ADVISORY COMMITTEE ON FISHERIES RESEARCH

Report of the

FIRST SESSION OF THE WORKING PARTY ON HUMAN CAPACITY DEVELOPMENT IN FISHERIES

Rome, 19–22 April 2004
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PREPARATION OF THIS DOCUMENT

This is the final report approved by the participants at the first session of the Working Party on Human Capacity Development in Fisheries of the FAO Advisory Committee on Fisheries Research held in Rome, Italy, from 19 to 22 April 2004. The discussion papers presented at the Working Party will be published as an FAO Fisheries Circular.

Distribution:

Participants
ACFR Members
FAO Fisheries Officers, Regional and Subregional Offices
A VISION STATEMENT FOR
HUMAN CAPACITY DEVELOPMENT IN FISHERIES

“A society that has the ability, means and conditions to achieve the sustainable development of fisheries, at local to global levels, for the benefit of all, and to meet the targets of the World Summit on Sustainable Development (WSSD) ‘Plan of Implementation’ as well as the Millennium Goals.”
ABSTRACT

The Working Party on Human Capacity Development in Fisheries of the Advisory Committee on Fisheries Research (ACFR) held its First Session in Rome, Italy, from 19 to 22 April 2004. The Working Party agreed on a vision statement and a definition for human capacity development. It further reviewed current emerging needs for improvements of human capacity based on novel emerging concepts in international fisheries and on lessons learnt from past human capacity development initiatives, and provided a guide to prioritization of these needs in any given situation. The Working Party elaborated a strategic framework on the subject consisting, inter alia, of eight key strategies and appropriate related actions as well as potential delivery mechanisms. The Working Party stressed that the strategic framework was not intended only for FAO but for use by all stakeholders. It further suggested that pending progress in the adoption of the strategic framework by the governing bodies of FAO, the Fisheries Department should lay great emphasis in human capacity development in its work and define five specific areas where the FAO Fisheries Department could play key facilitating role in human capacity development in the fisheries sector.
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BACKGROUND AND PURPOSE

1. At its Fourth Session in December 2002, the FAO Advisory Committee on Fisheries Research (ACFR) identified human capacity as a high priority issue, especially with respect to meeting the targets set by the World Summit on Sustainable Development (WSSD) in (i) the areas of global reporting and assessment of the state of the environment by 2004, (ii) elaborating National Plans of Action (NPOAs) for combating illegal, unregulated and unreported (IUU) fishing by 2004 and for reduction of fishing capacity by 2005, (iii) applying the ecosystem approach by 2012 and (iv) maintaining or restoring fish stocks by 2015. The Committee felt that past models for delivering on these needs (i.e. formal training provided by experts from developed countries to developing countries) would also need to change to accommodate the newer approaches to fisheries management. It would need to be based on a more mutual learning process, so that information and knowledge could be shared more efficiently and effectively by all involved. Human capacity would need to be built not just for science but also for management and the needs of other stakeholders.

2. In response, the ACFR commissioned a “Discussion Paper on Human Capacity Development in Fisheries” (ACFR/WP/HCB/I/2). This draft was finalized in March 2004 and constituted the basis for a subsequent “Draft Strategic Framework for Human Capacity Development in Fisheries” (ACFR/WP/HCB/I/3). These two documents formed the primary resource materials for the Working Party.

3. The main purpose of the Working Party was to review and comment on both the discussion paper and the draft Strategic Framework for Human Capacity Development in Fisheries. In doing so, the Working Party was invited to pay particular attention to the nature and scope of such a strategy, its guiding principles, objectives and the key strategies to reach these objectives. It furthermore undertook an assessment of the main actions in terms of activities, sectoral responsibilities and priorities required to enable these strategies to be effectively implemented, and outlined an implementation pathway for the strategic framework.

ORGANIZATION OF THE WORKING PARTY

4. The Working Party held its Session at FAO Headquarters, Rome, from 19 to 22 April 2004. It was funded by the Regular Programme with the support of the FishCode Project. The Session was attended by seven experts in their personal capacities. A list of the experts is attached as Appendix B.

5. The Assistant Director-General for Fisheries of FAO, Mr Ichiro Nomura, made an Opening Statement. He welcomed the participants to FAO and Rome and noted, inter alia, that the development of new technologies and systems as well as the adoption of a number of internationally agreed instruments and statements have made it imperative to focus more directly on building human capacity within the fisheries sector, not just for science but also to strengthen the knowledge and skills of fisheries and aquaculture administrators and to encourage the participation of stakeholders in the governance process. He stressed that the holding of the Session was both timely and important. Mr Nomura’s Opening Statement is given in Appendix D.

6. Dr Kwame Koranteng, Vice-Chairperson of ACFR and Dr Vlad Kaczynski were elected Chairperson and Vice-Chairperson, respectively. Mr Tim Huntington was elected Rapporteur with the assistance of Dr Derek Staples and Dr Benedict Satía.
7. The Working Party adopted the agenda attached as Appendix A. The Chairperson then outlined the timetable for the Session. The documents placed before the Session are listed in Appendix C.

OUTCOMES OF THE MEETING

8. The Working Party reviewed the first of the two main working documents, “Discussion Paper: Human Capacity Development in Fisheries” (ACFR/WP/HCB/I/2). The main outcomes of the review are the following:

Vision Statement

9. The Working Party first elaborated a Vision Statement for human capacity development in fisheries as follows:

“A society that has the ability, means and conditions to achieve the sustainable development of fisheries, at local to global levels, for the benefit of all, and to meet the targets of the World Summit on Sustainable Development (WSSD) ‘Plan of Implementation’ as well as the Millennium Goals.”

10. As an overarching principle, the Working Party agreed that human capacity development is a national responsibility that should be supported by global, intergovernmental, regional and non-governmental organizations.

Definition of human capacity development

11. The Working Party modified the working definition of human capacity development provided by UNDP, 1997 as a basis for further elaboration in the revised draft Strategic Framework document as follows:

“The process by which individuals, groups, organizations, institutions, and societies develop their abilities – both individually and collectively – to set and achieve objectives, perform functions, solve problems and to develop the means and conditions required to enable this process”.

12. The linkages between human capacity development and sustainable development are further elaborated in Appendix E.

13. Based on this definition, the Working Party recognized that there are two important attributes of human capacity development. Firstly, human capacity development should address at least four levels – (i) individuals (ii) organizations, (iii) sector/networks, and (iv) the broader enabling environment. Importantly, it was noted that the overall capacity is not just the sum of individual/institutional/sector capacities but also included the opportunities and incentives for people to use and extend their skills within an enabling environment. Human capacity development, therefore, takes place not just within individuals, but between them and in the institutions they create. Capacity-development initiatives must take a holistic view of the context in which individuals operate.

14. Secondly, human capacity development is a process, whereby individual development becomes embedded in a sustainable shift in performance and collective behaviour. This process includes identifying needs, building knowledge, understanding, skills and attitudes that can be implemented through practice and experience of individuals that lead to sustainable changes in the collective performance of institutions, sectors, society and the enabling environment. The Working Party recognized that this is a not a simple linear process and that capacity cannot be solely developed from the outside but should be acquired over time, with external support facilitating the process. It was also recognized that this was a two-way process whereby an individual’s capacity-development needs, knowledge and experience
would closely reflect the requirements of the institution – be it an organization or a household – in which they operate.

15. This means that individuals/organizations/sectors that require or request assistance should be involved in the design and evaluation of the capacity development. Because human capacity development is a process, it has to some extent, uncertain results that are not easily measurable, although it was felt that some evaluation of performance was necessary to promote continual improvement, and more work needed to be done to define success (see paragraphs 28 and 29).

Identification of current and emerging needs in human capacity development

16. As a way of organizing the many and varied needs for human capacity development as they relate to fisheries, the Working Party discussed a classification diagram as given in ACFR/WP/HCB/I/2. This consisted of 22 topics grouped under three main knowledge and skill categories – (i) fisheries science and research; (ii) fisheries sector management and (iii) societal skills. It was explained that these groupings were, in fact, part of a matrix where the four levels of recipients of human capacity development cut across the groupings.

17. In general, the Working Party felt that this was a useful analysis of future needs but also identified several areas for improvement. Firstly, the list of topics had some omissions and the participants suggested the addition of:

(i) Fisheries science and research
   - Bioeconomics
   - Social/policy analyses
   - Communication of results (not just communication technology)

(ii) Fisheries sector management
   - Ecosystem approach to fisheries management
   - Co-management

(iii) Societal skills
   - Capturing traditional knowledge
   - Decentralization

18. The Working Party also felt that identifying the topics in three groupings tended to underemphasize the importance of the interactions between the topics. One suggestion was to link the topics to the three main objectives of the sustainable development of fisheries, viz: (i) economic growth; (ii) environmental sustainability; and (iii) social equity. Another suggestion was to link them to three interconnecting circles of (i) responsive knowledge; (ii) responsive management and (iii) responsive policy. A revised diagram is given in Appendix F.

19. The Working Party recognized that the list was very extensive and that it was necessary to prioritize these topics in any given situation. As a guide to prioritization, the Working Party modified five critical questions that needed to be addressed, as identified in the background discussion paper. The modified questions became:

- Who defines the needs for human capacity development?
- What aspects of human capacity development are most needed to solve the key problems, and the objectives that have been defined to address these problems?
• Which level of capacity is the focus of assistance – individual, organizational, sector/network and/or the enabling environment?
• What are the current capacity levels, and who are the target groups within each capacity level, so that core capacities can be built on?
• What is a realistic expectation of what can be achieved through capacity development?
• What is the time-frame for the required improvement?

Past and current approaches for human capacity development

20. Past approaches to human capacity development (in fisheries and other sectors) have tended to focus primarily on technical support through training to individuals/institutions in science, research and development, and on the institutional capacity of government recipients of aid where institutional weakness was seen to threaten overall project success. Less attention has been paid to non-sector specific skills such as management, business administration and governance.

21. A review of current development approaches suggests greater emphasis is now being placed on human capacity development in areas such as the ecosystems approach to fisheries, the sustainable livelihoods approach, poverty assessments, and on issues of governance and wider generic, non-fisheries specific knowledge and skills. Other sectors are also now concentrating more on the overall enabling environment.

22. There is a wide range of potential delivery mechanisms that can be used for human capacity development, and which can be usefully categorized into (i) face-to-face mechanisms, (ii) remote mechanisms and (iii) a mixture of the two.

23. Face-to-face mechanisms include: classroom-based training, seminars, conferences and workshops, research programmes, exchange programmes, demonstration trials, on-the-job training and mentoring. Face-to-face mechanisms tend to be a resource intensive approach but may have a high degree of success in enhancing knowledge and skills, and developing overall competency.

24. Remote mechanisms include budget/programme support, publications, manuals/training material, radio, distance-based learning, and mechanisms based on information and communication technology (ICT).

25. Almost all are being used in the fisheries sector, with increasing emphasis on remote, Internet-based approaches. However, because many of the stakeholders do not have access to the Internet, it is argued that traditional mechanisms of delivery remain vital, even if the way they are structured and delivered requires some change, especially with regards to more participation by recipients. It is increasingly recognized that mixed use of mechanisms may be appropriate, and that mechanisms may need to be delivered through partnerships of service providers.

Lessons learned

26. The Working Party considered that the following lessons had been learned from a review of previous capacity-development initiatives:
Capacity assessment

Lesson 1: The process of human capacity development itself can add value to overall capability, as well as result in the improved performance of the individuals, groups and organizations.

Lesson 2: Initiatives should take account of, and be tailored to, existing levels of core capacities and involve a two-way process of knowledge transfer and acquisition.

Lesson 3: Human capacity development initiatives need to identify the individuals and organizations that will champion the process and can adopt and lead human capacity development.

Lesson 4: There is a need for better integration of human capacity development initiatives with national planning processes, and especially between policy, management and research.

Needs analysis

Lesson 5: Capacity development initiatives should establish an adequate level of participation in their needs assessment, design, implementation and monitoring.

Delivery

Lesson 6: Initiatives should provide adaptive, flexible and suitable learning pathways, taking into account the individual’s work environment, lifestyle and aspirations.

Lesson 7: Incentives and mechanisms should be provided to support recipients of human capacity development.

Sustainability

Lesson 8: Human capacity development is a long-term process that requires continued support through national initiatives and partnerships.

Lesson 9: Efforts should be made to retain capacity investment within the fisheries sector.

Lesson 10: Those delivering human capacity development initiatives should themselves have the necessary knowledge, skills and abilities to provide human capacity development.

Enabling environment

Lesson 11: Approaches to capacity development should take greater cognisance of the overall societal context and the political influence of supported institutions and sectors.

Lesson 12: Approaches should ensure an adequate focus on the social, economic and environmental context in which technical solutions are being implemented.

Lesson 13: Initiatives should capture and enable attitudinal changes and skills that are likely to result in a collective sense of purpose and progress.
Lesson 14: Initiatives should recognize the need for an enabling environment that provides the incentive to promote the use and further development of the enhanced capacity.

Lesson 15: One size does not fit all - planning of human capacity development should take into account the realities of the overall environment under which capacity enhancement will take place.

27. The Working Party emphasized the need for the draft Strategic Framework to reflect these lessons.

Defining “successful” human capacity development

28. The Working Party considered what constitutes “successful” human capacity development. It was first stated that this needs to be defined by a two-way process between provider and recipient, and that capacity-development objectives should be pre-defined and agreed as an essential part of the initial design process.

29. The Working Party acknowledged that the definition of successful capacity-development is difficult to define as there are different perspectives on what constitutes “success”. However for the purpose of the Strategic Framework, the Working Party felt that success could be looked at on two different levels:

- **Human capacity development indicators**: measures the shorter-term outputs and achievements of capacity-development. These are easy to measure (i.e. number of persons trained, publications issued, and feedback from training sessions) but have limited long-term relevance.

- **Fisheries management indicators**: attempts to measure the contribution of human capacity development in achieving sustainable fisheries management goals (environmental, economic and social). This might be considered the ultimate measure of successful capacity-development but may be difficult to segregate from other background influences.

Strategic Framework for Human Capacity Development in Fisheries

30. Based on the review of the Discussion Document (ACFR/WP/HCB/I/2), the Working Party reviewed and amended the Draft Strategic Framework for Human Capacity Development in Fisheries (ACFR/WP/HCB/I/3). The updated version can be found in Appendix G.

31. The Working Party agreed that the strategic framework for human capacity development is intended not only for FAO but for the use of all stakeholders.

OUTPUTS OF THE MEETING

Recommendations and main conclusions

32. The draft discussion document should incorporate the changes suggested by the Working Party and then be published as a FAO Fisheries Circular.

33. This Administrative Report, including the updated Strategic Framework for Human Capacity Development in Fisheries, should be submitted to ACFR for its deliberation.
Future related activities for FAO

34. The FAO Fisheries Department, pending progress in the adoption of the draft Strategic Framework by its Governing Bodies, should lay greater emphasis on human capacity development in its work.

35. In particular, it is suggested that FAO place emphasis on the following areas:

- Development and operationalization of a practical toolkit or manual to assist in designing, implementing and monitoring human capacity development approaches.

- A number of the strategies outlined in Part 5 of the draft Strategic Framework require considerable levels of cooperation and linkage, within and between beneficiaries, donors, development practitioners, governments, researchers, NGOs and other stakeholders. As the key international fisheries-related organization, FAO could play a lead role in facilitating such cooperation.

- Implementation of the draft Strategic Framework will require feedback and consultation with other donors and stakeholders to assess its merits, improve it, and again, to operationalize the specified actions with associated responsibilities and timeframes. The Working Party expressed the view that the FAO should play a key role in this approach.

- The importance of ICT and newly emerging electronic systems was highlighted in ACFR/WP/HCB/1/2. FAO has been active in developing and supporting an increasingly wide range of ICT solutions (including the Community Development Server) that are aimed at facilitating knowledge exchange using a participatory, “many-to-many” approach. Such systems, or open source alternatives, could be deployed through FAO or its partner agencies for the purposes of fisheries capacity building in several ways. FAO may also act as a key hub for human capacity development tools and mechanisms for these systems.

- FAO regional fishery bodies, along with other intergovernmental organizations, could serve as key hubs in the various regional networks and groupings that already exist or may emerge. It is suggested that where available, the infrastructure and capabilities of existing regional organizations should be used to facilitate these regional fora, rather than attempting to establish new regional organizations specific to human capacity development. The Working Party also expressed concern that not all aquatic areas of the world were covered.

ADOPTION OF THE REPORT

APPENDIX A

AGENDA

1. Opening of the session and introduction of participants
2. Election of the chairperson, vice-chair and rapporteurs
3. Adoption of the agenda and administrative and working arrangements
4. Definition of human capacity development
5. Identification of current and emerging needs in human capacity development
6. Past and current approaches for human capacity development in fisheries
7. Lessons learned
8. Defining successful human capacity development
9. Strategic Framework for Human Capacity Development in Fisheries
10. Recommendations and main conclusions
11. Future related activities for FAO
12. Adoption of the report
APPENDIX B

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# APPENDIX C

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APPENDIX D

OPENING STATEMENT BY MR ICHIRO NOMURA
ASSISTANT DIRECTOR-GENERAL, FAO FISHERIES DEPARTMENT

Ladies and Gentlemen,

I am pleased to welcome you to FAO Headquarters in Rome and to this meeting of the Advisory Committee on Fisheries Research (ACFR) Working Party on Human Capacity Building.

I wish to congratulate you on your appointment by the Director-General to this Working Party. You have been selected, on the basis of your specialized knowledge, for the purpose of giving advice to the ACFR on this very important cross-cutting issue. Although your group is numerically small, consisting of only eight members, selection has been made to include the widest possible subject matter and geographical representation.

Over a relatively short period of time, new technologies and systems have revolutionized the way many organizations, institutions and stakeholders in the fisheries sector conduct their affairs and fulfil their mission. Correspondingly, a number of internationally agreed instruments and statements call for newer approaches in dealing with emerging issues related to the sustainable and environmentally friendly management and development of capture fisheries and aquaculture. Such approaches are emphasized, for example in the FAO Code of Conduct for Responsible Fisheries, and other instruments elaborated within its framework, as well as the Plan of Implementation adopted at the World Summit on Sustainable Development in 2002 in Johannesburg. This is particularly important because of the international character of fisheries, the nature of the activities and the resources, as well as their legal regime.

Ladies and Gentlemen, Colleagues,

There is an increasing demand for training and a need for focusing more directly on building human capacity within the fisheries sector. Such initiatives should be based on a mutual learning process so that information and knowledge may be shared more efficiently and effectively between all involved. Human capacity should also be built, not just for science but also to strengthen the skills of fisheries and aquaculture administrators and to encourage the participation of stakeholders in the governance process.

The FAO Fisheries Department is doing considerable work in this area, but recognizes that its efforts should be enhanced through the development and adoption of a more focused strategic approach to the issue of human capacity building. Such a step would benefit the work, not only of the Department, but of regional management and advisory bodies, governments, universities and research institutions, development assistance agencies and NGOs.
Ladies and Gentlemen,

In developing such a strategic approach, due regard should be given to identifying and establishing partnerships with other agencies and organizations providing capacity building in fisheries. We also need to learn from capacity building initiatives undertaken within other sectors such as agriculture and forestry.

It is in this context that your task during the next four days should be placed. I trust that you will exchange experiences and views and provide strategic counsel for improving human capacity building in order to help secure a sustainable future for capture fisheries and aquaculture. The documents that have been prepared by the Secretariat are for guidance, and it is hoped that they will facilitate your work.

I am confident that you will also address the challenge before you in a cooperative manner and that your experienced counsel will be offered with a sense of pragmatism as well as vision. I hope that, in your discussions, you will focus particularly on the situation of developing countries due to the magnitude of the problems, the need to confront, and their deficit in terms of the resources required to implement effectively the provisions of many international fisheries instruments.

In concluding, Ladies and Gentlemen, Colleagues, I wish to reiterate that we value your opinions and will use your advice to guide our work in fisheries and aquaculture.

I wish you a highly productive and useful meeting and an enjoyable stay in Rome. Thank you.
HUMAN CAPACITY DEVELOPMENT AND SUSTAINABLE DEVELOPMENT

Introduction
It was the Working Party’s view that human capacity development is “the process by which individuals, groups, organizations, institutions, and societies develop their abilities – both individually and collectively – to set and achieve objectives, perform functions, solve problems and to develop the means and conditions required to enable this process”.

According to this definition it is not only important to have due consideration for the levels at which human capacity development takes place and the value of the human capacity development process in itself, but also, with the attainment of the objectives for which human capacity enhancement is required. In the case of fisheries, this clearly refers to the objectives of fisheries management.

As underlined by the Commission for Sustainable Development (1992) and by the Code of Conduct for Responsible Fisheries (1995), it is increasingly being recognized that fisheries management must be strongly focused towards the achievement of sustainable development of fishing activities or fisheries.

Thus, the main central objective of human capacity development in fisheries may be seen as the process intended to improve the abilities, means and conditions to contribute to the attainment of sustainable development of fisheries.

Sustainable development
According the Commission for Sustainable Development (1992), the achievement of sustainable development is not only dependent upon the sustainability of the environment and its natural resources, but also on the level of economic and social conditions reached by the people using the environment and its natural resources.

In this context, fishery resources use and conservation and, therefore, fisheries management must be considered as directly related, not only to the need to sustain the environment and natural resources base over time, but also to the need to satisfy human needs and welfare.

Following Dourojeanni (1993) it is possible to graphically represent (Figure E-1) the achievement of Sustainable Development by the simultaneous attainment of three objectives: (i) environmental and natural resource sustainability, (ii) economic growth and (iii) social equity.

Figure E-1 is a modification of Nijkamp (1990) triangle in which each side represents the three objectives previously mentioned. The arrows represent the direction for the achievement of the specific objective and the central area represents the zone of possible reconciliation of these objectives and is the equilibrium zone for sustainable development.

In simple terms, the attainment of environmental sustainability refers to the balance between the human rate of use of the environment and its resources, with natural resources rates of growth and environmental resilience\(^1\). In similar terms, the attainment of economic growth is related, among other things, to the generation of employment, food, income and wealth (net economic benefits). Social equity refers to the need to give due consideration to the need to

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\(^1\) The term use refers both to the concept of extraction and consumption (with or without transformation) of natural resources, as well as, to non consumptive uses and conservation.
generate equal opportunities among people (generational, gender, cultures) to have access to the natural resources base for its use and to the wealth generated.

Therefore, the attainment of sustainable development implies the balance between these three objectives or, in other words, to their simultaneous achievement.

**Sustainable development, required knowledge and skills**

In a simple way, the concept of Sustainable Development can be graphically described in a Venn diagram (Figure E-2). In this diagram, each one of the three objectives is represented as a set of conditions that requires a certain amount of knowledge and skills to be fulfilled in order for the objectives to be met. The intersection of these three sets represents sustainable development.

Some of the required knowledge and skills arise as a result of the dynamic behaviour of fish and fish stocks over time, and are dependent upon environmental changes as well as on human behaviour (people fishing and other activities). Also, other knowledge and skill needs arise from the fact that human behaviour over time is highly dynamic and interdependent with fish resource base availability, prevailing market conditions, legal and institutional frameworks and existing technical and scientific knowledge.

ACFR/WP/HCB/I/2 presented to the FAO Advisory Committee on Fisheries Research has identified a number of knowledge areas and skills required for human capacity development in fisheries. There is a need to link and reorganize these skills and knowledge areas according to the conditions required to achieve Sustainable Development and its three simultaneous objectives.

**References**


Figure E-1: Sustainable development and its three simultaneous objectives

Figure E-2: Simple system view of sustainable development
THE THREE LINKED KNOWLEDGE AND SKILL GROUPINGS

**Economic Growth - Sustainable Resources - Equity**

**Fisheries Science and Research**
- **Ecosystem Sciences**
  - Ocean and climate science, species and habitat ecology and biodiversity, ecosystem modeling
- **Fisheries Sciences**
  - Fish biology, population dynamics, stock assessment, risk assessment and mitigation
- **Fisheries Technology**
  - Visual and gear design, fishing techniques, design & use of marine electronics, safety at sea
- **Post-harvest Utilisation and Marketing**
  - Fish storage and preservation, processing and product development, distribution and marketing
- **Aquaculture Technology**
  - Breeding, nursing and grow-out techniques, holding facilities, nutrition, disease, environmental
- **Data Collection & Information Management**
  - Data needs assessment, data collection, management, storage & results dissemination, GIS, data compatibility issues and access
- **Social Sciences**
  - Economics and bio-economics, sociology, anthropology, demography and political science
- **Communication Technology**
  - Software and hardware development, digital integration, networking, radio and cellular communication systems

**Fisheries Sector Management**
- **Policy Development**
  - Policy analysis, objective setting, ecosystem approach, strategic planning, decentralisation, international co-operation
- **Sector Planning and Management**
  - Decision-support, planning, co-management, local knowledge, HR management, administration & institutional capacity
- **Regulation of Fishing Capacity**
  - Monitoring systems, vessel registration, capacity reduction schemes, alternative livelihoods
- **Monitoring, Control and Surveillance**
  - Fisheries monitoring and observer programmes, management of surveillance assets, enforcement response mechanisms and processes
- **Fisheries Law & Law of the Sea**
  - International, regional & national law, rule-making, regulatory mechanisms and enforcement
- **Cross-sectoral Integration**
  - Inter-Ministerial dialogue, integrated coastal area management, stakeholder fora
- **Fisheries economics**
  - Natural resource valuation, economic instruments, cost-benefit analysis, investment appraisal, cost and earnings, markets
- **Fisheries socio-economics and livelihoods**
  - SLA, poverty assessments & profiling, stakeholder participation, socio-economics, human behaviour, fisheries culture and values

**Societal Skills**
- **Community Mobilisation**
  - Stakeholder identification and consultation, group formation, organisation, leadership, relationship building, empowerment
- **Management and Administration**
  - Leadership, change management, work planning, organisational skills, administration and accounting, reporting and accountability
- **Conflict Management & Problem Solving**
  - Consensus building and maintenance, facilitation, negotiation, team building, problem solving and stakeholder consultation
- **Good Governance**
  - Principles, rule of law, civil society, equality, integrity, political processes, power-sharing, stewardship and critical thinking
- **Environmental Awareness**
  - Awareness building of best practices and market access/product requirements & sustainability mechanisms (certification and eco-labeling)
- **Information & Communication**
  - Internet access and skills, information use and dissemination, markets and prices, safety at sea

*Founded on the Basic Elements of Sustainable Development*

APPENDIX F
APPENDIX G

DRAFT STRATEGIC FRAMEWORK FOR
HUMAN CAPACITY DEVELOPMENT IN FISHERIES

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PREPARATION OF THIS DOCUMENT

This document contains the draft text of a Strategic Framework for Human Capacity Development in Fisheries.

At its Fourth Session in December 2002, the FAO Advisory Committee on Fisheries Research (ACFR) identified human capacity as a high priority issue, especially with respect to meeting the targets set by the World Summit on Sustainable Development (WSSD) in (i) the areas of global reporting and assessment of the state of the environment by 2004, (ii) elaborating National Plans of Action (NPOAs) for combating illegal, unreported and unregulated (IUU) fishing by 2004 and for reduction of fishing capacity by 2005, (iii) applying the ecosystem approach by 2012 and (iv) maintaining or restoring fish stocks by 2015. The Committee felt that past models for delivering on these needs (i.e. formal training provided by experts from developed countries to developing countries) would also need to change to accommodate the newer approaches to fisheries management. It would need to be based on a more mutual learning process, so that information and knowledge could be shared more efficiently and effectively by all involved. Human capacity would need to be built not just for science but also for management and the needs of other stakeholders.

In response, FAO ACFR commissioned a discussion paper on human capacity development in fisheries. This paper constituted the basis for this draft Strategic Framework and together they formed the primary resource materials for a Working Party held in FAO Rome over 19–22 April 2004. The main purpose of this Working Party was to review and comment on the draft Strategic Framework for Human Capacity Development in Fisheries. In doing so, it was invited to pay particular attention to the nature and scope of such a Strategic Framework, its guiding principles, its objectives and key strategies to reach these objectives. It undertook an assessment of the main actions in terms of activities, sectoral responsibilities and priorities required to enable these strategies to be effectively implemented, and outlined an implementation pathway for the Strategic Framework.

Draft Strategic Framework for Human Capacity Development in Fisheries

ABSTRACT

This document presents a draft Strategic Framework for effective human capacity development for the sustainable development of fisheries. It outlines an overall goal and related objectives, and certain guiding principles of the framework. Key strategies and related actions are specified, and it calls on States, international and bilateral agencies, regional fishery bodies, non-governmental organizations, the private sector, and fishers themselves, all to take on certain commitments to ensure that improved human capacity development in fisheries is achieved.
INTRODUCTION

1. Human capacity development has been defined as “The process by which individuals, groups, organizations, institutions, and societies develop their abilities – both individually and collectively – to set and achieve objectives, perform functions, solve problems and to develop the means and conditions required to enable this process”.

2. The ability of the world’s fisheries resources to generate nutritional, social and economic benefits is firmly rooted in our collective “capacity” to manage and regulate their use. This capacity was traditionally based upon the intergenerational knowledge of fishers and their forbearers, but with rapidly increasing populations and the rising efficiency of fishing methods, many fisheries have become increasingly dependent upon the ability of the research community, resource managers and policy makers to make decisions on their behalf. It is here, therefore, where much of the efforts in capacity development for resource management were directed over recent times.

3. Whilst undoubtedly some progress has been made, there is increasing recognition that a) still greater human capacity improvements are necessary, and b) the rather centralized and top-down approach has ignored – or at least underestimated – the importance of local knowledge, institutions and social capital in the process of economic and social development. As a result, there is a more recent trend towards merging the top-down and bottom-up approaches through co-management and other initiatives. These historical developments over the past twenty years have led FAO, and others, to advocate a number of profound changes in the way we undertake fisheries resource management. These include the:

   • Commission for Sustainable Development (1992), as called for by the United Nations Conference on Environment and Development (UNCED) – Agenda 21, that focuses on sustainable development and poverty alleviation, particularly through community-based approaches.

   • FAO Code of Conduct for Responsible Fisheries (1995), where Article 5 urges that the particular requirements of developing countries are recognized in implementing its provisions. It requests that FAO elaborate an interregional assistance programme so that developing countries are better placed to meet their obligations under the Code.

   • FAO International Plans of Action (IPOAs) for implementing various aspects of the Code of Conduct, including national plans for (i) the management of fishing capacity (1999), (ii) reducing incidental catch of seabirds in longline fisheries (1999), (iii) the conservation and management of sharks (1999); and (iv) to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing (2001).

   • Reykjavik Declaration on Responsible Fisheries in Marine Ecosystems (2001), which calls for greater consideration of ecosystems in setting fisheries management objectives (the so-called ecosystem-based fisheries management approach).

   • Strategy for Improving Information on Status and Trends in Capture Fisheries (2003).

4. There have also been a significant shift in global thinking that influences the ways in which fisheries and their underlying ecosystems are utilized and managed, and the role in which development partners such as FAO interact in this process, including:

   • greater emphasis on sustainability and the environment, as reflected in the targets set by the World Summit on Sustainable Development;

   • a move in public management towards decentralization, strengthening relationships between government and civil society, privatization and deregulation;

   • increasing emphasis on good governance – e.g. participation, accountability, transparency;

   • wider recognition of the need for donor initiatives to be both cost-effective and demand-driven, with more emphasis on partnership;

   • the information and communications revolution, with the internet transforming the way people and organizations can communicate and learn;
• increasing creativity and innovation from developing countries; and
• greater awareness of the need for a more integrated, holistic approach to development, rather than the historical emphasis on sectoral approaches.

5. This recent period of rapid change implies the need to review past successes and failures of human capacity development in fisheries in order to identify the emerging needs and opportunities for improving our stewardship of the world’s fisheries resources. The Working Party for the Advisory Committee on Fisheries Research (ACFR) recognized that past approaches to capacity development (both in fisheries and other sectors) have tended to focus primarily on technical support through skill-based training to individuals and through institutional strengthening. Less attention had been paid to non-sector specific knowledge and skills such as business management, socio-economics and good governance. A number of key lessons are drawn from previous activities. Most important are that:

• Capacity development initiatives must be participatory in design, implementation and monitoring. Initiatives must build on core-capacities and be a two-way process of knowledge transfer.
• Initiatives must provide for flexible and suitable learning pathways.
• Approaches must take greater cognisance of the overall societal/political context in which initiatives operate.
• There is need for much better integration of initiatives based on regional/geographical, intrasectoral, intersectoral, and vertical linkages.
• Appropriate incentives must be built into capacity development initiatives.
• Those delivering capacity development may themselves require capacity development for effective delivery.

6. An overarching lesson learned was that capacity needs to be consolidated and strengthened at four levels: in individuals, in organizations/institutions, in sectors and networks, and in the overall enabling environment in which the first three function (see Appendix A). Initiatives must therefore take a holistic view of the context in which individuals operate. Capacity development is also a process, whereby individual development becomes embedded in a sustainable shift in performance contributing to collective behaviour.

NATURE AND SCOPE

Nature of the Strategic Framework

7. This Strategic Framework has been elaborated within the framework of the FAO Code of Conduct, as envisaged by Article 2 (e). All concerned Members and non-members of FAO and fishing entities are encouraged to support its implementation.

8. Article 5 of the Code of Conduct specifically identifies the need to recognize and understand the particular challenges faced by developing countries in supporting its implementation and urges states, relevant intergovernmental and non-governmental organizations and financial institutions to work for the adoption of measures to address the needs of developing countries, especially in the areas of financial and technical assistance, technology transfer, training and scientific cooperation and in enhancing their ability to develop their own fisheries as well as to participate in high seas fisheries, including access to such fisheries. The Strategic Framework also recognizes that, whilst capacity issues may be greater in magnitude in developing countries, they also affect developed countries, especially where there is a high level of skill migration or where efforts are made to tackle novel emerging concepts such as the ecosystem approach to fisheries management.

9. Article 6.16 refers to promote the awareness of responsible fishing through education and training. Article 8.1.7 suggests that States should enhance through education and training programmes the education and skills of fishers and, where appropriate, their professional qualifications, taking into account programmes should take into account agreed international standards and guidelines. Article
12.1 also suggests that States should ensure appropriate training, staffing and institution building to conduct research, again taking into account the special needs of developing countries.

10. In this Strategic Framework, the reference to States includes the European Community in matters within its competence.

**Scope of the Strategic Framework**

11. The Strategic Framework is global in scope and designed to cover all capture fisheries and aquaculture in inland and marine waters, including all industrial, artisanal, subsistence and recreational fisheries.

12. Capacity initiatives should take a holistic view of the overall context in which such individuals operate, to enable individuals or institutions to implement and utilize newly acquired capacity. The Strategic Framework is intended to be wide-ranging and can be equally applied to individuals, organizations, discrete and networked sectors, as well as the wider enabling environment that represents the societal context in which development processes take place.

13. The Strategic Framework focuses on a more integrated approach to the three broad knowledge and skill groupings as follows (see Appendix B for details).

- **Fisheries science and research** – Whilst many technical subjects are now well established, several new areas are emerging that have a less established knowledge and skill-base, for example aquatic ecosystem management and the process by which research responds to management and policy issues.

- **Fisheries sector management** – In addition to the traditional areas of fisheries sector management a number of themes have been emerging over recent years. For example, the reduction of fishing capacity and poverty alleviation. These require particular skill sets that are often novel and may require different approaches to human capacity development than usually used in fisheries.

- **Societal skills and knowledge** – Societal skills that focus on fisheries-specific issues, as well as wider aspects, that can contribute to an enabling environment require capacity development at the national and sector level. This would assist and facilitate good economic policies and good governance. It also recognizes that fisheries managers and other stakeholders need to possess wider management skills.

**VISION, GOAL AND OBJECTIVES OF THE STRATEGIC FRAMEWORK**

**Vision Statement**

“A society that has the ability, means and conditions to achieve the sustainable development of fisheries, at local to global levels, for the benefit of all, and to meet the targets of the World Summit on Sustainable Development Plan of Implementation as well as the Millennium Goals.”

**Overall goal**

14. The overall goal of this Strategic Framework is to increase the capacity of individuals, groups, organizations, institutions, and societies to develop their abilities, individually and collectively, to ensure the sustainable development (social, economic and environmental) of the world’s fisheries, based on current and emerging trends and needs.

**Objectives**

15. Within this overall goal there are a number of discrete objectives. These include to:

- Strengthen the ability of all nations, especially developing countries, to implement the FAO Code of Conduct for Responsible Fisheries and to develop fisheries management regimes through a precautionary approach.
• Provide a framework that facilitates the prioritization and strengthening of sustainable capacity-development initiatives through regional and national strategies that address local issues.

• Broaden the scope of human capacity development initiatives to include the wider enabling environment that permits good governance, including effective participatory processes and the integration of the environmental, economic and social aspects of sustainable development.

• Develop and facilitate partnerships at a number of levels and scales, including regional partnerships that take strength from the existing regional fishery bodies and arrangements, as well as wider global coordination and cooperation between different donors and other development partners.

• Facilitate collaboration within and between States, at different political and societal levels and between (i) scientists, policy makers, managers, communities, fishers, fish workers and other stakeholders, (ii) fisheries and other sectors, and (iii) the public and private sectors.

• Develop a network of effective delivery mechanisms for capacity development through appropriate partnerships including acknowledged centres of excellence.

GUIDING PRINCIPLES

16. The arrangements for implementation of this Strategic Framework should be based upon the following guiding principles.

Prioritization

17. Human capacity development should be geared towards addressing the global priorities for sustainable development of fisheries, namely continued and greater implementation of the Code of Conduct for Responsible Fisheries, the combating of IUU fishing and reducing fishing capacity, applying the ecosystem approach and maintaining or restoring fish stocks.

Equity

18. The current regional imbalance in standards of human capacity should be reduced through focused capacity-development initiatives.

Sustainability of capacity development

19. Developmental assistance should help build robust, sustainable capacities and capabilities.

20. Human capacity development should be considered a long-term process that requires careful planning, investment and effective implementation.

Participation and cooperation

21. Partnerships are essential to capitalize on acknowledged centres of excellence. These partnerships should cover the wide array of specializations essential for holistic management, enhancing knowledge and capturing experience.

Regional self-development

22. It is primarily the responsibility of the nations to ensure their own capacity-development.

23. Capacity development should build upon existing local knowledge and skills.

24. Regional fishery bodies and arrangements, where appropriate, should provide a proactive role in defining regional capacity-development needs and facilitating a cooperative response.

Information and communication technology

25. An effective response should be developed to bridge the “digital divide” by taking advantage of the information and communications technologies (ICTs) for e-learning, information access and networking.
Results-based monitoring and evaluation

26. Monitoring and evaluation of capacity-development should be based on fisheries management indicators in addition to human capacity improvement indicators, both over the short and long term.

KEY STRATEGIES AND REQUIRED ACTIONS

27. The Strategic Framework contains eight key strategies to achieve the vision, overall goal and objectives. These strategies, together with the related actions, are set out below.

Strategy 1: Capacity development focused at the appropriate level

28. Capacity development needs to be focused at four levels: (i) individuals, (ii) institutions and organizations, (iii) sector-wide and (iv) at the enabling environment.

Required actions:

29. States, relevant intergovernmental, non-governmental organizations and financial institutions should, at the stage of identifying fisheries development/management initiatives, assess the relative capacity development needs of recipients at all four levels and ensure they are appropriately addressed.

30. States, intergovernmental, non-governmental organizations and financial institutions should ensure that the identification, implementation and monitoring of capacity development initiatives are strongly participatory, with continued interaction between the (i) development partners, (ii) funding agencies, (iii) recipients (both at individual and institutional levels) and (iv) the capacity development providers.

Strategy 2: Capacity development built upon, and widening the knowledge and skills of all stakeholders

31. Capacity development needs to be focused at three groups of fisheries-related capacity needs i.e. (i) fisheries science and research, (ii) fisheries sector management and (iii) societal skills. The latter’s enabling environment functions need particular attention. Thus a coherent approach to address and integrate all three groupings, not necessarily through one single initiative, is necessary.

Required actions:

32. States, relevant intergovernmental and non-governmental organizations and financial institutions need to ensure adequate effort, during both programme and project design and recurrent sectoral policy reviews, on the relative needs of, and responses to, all three knowledge and skill areas.

33. States, relevant intergovernmental and non-governmental organizations and financial institutions should ensure that the identification, implementation and monitoring of capacity needs for development are strongly participatory, with a clearly identified two-way process.

34. Regional fishery bodies should, where appropriate, establish a regional knowledge and skills needs analysis around the three main groups, stratified at the appropriate levels, in preparation for development regional networks, centres of excellence and partnerships.

35. FAO, academic institutions and other relevant organizations should continue to lead and develop normative work on human capacity development in fisheries.

Strategy 3: Development of regional capacity-development networks

36. Develop regional networks for addressing common issues and promoting self-reliance through regional capacity development.

Required actions:

37. States, relevant intergovernmental and non-governmental organizations and financial institutions should establish regional fora (within and between themselves) to identify common needs, efficiencies in joint delivery of programmes, and sharing of information.
38. FAO and other relevant organizations should initiate a regionally-based assessment of existing institutions and organizations (both governmental and non-governmental) and their capability to provide capacity development services across the capacity development levels and knowledge and skill areas.

**Strategy 4: Identification and recognition of regional centres of excellence**

39. Identify and recognize centres of excellence linked to regional networks for specific scientific and managerial skills and knowledge which could act as potential service providers. These centres of excellence might be research facilities, academic institutions, private sector businesses or state sector management institutions.

**Required actions:**

40. FAO, through the coordination of regional fishery bodies and arrangements, should identify one or more key national institutions that are, or have the potential for becoming, regional “centres of excellence” for developing knowledge and skill areas relevant to the technical and non-technical expertise required by fishers, fish workers and managers.

41. Regional fishery bodies and arrangements should establish and formalize a human capacity development network consisting of one or more regional centres of excellence for each skill area identified as both relevant to the region and responding to the societal levels of the potential recipients. Where possible, these centres of excellence will be geographically dispersed amongst regional states.

42. States, through the coordination and assistance of regional fishery bodies and arrangements, should develop linkages with these centres of excellence in order to establish opportunities for skills and knowledge transfer, exchange of experience and partnership development.

**Strategy 5: Establishment of improved cross-sectoral linkages and cooperation**

43. Establish better cross-sectoral linkages, including horizontal links within the fisheries sector, for example between researchers and policy makers or between fishers and researchers, but also better linkages between sectors to understand and manage the impacts of other sectors on fisheries.

**Required actions:**

44. States should establish better linkages and fora between stakeholders within fisheries, for example to allow research institutions and stakeholders to make meaningful inputs into policy. Capacity development support should be provided to technical staff and other stakeholders, for example in sustainable livelihood analysis, integrated coastal area management and other socio-economic skills. Fishers and fish workers may require assistance in mobilising representation, consensus building and resource co-management.

45. States, with the assistance of regional fishery bodies and arrangements, should improve linkages between scientists, data providers and sectoral decision-makers to reduce capacity limitations in applied research and monitoring. Capacity-development support will be required in setting realistic and practical management objectives and monitoring targets, especially in pursuing the ecosystem approach to fisheries.

46. States, in collaboration with intergovernmental and non-governmental organizations, should establish fora for improved management and understanding of intersectoral impacts. Capacity-development support will be required in facilitating dialogue at policy (e.g. interministerial) and operational (e.g. watershed or coastal management) levels through improved sector planning, communication and coordination skills.

**Strategy 6: Appropriate delivery mechanisms to suit local circumstances**

47. Tailor delivery mechanisms through a participatory process to ensure they meet the particular needs, capabilities and funding of the recipients, with appropriate matching to service providers.
Required actions:

48. States, in collaboration with relevant intergovernmental and non-governmental organizations and financial institutions, should assess the need for mixed capacity-development delivery mechanisms that allow for the practical requirements and flexibility needed by beneficiaries.

49. States, in collaboration with relevant intergovernmental and non-governmental organizations and financial institutions, should utilize formal processes to match delivery mechanism options to the level, aspects, and area of capacity being targeted.

50. States, in collaboration with relevant intergovernmental and non-governmental organizations and financial institutions, should ensure the capacity of providers to undertake their roles effectively, and selection of providers should be based on categorization and the establishment/recognition of centres of excellence for specific skills and knowledge.

51. Organizations and institutions should promote opportunities for the use of mentors and “on-the-job” training, as these are seen as particularly cost-effective.

52. States should embrace new information and communication technologies that increase accessibility to knowledge and promote cooperation.

Strategy 7: Sustainability of capacity-development initiatives

53. Establish long-term capacity-development initiatives where (i) individuals are encouraged, and able, to reinvest their new knowledge and skills in the fisheries sector and (ii) the capacity of institutions is strengthened to adapt to change.

Required actions:

54. States should develop an enabling environment that allows individuals, organizations and institutions to flourish in a stable, robust and interactive society taking greater cognisance of the overall societal context and the political influence of supported institutions and sectors.

55. States, relevant intergovernmental and non-governmental organizations and public and private sector institutions should assist to develop human resource development plans where individuals are encouraged to pursue a clear, progressive and well-rewarded career path. This should include the use of regularly reviewed personal development plans with associated training needs assessments and career appraisals. This process will require a better understanding of individuals work environment requirements, lifestyles and aspirations.

56. States, relevant intergovernmental and non-governmental organizations and public and private sector institutions should strengthen their abilities to assess their own functional capacities and skill flows in order to monitor dynamic changes that occur over time. This will allow a dynamic approach to identifying and addressing knowledge and skill gaps, and permit the development of strategies to retain key staff for core functions.

57. FAO, other development agencies and donors should enhance their own capacities in order to respond to the changing needs of the fisheries sector. This requires a balance between field-based activities and normative work on capacity-development approaches and delivery mechanisms.

Strategy 8: Application of results-based management to capacity-development approaches

58. Improve the understanding of capacity-development “success” and its measurability, to ensure that initiatives build upon prior experience and lessons learned.

Required actions:

59. States, with the assistance of intergovernmental organizations, should conduct further investigation into both fisheries and human capacity indicators, and develop a suite of indicators relating to process, product, performance, output and sustainability.
FAO, other international organizations, development agencies and donors should establish common protocols on ex ante and ex post evaluation of capacity development needs and outcomes. In particular, longer-term ex post analyses are required to assess the success and sustainability of capacity development initiatives.

PROMOTION AND IMPLEMENTATION MECHANISMS

General call for improving human capacity development in fisheries

States, regional fishery bodies and arrangements should develop national and regional plans for improving human capacity development at all levels in society and in a wide range of technical, managerial and enabling roles. These plans should be realized through a series of linked short-term and long-term actions that are developed through partnerships.

The role of States

States have a key role in implementation of this Strategic Framework, both at the national level but also as main participants in regional activities. Of primary importance is the need to provide an enabling environment where well functioning institutions, comprising of motivated and dedicated individuals, can flourish in a climate of good governance, a principled policy climate and the rule of law.

States should evaluate the actions they need to take to improve their capacity to responsibly manage their fisheries, address these requirements on a priority basis, and report on the improvements they make, as part of their biennial report to FAO on the Code of Conduct.

The role of regional fishery bodies and arrangements

Regional fishery bodies and arrangements, within the limits defined by their conventions and to the extent mandated by their members, should participate in the implementation of this overarching Strategic Framework by providing support to their members in identifying a regional plan for human capacity development in fisheries.

Regional fishery bodies and arrangements should, within the limits defined by their conventions and to the extent mandated by their members, take a lead in assisting their members identifying potential partnerships and networking opportunities at both regional and interregional levels, that might serve to assist and implement the regional plan.

The role of FAO

FAO will, as and to the extent directed by its Conference, and as part of its Regular and Field Programme activities, support States and regional fishery bodies and arrangements in the implementation of this Strategic Framework.

FAO will, as and to the extent directed by its Conference, support member States’ implementation of this Strategic Framework, through in-country technical assistance projects using Regular Programme funds and by use of extrabudgetary funds made available to the Organization for this purpose. For better conservation and management of fishery resources, FAO should prepare a specific programme for improving the planning, implementation and monitoring of human capacity development in fisheries.

FAO will, through the Committee on Fisheries, report biennially on the state of progress in the implementation of this Strategic Framework.

The role of development partner agencies and non-governmental organizations

International and national development partner agencies and organizations, should give priority to the provision of financial and technical assistance where it is most needed, in the form of targeted capacity development within this overall strategic framework and the development of subsequent regional plans.
70. Non-governmental organizations (national, regional and international) concerned with fisheries, fishers and fish workers and the aquatic environment and related research, should participate in the implementation of the Strategic Framework through appropriate support, information, development of methods and capacity development.

**The role of resources users**

71. The fishers and fish workers have an important role to play in both the development of their own capacity for resource stewardship and co-management as well as the way they interact with scientists, resource managers and policy makers. This process is often best progressed on a collective basis and thus increased efforts to form representative stakeholder groups, with whom States, relevant government agencies, non-governmental organizations and private sector institutions can interact, is essential. These groups can participate in capacity-assessment exercises as well as training needs analyses and curriculum development initiatives.

**The role of the private sector**

72. In certain situations private-public partnerships may be appropriate in providing novel capacity development mechanisms, for example internet-based training delivery and provision of information. Such partnerships can be an efficient way to capitalize on the unique strengths of the public and private sectors. They also offer the potential to access greater levels of funds/investment, additional expertise and enthusiasm, and to generate profits to ensure sustainability.
Appendix A. The four levels of capacity development

### Appendix B. The key knowledge and skill groupings of capacity development for fisheries

**Founded on the Basic Elements of Sustainable Development**

- **Economic Growth** - Sustainable Resources - Equity

<table>
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<th>Conflict Management &amp; Problem Solving</th>
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<td>Consensus building and maintenance, facilitation, negotiation, team building, problem solving and stakeholder consultation</td>
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<tr>
<th>Environmental Awareness</th>
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</thead>
<tbody>
<tr>
<td>Awareness building, education, training in sustainable fishing methods, monitoring and reporting</td>
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<thead>
<tr>
<th>Sustainable Trade</th>
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<tbody>
<tr>
<td>Awareness building of best practices and market access/product requirements &amp; sustainability mechanisms (certification and eco-labeling)</td>
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</tbody>
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<thead>
<tr>
<th>Information &amp; Communication</th>
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</thead>
<tbody>
<tr>
<td>Internet access and skills, information use and dissemination, markets and prices, safety at sea</td>
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<table>
<thead>
<tr>
<th>Good Governance</th>
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<tbody>
<tr>
<td>Principles, Rule of Law and co-management, civil society, equality, integrity, political processes, power-sharing, stewardship and critical thinking</td>
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<table>
<thead>
<tr>
<th>Societal Skills &amp; Knowledge</th>
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<tbody>
<tr>
<td>Community Mobilisation</td>
</tr>
<tr>
<td>Stakeholder identification and consultation, group formation, organisation, leadership, relationship building, empowerment</td>
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<table>
<thead>
<tr>
<th>Management and Administration</th>
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<tbody>
<tr>
<td>Leadership, change management, work planning, organisational skills, administration and accounting, reporting and accountability</td>
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<thead>
<tr>
<th>Integration</th>
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</thead>
<tbody>
<tr>
<td>Ecosystem Sciences</td>
</tr>
<tr>
<td>Ocean and climate science, species and habitat ecology and biodiversity, ecosystem modeling</td>
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<table>
<thead>
<tr>
<th>Fisheries Sciences</th>
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</thead>
<tbody>
<tr>
<td>Fish biology, population dynamics, stock assessment, risk assessment and mitigation</td>
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<thead>
<tr>
<th>Fisheries Technology</th>
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</thead>
<tbody>
<tr>
<td>Vessel and gear design, fishing techniques, design &amp; use of marine electronics, safety at sea</td>
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<thead>
<tr>
<th>Post-harvest Utilisation and Marketing</th>
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<tbody>
<tr>
<td>Fish storage and preservation, processing and product development, distribution and marketing</td>
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<thead>
<tr>
<th>Aquaculture Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding, nursing and grow-out techniques, holding facilities, nutrition, disease, environmental management</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Communication Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software and hardware development, digital integration, networking, radio and cellular communication systems</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Data Collection &amp; Information Management</th>
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</thead>
<tbody>
<tr>
<td>Data needs assessment, data collection, management, storage &amp; results dissemination, GIS, data compatibility issues and access</td>
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<table>
<thead>
<tr>
<th>Fisheries Science and Research</th>
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</thead>
<tbody>
<tr>
<td>Fisheries Sector Management</td>
</tr>
<tr>
<td>Sector Planning and Management</td>
</tr>
<tr>
<td>Decision-support, planning, co-management, local knowledge, HR management, administration &amp; institutional capacity</td>
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<thead>
<tr>
<th>Regulation of Fishing Capacity</th>
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<tbody>
<tr>
<td>Monitoring systems, vessel registration, capacity reduction schemes, alternative livelihoods</td>
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<thead>
<tr>
<th>Fisheries Monitoring and Observer Programmes</th>
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<tbody>
<tr>
<td>Fisheries monitoring and observer programmes, management of surveillance assets, infringement response mechanisms and processes</td>
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<thead>
<tr>
<th>Fisheries Law &amp; Law of the Sea</th>
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<tbody>
<tr>
<td>International, regional &amp; national law, rule-making, regulatory mechanisms and enforcement</td>
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<thead>
<tr>
<th>Fisheries Economics</th>
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</thead>
<tbody>
<tr>
<td>Natural resource valuation, economic instruments, cost/benefit analysis, investment appraisal, cost and earnings, markets</td>
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<thead>
<tr>
<th>Fisheries socio-economics and livelihoods</th>
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<tbody>
<tr>
<td>SLA, poverty assessments &amp; profiling, stakeholder participation, socio-economics, human behaviour, fisher culture and values</td>
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<tr>
<th>Cross-sectoral Integration</th>
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<tbody>
<tr>
<td>Inter-Ministerial dialogue, integrated coastal area management, stakeholder fora</td>
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<tr>
<th>Policy Development</th>
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<tbody>
<tr>
<td>Policy analysis, objective setting, ecosystem approach, strategic planning, decentralization, international co-operation</td>
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<thead>
<tr>
<th>Social Sciences</th>
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</thead>
<tbody>
<tr>
<td>Economics and bio-economics, sociology, anthropology, demography and political science</td>
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The first session of the Working Party on Human Capacity Development in Fisheries of the FAO Advisory Committee on Fisheries Research (ACFR) was held in Rome, Italy, from 19 to 22 April 2004. The session agreed on a vision statement and a definition of human capacity development and also elaborated a strategic framework on the subject consisting, *inter alia*, of eight key strategies and related actions. The Working Party requested that this report and the draft strategic framework be submitted, by the Secretariat, to ACFR at its next session.