ANNEX

Process-oriented methodologies and information management tools for use in EAF implementation

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This Annex describes some of the methods and tools commonly used to:

- ensure that policy and planning processes run smoothly;
- acquire the information that is needed for these processes.

To assist the reader in determining what tools or methods could be used in developing or implementing various aspects of the EAF, we pose for each of them three questions:

- "What is the nature of the method or tool?"
- "Why is it important?"
- "How is it used in EAF?"

The space here to answer these questions is limited. In each case there is a body of literature that provides background to the method or tool, describes appropriate use in greater detail and reviews application in various situations. Readers are advised to consult this literature for further information and guidance.

This Annex is organized into two parts, on process-oriented and information gathering methodologies and tools. Within each of the two sections in this annex, the methods and tools are presented in alphabetical order. Some apply more to large-scale situations, such as a large marine ecosystem, while others are more appropriate for local or community levels. Many of them are interdisciplinary to lesser or greater extents, but some are more akin to generic skills than any particular academic discipline.

It is tempting, but potentially misleading, to categorize them as low or high cost. Inexpensive methods may become costly when aggregated over large geographic areas, numbers of sampling units, or other factors of scale and scope. Several methods complement each other, such that they can operate in parallel, be nested within others or allow others to be nested within them. Readers are advised to determine the mix of methods and tools that fit the given context, including the capacity to use them successfully, rather than to seek a neat hierarchy or blueprint for selecting or applying them.

The methods and tools presented in this Annex are not exhaustive. Additional methods and tools exist which may be equally appropriate in the many different situations in which EAF may be applied. The references and descriptions serve only as starting points for seeking the most appropriate from among the many options.

PROCESS METHODOLOGIES

Process methodologies are the sets of skills and mechanisms used to efficiently and effectively implement policy, planning and management activities that involve groups of people interacting, often in decision-making. They provide structured approaches to reaching desired outcomes.

Conflict management and negotiation

What is it?

The goal of conflict management is not to avoid conflict, but to apply skills that can help people to express their differences and solve their problems for win-win, or mutually beneficial, outcomes (McConney *et al.*, 2003). Conflict management is facilitated negotiation that works best under the following conditions:

- All the disputing parties are known
- Willingness to negotiate resolution
- Reaching resolution is important for all
- Parties trust conflict management method
- A mutually beneficial outcome is a possibility
- Parties have authority to make deals
- Funds, time and other resources are available
- Resolution is desirable in the wider context

Why is it important?

Conflicts are almost inevitable in multistakeholder situations such as EAF, and they are not necessarily negative. They may cause more equitable power relationships to emerge, correct bad fisheries management practices or improve EAF policy. The issue is how to manage conflicts in order to reach (at least temporary) solutions in the most appropriate and least disruptive or harmful manner.

How is it used in EAF?

It is useful at many points in policy and planning cycles, and management as well, to reduce the actual or potential levels of conflict amongst diverse stakeholders so that decision processes can be more positive and productive. Being social interactions, conflicts have many dimensions that should be properly understood before interventions are made, and this necessitates human dimensions research. Often there will be more than one source of conflict. Correct identification of the nature of the source of the conflict requires getting past the symptoms until the root cause(s) are reached. Potential sources of conflict include:

- Relationships – values, beliefs, prejudices, past injustices, poor communication
- Information – poor quality information, misinformation, differing interpretations
- Interests – perceived or actual; substantive/physical or intangible/perceptual
- Structures – institutions, authority, resource flows, time constraints, financing

There are several stages in conflict management. The following apply to most methods:

- Initiation – a stakeholder or outsider invites help to manage the conflict
- Preparation – conflict analysis, information sharing, rules, participant selection
- Negotiation – articulating interests and win-win options, packaging desired options
- Agreement – concluding jointly on best option package, recording final decisions
- Implementation – publicizing outcomes, signed agreement (optional), monitoring

In the highly technical situations common in EAF negotiations, there may be serious disparities in the capacities of stakeholder groups to interpret and use the information provided. In such situations it may be necessary, as part of the process, to allocate specialist expertise to groups in need. Mutually beneficial outcomes can usually only be realised if participants progress from negotiating on the basis of positions to negotiating in keeping with their underlying interests (Fisher *et al.*, 1981). Positions may change, but interests are likely to remain the same, or be modified upon understanding the interests of the other side(s).

Consensus building

What is it?

Closely related to conflict management, consensus building is the term used for a number of collaborative decision-making techniques in which a facilitator or mediator assists diverse or competing interest groups to agree on contentious policy issues, management objectives, or other matters for which consensus rather than majority decisions are being pursued. Visioning and collaborative problem solving are examples of consensus processes (Susskind *et al*., 1999). Consensus building tends to be a fairly informal, but structured, process for discussing issues and sharing perspectives while respecting interests and seeking ways of working together for mutual benefit.

Why is it important?

Similar to conflict management, consensus building plays an important role in helping decision processes to be more positive and productive. It can be employed prior to a conflict developing and hence reducing the need for conflict management. It is often essential to reach consensus rather than a majority decision when the dissenters have the power to thwart the decision that they disagree with, or to instigate and fuel levels of conflict that de-rail the process.

How is it used in EAF?

In EAF, consensus building is especially important at the levels of policy goals and plan objectives where reaching harmonious agreement on big issues paves the way for subsidiary agreements on numerous smaller technical and institutional issues. For example, an agreement on how agricultural and fisheries development should mesh with tourism may set the stage for comprehensive watershed and coastal management encompassing both terrestrial and aquatic ecosystems. Without consensus at a higher policy level on how these economic sectors are either related or integrated, using and interpreting sectoral performance indicators could be difficult.

Delphi method

What is it?

The city of Delphi was where people came to consult the oracle housed in Apollo's temple who forecasted the future. The purpose of the Delphi technique is to elicit information and judgments from a group to facilitate problem-solving, forecasting, planning, and decision-making (Neuman, 1994). It often involves paneling a group of experts on a particular topic to determine consensus on an issue. This method is used both for information acquisition and in process.

Why is it important?

There are many variations of the Delphi method, and while some can be used in face-to-face meetings, most seek to avoid physically assembling the experts. Instead, information is exchanged via email these days. This takes advantage of experts' creativity while facilitating group involvement and interaction. Delphi is designed to reap the benefits, but reduce the liabilities, of group problem-solving. This is important in EAF because ordinary meetings of diverse experts with different disciplinary backgrounds and academic or professional status can be difficult to manage even with a facilitator. Such meetings are expensive to organize if the experts reside in different corners of the world.

How is it used in EAF?

The Delphi technique can be used in the EAF to overcome many of the constraints associated with getting the best available scientific advice in the most cost-effective and efficient manner (Landeta, 2006). If, for example, expert opinion were required on

some aspect of ecosystem interactions at a particular site, a panel of carefully selected experts would be assigned to answer a series of questionnaires in which the questions are usually formulated as hypotheses or propositions. Each round of questioning is followed with the feedback on the preceding round of replies, usually presented anonymously. Thus the experts are encouraged to revise their earlier answers in light of the replies of other members of the group. During this process the range of the answers will normally decrease, and the group will converge towards consensus. After three or four rounds the process is usually complete and the median scores determine the final outcome that reflects the best available advice from the group. Software is available to support the Delphi technique. It can be used at several points in policy, planning and management cycles.

Facilitation

What is it?

As a critical supporting skill in SEI research with human subjects, facilitation helps exchanges, meetings or decision-making to run smoothly and reach desirable ends. Facilitation, by itself, does not mean problem-solving. The role of the facilitator is not to control a group or make the final decision on anything. The facilitator is trained to be responsible for ensuring that group processes are inclusive, productive, and effective.

Why is it important?

Many of the policy and management planning processes in EAF involve groups of diverse stakeholders trying to resolve conflicts or reach decisions. It is useful to have a trained facilitator guide participants, and so reduce claims of lack of objectivity or transparency (McConney *et al*., 2003). The facilitator should have a feel for the social, cultural and institutional landscape, and possess the skills to work with diverse groups of stakeholders and under sometimes very difficult circumstances, such as when there is conflict. The skills and abilities are different to those of a chairman.

How is it used in EAF?

It is used in all processes, such as a group of resource users, fishery and coastal managers, interests from outside the fisheries sector and environmental NGOs trying to decide upon management or policy objectives at a national workshop. However, facilitation skills are also useful on the beach with a group of fishers in the midst of an argument with watersports operators about the use of coastal areas. The opportunities for use in EAF are numerous given the several groups involved. It is important to have a trained facilitator, who:

- Distinguishes process from content
- Manages the client relationship
- Prepares thoroughly for planning
- Uses time and space intentionally
- Evokes participation and creativity
- Maintains objectivity at all times
- Reads underlying group dynamics
- Releases blocks to the process
- Adapts to the changing situation
- Shares responsibility for process
- Demonstrates professionalism
- Shows confidence and authenticity
- Maintains personal integrity

Visioning

What is it?

Visioning is a group exercise, often used in the initial stages of strategic planning and other goal-oriented processes, to define and communicate to create a sense of shared ownership a desirable future.

Why is it important?

It is important for stakeholders to actually see the end point of their efforts and not only a path that may lead to it. The more stakeholders there are, the more important it is to share a vision early in the process.

How is it used in EAF?

Visioning provides a frame or reference for strategizing the outcome that EAF stakeholders want to achieve. Vividly describing and then agreeing upon the conditions of the future as if they could be seen in the present, makes easier to devise the path (through mission, goals, objectives, activities and tasks).

INFORMATION ACQUISITION AND DISSEMINATION

Information acquisition covers a variety of means of collecting and converting data into information. It is often the first step in policy and planning processes such as those described above. Information dissemination or communication is a similarly multifaceted term used to describe means of communication to diverse audiences, often by several channels, pathways and products (FAO, 2006b). Some agencies go a step further beyond outputs to address information uptake and knowledge mobilization such as to produce management or policy outcomes.

Asset mapping

What is it?

An asset map is typically an inventory of the features and relationships of a community as perceived by the people in that community (Guy *et al.*, 2002). Mapping assets involves:

- collecting an inventory of positive aspects of a community
- ranking aspects of the community valued the most by members
- determining why people place high value on certain assets in the community

Why is it important?

Asset mapping provides a shared community view of what are the important assets of the entire community, highlighting interconnections among assets and revealing how to access those assets such as for use in livelihood or coping or community development strategies.

How is it used in EAF?

An asset map can be used to devise collaborative strategize about how to build on assets in order to sustain and enhance community development. The process is often one of empowerment and reveals the relationships that communities have with ecosystems.

Brainstorming

What is it?

Brainstorming is process for creatively generating many alternative ideas or solutions for a specific topic or problem. It can be used by individuals, but is often a group process. After ideas are generated they are often categorized, discussed and prioritized for further analysis.

Why is it important?
Good brainstorming exercises can produce very innovative ideas or solutions. It is an equitable method in that any person can participate. Criticism is not allowed during brainstorming and this free flowing participation can also be useful for building teamwork.

How is it used in EAF?
Employed mainly in planning processes, brainstorming can quickly generate a series of objectives and activities for closer examination afterwards. If the stakeholders are diverse the mix of ideas can be quite varied. The best ideas, "outside of the box", may come from those who are not experts.

Communication strategy

What is it?
A communication strategy is a summary framework that sets out, often in a matrix or table, the key elements and relationships of any initiative to share information to achieve expected outcomes. Elements typically include target audiences, objectives, key messages, products and pathways with appropriate budgets.

Why is it important?
Unless a strategy is devised, it is likely that simply disseminating information (such as in technical reports or scientific articles) will result in key audiences (e.g. policy-makers, resource users) being overlooked or not communicated with effectively. It is important to ensure that key stakeholder groups are kept informed of progress and problems with the EAF.

How is it used in EAF?
Especially during the early introduction of an EAF it will be necessary to keep all stakeholders well informed, and information will need to be packaged in different ways to meet the needs of different audiences. Using a communication strategy will assist in clearly setting out who needs what information in what form, and facilitate budgeting for it rather than leaving communication as an afterthought. Monitoring and evaluating communication outcomes can be part of a participatory strategy to keep stakeholders involved.

Focus groups

What is it?
Focus groups are an interactive form of group interviewing. Group interviewing involves interviewing a number of people at the same time, the emphasis being on questions and responses between the researcher and participants. Focus groups however rely on interaction within the group based on topics that are supplied by the researcher (Morgan, 1997).

Why is it important?
The focus group is important in providing a means of collecting data that more closely resembles daily interactive conversation and information sharing than the standard individual interview, especially in some cultures. Often a focus group may be the best way to solicit information when, for a variety of reasons, respondents may be reluctant to participate in individual surveys. Unlike the latter or simple group interviews, focus groups encourage the respondents to react to each other, share knowledge, trade opinions and so on, all without the obligation to reach a group decision or consensus.

How is it used in EAF?

In EAF it may be useful to have a variety of stakeholders that meet the basic focus group criteria for respondent selection gather to answer questions concerning, for example, the multiple uses of a particular reef or estuary. They may have very different views that will be revealed in the focus group session without the need for a "correct" answer or to achieve consensus.

Institutional analysis

What is it?

Institutional analysis is the investigation of how formal and informal social rules (institutions) shape human behaviour. Institutional analyses focus on how individuals and groups construct institutions, how institutions operate by patterns of interaction, how they are linked and the outcomes generated by institutions. As an example of institutional analysis the International Centre for Living Aquatic Resources Management (ICLARM) and Institute for Fisheries Management and Coastal Community Development (IFM) (ICLARM and IFM, 1998) developed a methodology for institutional analysis that has been employed particularly for research into co-management arrangements and conditions for success (Figure Annex 1).

The set of contextual variables shown on the left describe the fishery system that, influenced by external factors, results in incentives for fishery actors to interact or not in various patterns that have observable outcomes which feedback into the system that is constantly adapting.

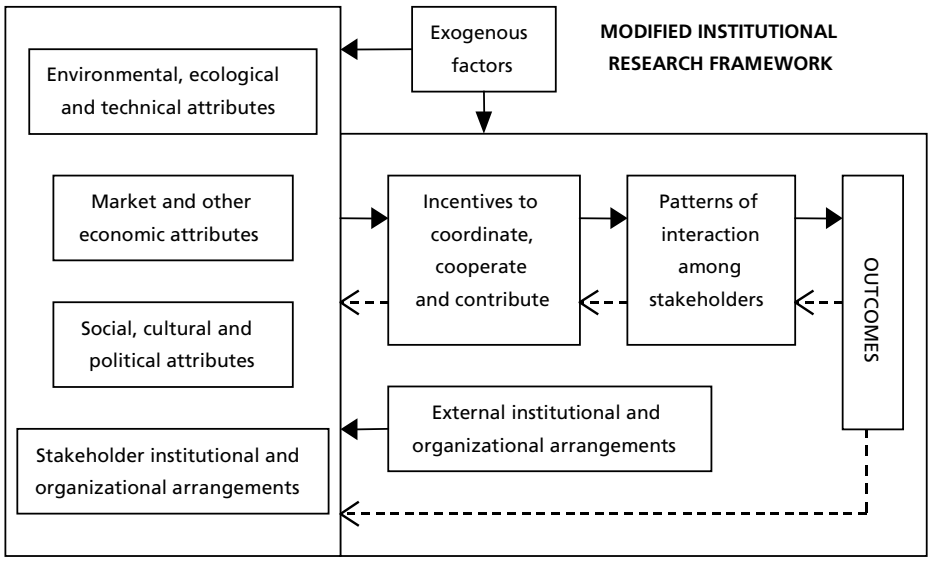
Why is it important?

Without institutional analysis a clear understanding of the complex interactions and relationships among the actors in fisheries is not likely to be achieved. This understanding is even more important as EAF encompasses a greater number of actors including those in other sectors.

How is it used in EAF?

It is used in EAF to determine what institutions are involved in policy, planning and implementation within the contexts of the key attributes of the fishery system. It

FIGURE ANNEX 1
Modified ICLARM/IFM Institutional Analysis and Design Research Framework



allows interventions to be designed, monitored and evaluated in a systematic fashion that facilitates learning and adaptation. The main aspects of institutional analysis conducted within the framework introduced above for investigating co-management are as follows (ICLARM and IFM, 1998).

- Institutional arrangements analysis: This links the contextual variables that characterize key attributes of the resource and the resource users with management institutions (fishery rights and rules). These arrangements and contexts affect how resource users and fisheries authorities use incentives and penalties to coordinate and cooperate in resource governance, management and use. Incentives influence the patterns of interaction and behaviour of the co-management partners, i.e. the type of co-management arrangement and how it functions.
- Co-management performance analysis: The co-management produces outcomes that feedback to impact upon contexts and the behaviour of all stakeholders including fisheries authorities. Contexts that change over time may change institutional arrangements. These affect incentives, patterns of interaction and outcomes. Co-management outcomes can be evaluated in terms of management efficiency, and the equity and sustainability of resource utilization. Analysing successful outcomes is particularly useful for learning and adapting.

Participatory monitoring and evaluation

What is it?

Participatory monitoring and evaluation (PM&E) involves the assessment of change throughout processes that involve many people or groups, each of whom is affecting or affected by the impacts being assessed. Negotiation leads to agreement on how progress should be measured and the findings acted upon. It is a challenging process for all concerned as different stakeholders must examine their assumptions about what constitutes progress – and together deal with the contradictions and conflicts that can emerge (Guijt, 1999).

Why is it important?

It promotes transparency and accountability while ensuring that the stakeholders and beneficiaries are fully engaged in the initiative. Where there are significant differences in the perspectives or backgrounds of participants it allows for information exchange focused on assessment in a way that may, by its objectivity, facilitate consensus building.

How is it used in EAF?

Within the policy and planning cycles PM&E can be used throughout implementation or at particular milestones to assess progress particularly prior to taking decisions on adaptive management action. It is one of the methods that fosters institutional and social learning and can contribute towards stakeholder empowerment.

Poverty assessment

What is it?

Poverty assessment encompasses a diverse suite of tools used to measure the complex multidimensional attributed of the state of relative deprivation defined in various ways as poverty with reference to a standard such as the "poverty line". The assessment tools address matters of income, nutrition, health, power, services and other aspects of quality of life, with areas of emphasis and approach (e.g. participatory or not) often depending on the method, purpose and agency doing the assessment.

Why is it important?
Poverty assessments have become particularly in the context of the Millennium Development Goals (MDGs) and the relationships between poverty and ecosystems described in the Millennium Ecosystem Assessment (MA).

How is it used in EAF?
In an EAF poverty assessments can facilitate the development of pro-poor policies and measures that help to alleviate poverty. They elucidate the conditions and underpinnings of poverty associated with particular ecosystems, locations and sectors of society. The poor or aspects of poverty may be overlooked in conventional fisheries management or approaches that do not encompass the human dimensions.

Rapid and participatory rural appraisals

What is it?
Rapid rural appraisal (RRA) emphasizes the importance of learning rapidly and directly from people. RRA involves tapping local knowledge and gaining information and insight from local people using a range of interactive tools and methods (Jackson and Ingles, 1995). Participatory rural appraisal (PRA) involves field workers learning with local people with the aim of facilitating local capacity to analyse, plan, resolve conflicts, take action and monitor and evaluate according to a local agenda.

Why is it important?
RRA is regarded as a set of guidelines and tools which can be used in many different ways and many different circumstances and without necessarily attempting to change political and social structures. PRA is the specific use of RRA approaches and tools to encourage participation in decision-making and planning by people who are usually excluded from these processes. RRA is a useful technique for data gathering and problem identification, whereas PRA is more appropriate to programme design and planning. The distinction is not merely one of proper sequencing. If not used correctly, PRA can generate false expectations of what the programme will provide or what local people can achieve. This can cause problems in the relationship between the community members and the programme staff which can threaten success. Both approaches are carried out by multidisciplinary teams and differ from conventional information-gathering approaches in that field workers work with and learn directly from local people. The methods involve a minimum of outsider interference or involvement (Pomeroy. and Rivera-Guieb, 2005). Several have been specially adapted for coastal and fisheries applications (Bay of Bengal Programme, 1993; Pido *et al*., 1996).

How is it used in EAF?
RRA can be especially useful in the early stages of scoping or introducing EAF when it is critical to quickly get information on the people in an area or industry. The RRA toolbox is broad, varied and constantly growing. The tool is chosen for a specific objective, context and conditions and should reflect "personal" tools of the user (Townsley, 1996). In a broad categorization, RRA tools include:

- secondary data reviews;
- workshops;
- structured observations;
- ranking and classifications;
- interviews;
- community meetings;

- mapping techniques;
- diagrams and graphics; and
- understanding processes and change.

Risk and vulnerability assessment

What is it?

Risk assessment is the term used to describe either a process or a product (of risk analysis), used in risk management. Risk assessment essentially determines whether the probability of a particular hazard, in relation to the severity of its impact, is considered acceptable or not when compared to some standard or benchmark. It is employed to guide decision-making. When the emphasis is on vulnerability as a special attribute of risk it is termed vulnerability assessment.

Why is it important?

Risk is a complex concept with a large perceptual component. It is important to systematically assess risk, usually quantitatively but also qualitatively, so as to remove some of the subjectivity found in the casual estimations of risk that people routinely make. Vulnerability, the flip-side of resilience, is important for noting the weakest links (those even more at risk) in a chain or system.

How is it used in EAF?

Decisions that utilize, or can benefit from, risk and vulnerability assessment occur at all levels of policy and planning in an EAF. These assessments, used at the policy level, can assist in selecting policies that have the least problematic impacts on the poor or women, for example.

Social mapping

What is it?

Social mapping is a visualization technique closely related to stakeholder analysis and cognitive mapping. It allows stakeholders to draw maps illustrating their interrelationships and their relationships to natural resources or other features of a particular location.

Why is it important?

The importance of social mapping, like many other visualization tools, lies in the ability to elicit information from stakeholders in a format that is easily understood and shared. This can serve as the basis for fruitful discussions and decision-making.

How is it used in EAF?

When different stakeholder groups (e.g. fishers and hoteliers), or people with different attributes within the same group (e.g. men and women) in an EAF each produce a social map their outputs can be compared in workshop sessions to determine and discuss reasons for similarities and differences. Since social maps reflect perceptions, attitudes, beliefs and values the information shared can assist the various parties to understand each other better and assist researchers or planners to take these differences into account in their work.

Stakeholder analysis

What is it?

Stakeholder analysis helps to systematically determine who needs to be a partner in the management arrangement, and whose interests are too remote to make this necessary. In doing this it also examines power, conflict, relative incentives and other relationships.

Why is it important?
The importance of stakeholder analysis lies mainly in its ability to ensure that the many actors in an EAF are properly identified and characterized in terms of their interests in the particular circumstance and some of their interactions that relate especially to power. Without stakeholder analysis being done at the start of the policy and planning cycles it is likely that critical actors will be omitted from the processes and that this will lead eventually to problems with the EAF. It is an important analytical tool that also helps to promote transparency.

How is it used in EAF?
There is no single best method of stakeholder analysis. Situation-specific common sense must be applied. Special care must be taken to ensure that voiceless and disadvantaged groups that may include women, youth, the elderly and poor people, are not excluded from the analysis. Multiple group memberships are common, especially in small communities. In such cases it will be necessary to be certain "who is speaking" at any given time (McConney *et al*., 2003). Stakeholder analysis poses questions such as:

- Who is directly affected by the problem situation being addressed?
- What are the interests of various groups in relation to the problem?
- How do groups perceive the management problem to affect them?
- What resources do groups bring to bear (for good or bad) on the problem?
- What organizational or institutional responsibilities do the groups have?
- Who should benefit, or be protected from, management interventions?
- What conflicts may groups have with each other and management strategies?
- What management activities may satisfy the interests of the various groups?

Survey methods

What is it?
Survey research is the collective term for a large variety of measurement methods in applied social research that involve asking questions of respondents, often combined with making observations (Converse and Presser, 1986). A survey method can range from a brief informal interview yielding purely qualitative data to an intensive in-depth questionnaire that is highly quantitative in content and analysis. There are methods for the scientifically rigorous treatment of both types of data. In addition, a survey can elicit information from the entire population of interest or may be based on samples, the costs of which will depend on the population of interest and other factors.

Why is it important?
Surveys present opportunities to elicit a great variety of data and information from respondents that provide insight useful for problem-solving and decision-making. Different groups of people can be compared and contrasted over a range of conceptually relevant variables often as part of hypothesis testing. Since managers involved in EAF will almost inevitable come across survey results, even from other sectors, it is important that they understand the benefits and limitations of surveys, when they should or should not be used, and how they can be abused.

How is it used in EAF?
In EAF, surveys are often part of larger methodologies, such as socio-economic monitoring and economic valuation. They can be part of any investigation in which the views of people or learning about their attributes are useful (Villareal *et al*., 2004). This can start with basic demographic and socio-economic data available from national population and housing census surveys that tell how many people reside in or use the area in which EAF will be introduced, and what their characteristics are. This

information can be used to design the policy and planning processes to ensure that all relevant aspects of the human dimension are addressed.

Transect diagram and walk

What is it?

A transect diagram is a cross-section illustration of an area such as on a line running from the nearshore to some distance inland. Bio-physical, infrastructure and socio-economic features are inserted to show the social-ecological characteristics of that section. A walk along the transect can be used to either construct or validate it, or both.

Why is it important?

It is a useful low cost method for gathering and sharing information in which all stakeholders can participate.

How is it used in EAF?

Transects of various parts of coastline can be used to enhance learning about ecosystems. If digital photographs or measurements are taken, the transects can be used in monitoring trends similar to ecological sampling stations. In this case the samples can be of human activity. The walks can be used for both information acquisition and dissemination while planning in a participatory manner.

Workshop methods

What is it?

Workshop method is the collective term for a suite of ways in which to get a group of people, normally with the assistance of a facilitator, to participate actively and effectively in tasks such as visioning, strategic planning, problem-solving, reaching consensus or other desirable end points.

Why is it important?

The event of "holding a workshop" should have associated with it a structured methodology to reach a pre-determined end point. Even brainstorming is structured to provide the latitude for creativity. It is not an unstructured process without rules. Hence it is important for fisheries manager to be familiar with various workshop methods and the extent to which they can meet the requirements of the EAF processes.

How is it used in EAF?

Workshops may occur in many parts of the EAF policy and planning cycles. For example, a visioning workshop may be held at the start of the policy and planning cycles to construct a shared perspective on what a variety of stakeholders see being put in place as a result of the implementation of EAF. Workshops are also an efficient way of sharing information with stakeholders as well as maintaining buy-in/interest throughout the EAF process.

This document aims to provide a better understanding of the role of the economic, institutional and sociocultural components within the ecosystem approach to fisheries (EAF) process and to examine some potential methods and approaches that may facilitate the adoption of EAF management. It explores both the human context for the ecosystem approach to fisheries and the human dimensions involved in implementing the EAF. For the former, the report provides background material that is essential to understand prior to embarking on EAF initiatives, including an understanding of key concepts and issues, of the valuation of aquatic ecosystems socially, culturally and economically, and of the many policy, legal, institutional, social and economic considerations relevant to the EAF. With respect to facilitating EAF implementation, the report deals with a series of specific aspects: (1) determining the boundaries, scale and scope of the EAF; (2) assessing the various benefits and costs involved, seen from social, economic, ecological and management perspectives; (3) utilizing appropriate decision-making tools in EAF; (4) creating and/or adopting internal incentives and institutional arrangements to promote, facilitate and fund the adoption of EAF management; and (5) finding suitable external (non-fisheries) approaches for financing EAF implementation.

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