild Life and Culture

Component
Participating Departments

: Environment management
: Orissa State Pollution Control board and
Paradeep Municipality



Appendix II

Report preparation meeting:

Date: 18. 05.09

Time: 11.00 am

Components: Review of the draft TNA report & Budget finalization for the training programmes

List of Participants:

Sl. No	Name	Designation	Department
1	Dr. S. Panda	Chief Executive	CDA
2	Dr. Ananta Ku. Sahu	Consultant Ecologist	ICZMP
3	Satya Padhiari	Consultant, Planner	ICZMP
4	Chittaranjan Mishra	Asst. CE	CDA
5	Chitralkha Mohanty	Research Assistant	XIMB
6	Prof. Niraj Kumar	Faculty	XIMB
