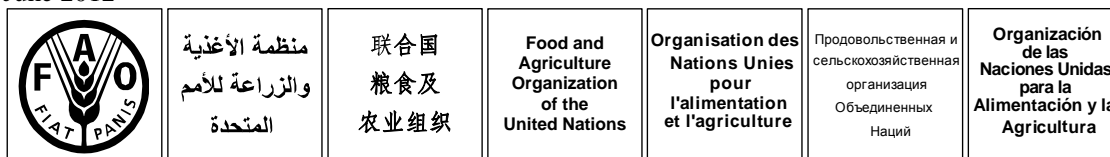


June 2012



## COMMITTEE ON FISHERIES

### Thirtieth Session

Rome, Italy, 9 - 13 July 2012

### Vision for the future

#### Executive Summary

This document presents a summary of two Future Vision Papers recently prepared by the FAO Fisheries and Aquaculture Department (FI): 1) Capture Fisheries and 2) Aquaculture. The present situation and possible future scenarios are presented along with the drivers that are expected to influence future fisheries and aquaculture. The Vision Papers are working documents which attempt to look into the future of fisheries and aquaculture to see what the challenges are, how they should be tackled and how problems could be resolved in order to reach future targets, including ideas and aspirations for the sector. The preparation of this paper was informed by the corporate Strategic Thinking Process described in detail in paper COFI/2012/12.1, with an emphasis on adapting its implications for fisheries and aquaculture as described in paper COFI/2012/12.2. The papers are not FAO policy nor are they the defined and agreed Vision and Mission Statements, but rather tools to help plan the work and make it more relevant to future challenges.

#### The Committee is invited to:

- comment on the general future vision and components of future visions presented;
- comment on the validity of the drivers that will influence future fisheries and aquaculture scenarios;
- comment on FAO's role in meeting the future challenges of food production from aquaculture and fisheries; and
- provide advice on how to prioritize future fisheries and aquaculture activities for FAO.

## **BACKGROUND**

1. FAO, through its Fisheries and Aquaculture Department (FI), has undertaken an activity to develop a future vision for fisheries and aquaculture in order to:
  - help FAO to consolidate its place as a leader in global agenda setting in fisheries and aquaculture;
  - understand the drivers and main factors that will influence society, the environment and therefore FAO's ability and role in responsible fisheries and aquaculture;
  - provide input into the ongoing strategic planning exercises, and making full use of the outcomes of such exercises.
2. Four future vision papers are foreseen. As a first step, two vision papers have been drafted on capture fisheries and on aquaculture. The vision papers attempt to look into the future of fisheries and aquaculture to the year 2050. However, due to the lack of vital economic data and information, forecasting aquaculture production up to the year 2050 was not possible. Therefore, in most places, aquaculture vision was restricted to 2030.
3. Two other vision papers are also planned - on information gathering and dissemination, and on marketing and post harvest issues. The four vision papers will be departmental living documents that will be continually revisited to meet the new challenges and opportunities in the fisheries and aquaculture sector.
4. These vision papers are being prepared in the context of the Strategic Thinking Process launched by the FAO Director-General in January 2012 to determine the future strategic direction of FAO, and to inform the review of the current Strategic Framework 2010-19, as described in detail in paper COFI/2012/12.1, with an emphasis on adapting its implications for fisheries and aquaculture as described in paper COFI/2012/12.2.

## **CONTRIBUTION OF FISHERIES AND AQUACULTURE TO GLOBAL FOOD**

5. With hunger and malnutrition identified as amongst the most significant problems facing the world's poor, the challenge governments and international development communities need to address, given the steep population growth, is whether there will be adequate food and nutrition security for all. It is tragic that a large proportion of the global population is currently suffering from multiple forms of malnutrition. The deteriorating trend in global food security reached an alarming level in 2009, when more than one billion people - the "bottom billion" or one-sixth of humanity - were undernourished. This was a consequence of the global economic slowdown, reinforced by the food and fuel crises, that reduced incomes and employment opportunities of the poor, and thus, significantly lowering their access to food. These crises mostly affect rural areas of the world, where 70 percent of the world's hungry live and work. The majority of undernourished people (62 percent) live in the Asia-Pacific region where we find the largest concentrations of people. In Africa climate change appears to be reducing agricultural production, particularly in areas affected by drought.
6. To provide food to the world's population in 2050, it has been estimated that agricultural output, originating primarily from crops, livestock and fisheries, including aquaculture, must increase by at least 60 percent. Meeting this target is indeed a formidable challenge for humanity considering that an alarming number of people still suffer from hunger and poverty. Hence, finding opportunities to alleviate poverty and increase food security through agriculture, including fisheries and aquaculture, is vital and timely.
7. Foods derived from aquatic resources have a significant role to play across the supply and value chain, linking ecosystems, economic development and human wellbeing. In 2010 the capture fisheries sector produced 89.5 million tonnes of fish, directly employed over 34 million people, and contributed to the livelihoods of over 200 million people in developing countries. The natural resources underlying this sector are under considerable stress, particularly from anthropogenic

sources, and many current features of the sector's functioning are considered to be unsustainable. In aquaculture, 59.9 million tonnes of food fish valued at USD 119.4 billion were produced in 2010, providing direct and indirect employment to over 12 million people globally. Continued increases in production that will be essential to meet the growing demand for fish and provision of and access to necessary resources will certainly be a challenge. Fisheries and aquaculture supplied approximately 16percent of the world's animal protein, provided important sources of essential minerals and fatty acids.

## **OPPORTUNITIES AND CHALLENGES FOR FAO**

8. For FAO, there are many challenges in assisting Member Countries to meet the increasing demand for fish over the coming decades. A strong vision is needed to place issues into context, to advise Member Countries, and to design and support measures to promote change and to protect resources.

9. The strategic planning process developed an overall Vision for the fisheries and aquaculture sector:

*A world in which responsible and sustainable use of fishery and aquaculture resources make an appreciable contribution to human well-being, food security and poverty alleviation.*

10. To turn this Vision into action, a Mission Statement for FAO's work in the sector was formulated:

*To strengthen global governance and the managerial and technical capacities of members and to lead consensus-building towards improved conservation and utilization of aquatic resources.”<sup>1</sup>*

11. The widely recognised context for sustainable development identifies three major 'capitals': those of *natural resources*, of *human and social value*, and of *economic and financial capital*, and describes the ways these may be traded off in the course of development<sup>2</sup>. It recognises key attributes of natural resources systems and the conditions in which renewable and non-renewable elements may be used and managed to create and deliver long-lasting and resilient social and economic benefits. The key components for FAO to contribute to achieving the vision for capture fisheries and aquaculture can be expressed in two broad categories:

- Ensuring ecosystem well-being – including biological and physical resources, and ecosystem services; and
- Ensuring human well-being – comprising food security, poverty reduction, diversified livelihoods, self-determination, and happiness.

12. Over-arching and interacting with both of these and with economic/financial capital factors is *governance* – the institutional arrangements that integrate actions and processes to achieve responsible fisheries and aquaculture.

## **THE FUTURE: DRIVERS OF CHANGE AND THEIR IMPLICATIONS FOR FOOD FISH PRODUCTION**

13. A variety of publications have examined future scenarios for food demand and supply<sup>3</sup> within which six main sets of drivers can be identified for fisheries and aquaculture.

<sup>1</sup>FAO Web site: <http://www.fao.org/fishery/about/en>

<sup>2</sup> World Summit on Sustainable Development (WSSD). 2008

<sup>3</sup> Foresight 2011; Christopher L. Delgado, Nikolas Wada, Mark W. Rosegrant, Siet Meijer, Mahfuzuddin Ahmed (2003) Outlook for Fish to 2020: Meeting Global Demand. A 2020 Vision for Food, Agriculture, and the Environment Initiative. International Food Policy Research Institute. Washington, D.C., U.S.A. and WorldFish Center, Penang, Malaysia, October 2003. OECD/FAO (2009). OECD-FAO Agricultural Outlook 2009-2018. Siw a Msangi and Mark W. Rose grant (2012). 2020 Conference: Leveraging Agriculture for Improving Nutrition and Health, February 10-12, 2011; New Delhi, India. 2020 Conference Paper 3.

- global population increase – 8 billion in 2030 and probably 9 billion by 2050 with most growth in low-middle income countries; increased urbanization; population growth most heavily influenced by the extent of female education and also by the Gross Domestic Product (GDP);
- changes in income and per capita demand – increased GDP and greater demand for fish and fish products, especially in East and South Asia;
- governance of food production – the potential ability of public, private and civil society to act collectively and holistically in managing resources and production processes;
- climate change and the impacts and effectiveness of adaptation and mitigation strategies.
- competition for resources – demand for global energy and for fresh water could double between now and 2050. Agriculture currently uses 70 percent of freshwater resources;
- changes in values and ethics of consumers – influencing food choice and policy options on issues such as environmental sustainability, animal welfare, fair trade, equity, bio-technologies.

14. By 2050, overall food demand is expected to rise by 60 percent over 2009 levels, about one percent per year globally and up to two percent per year in developing countries. In the developing world, fish consumption was estimated to grow by 1.5 percent per year to 2020<sup>4</sup>. The rate of increase is even higher now and growth in consumption will be even more influenced by income changes as population growth levels off. Demand in developed countries is not expected to grow as quickly, and fish consumption growth in Africa is expected to be slower than elsewhere.

15. Production from global capture fisheries has levelled off at some 90 million tonnes, though there may be significant unrecorded amounts, particularly from inland waters (SOFIA 2010) and as a result of IUU fishing. There may be scope for increased production by exploiting new fish stocks, e.g. meso-pelagics, by improving fisheries management, including management of by-catch. For example, according to Ye et al.<sup>5</sup>, 16.5 million tonnes of increased production from capture fisheries could be expected if World Summit on Sustainable Development (WSSD) fisheries targets were met. The annual loss of \$50 billion per year estimated to occur in marine capture fisheries could be avoided if fishing capacity was reduced to match sustainable levels. Fishery enhancements including stocking from aquaculture facilities, habitat modification and use of non-native species may be an option to augment production in some cases. Currently, a third of marine catches (27 million tonnes) is used for animal feed in the form of fish meal and fish oil; a direct utilization of these species for human consumption rather than for the production of high-value animals and fish could be an important contribution towards alleviating hunger. Otherwise, significant supplies of fish to meet the increased demand are most likely to derive from aquaculture, the fastest growing food production sector globally.

16. Food fish prices are now seeing a pronounced upturn with the exception of some canned fish and species such as shrimp and salmon<sup>6</sup>. Salmon and shrimp are now widely produced by aquaculture, which will increasingly influence fish prices, capture fisheries demand and incentives to fish. While price rises may occur in real terms, the costs of inputs are also likely to rise, and profitability of fishing will be a key issue in future activities and outputs. The supply of low-cost (mainly pelagic) fish, traditionally available from capture fisheries, will also be an important issue for food access and food security, on the one hand, and for continued aquaculture growth, on the other.

17. Increased population and expanding economies are expected to exert strong pressure on the world's aquatic ecosystems under a variety of future scenarios. This is especially true for freshwater

<sup>4</sup> Delgado, C.L., N. Wada, N.W. Rosegrant, S. Meijer, and M. Ahmed. 2003. Fish to 2020: supply and demand in changing global markets. International Food Policy Research Institute and WorldFish Center. WorldFish Center Technical Report 62.

<sup>5</sup> Ye et al. Rebuilding global fisheries: The World Summit Goal, costs and benefits (Article in press). Ye, Y., Cochrane, K., Bianchi, G., Willmann, R., Majkowski, J., Tandstad, M., Carocci, F. *Fish and Fisheries*.

<sup>6</sup> Food Outlook 2012. FAO Food Outlook May, 2012. <http://www.fao.org/docrep/015/al989e/al989e00.pdf>

ecosystems, in which water availability in 30 percent of the world's rivers is expected to be reduced due to increased water abstraction and climate change. The latter will further exacerbate impacts by increasing water availability in some areas while decreasing it in others. Ocean acidification due to climate change will also impact marine and coastal ecosystems, affecting specific groups of animals and the food webs of which they are a part. Sea level rise is the most likely threat (and better predicted) for lowlands and coastal zones. In some areas of the world, such increases will pose a threat to inland fisheries and aquaculture, but it may also offer new opportunities in some areas such as marine fisheries and aquaculture for the use of coastal zones previously occupied by agriculture.

18. Although the future forecasts are very challenging for global food production, the contribution of fish to global diets in 2012 has been estimated as 19.2 kg per person, supplying over three billion people with at least 20 percent of their average animal protein intake. This increase is due mainly to the ever-growing production of aquaculture. The share of farmed fish in total food fish was 47 percent in 2010 and is projected to reach 51 percent in 2015 and almost 54 percent by 2020.

19. Of the current 18.6 kg of fish per capita, 9.5 come from fisheries and 9.1 from aquaculture. Since people tend to consume more fish as their incomes grow, countries' per capita fish consumption is likely to increase. To account for the potential impacts of income growth on fish consumption, an econometric model was developed by FAO to use countries' historical fish consumption and income patterns to estimate their "income elasticity" of fish demand, which measures the percentage change in fish demand caused by a percentage change in per capita income.<sup>7</sup> The analysis indicated that if aquaculture could maintain its current growth rate, there would be enough fish to feed the growing population at the current per capita consumption. However, when both the population increase and income (GDP) growth are considered, even if aquaculture could maintain the current rate of growth, there would not be enough fish to feed the growing and wealthier populations, at the current rate of consumption, even by 2030.

20. There is a close relationship between capture fisheries production and aquaculture production, as fed-aquaculture, which accounts for about 75 percent of the current production from aquaculture, relies heavily on fishmeal and fish oil, which in turn are heavily dependent on marine capture fisheries. A recent forecast for fish production derived from different patterns of fish consumption and demand<sup>8</sup> produced five scenarios for aquaculture development: "Replacement efficiency", "Slow aquaculture", "Baseline", "Fast aquaculture" and "Ecological collapse". These scenarios have been used to predict associated fishmeal and fish oil prices with the initial consideration that the fishmeal production-consumption system is relatively stable. They also forecast that climate change will result in a small (6 percent) global increase in the potential catches of "large fish" and a potential growth of approximately 3.6 percent in fishmeal production by 2050, at the global level.

21. The study however cautions that very high price increases (the "Ecological collapse" scenario) could trigger a sequential collapse of small pelagic fisheries. In that event, in the short-run, the economic incentive to exceed maximum sustainable yield is high, potentially resulting in increases in fishing capacity and rapid depletion of resources. Such scenarios would be catastrophic for aquaculture, if the dependency on fish meal and fish oil is as it is today. Nevertheless, considering the current trend of a relative reduction in fishmeal usage in aquatic feeds as a result of increased reliance on other vegetable or animal proteins, it is unlikely that fish meal will become a limiting factor for aquaculture production in the coming decades. However, producing more fish low in the food chain that require less feed resources (e.g. herbivorous and omnivorous species) and using integrated production systems, such as integrated multitrophic aquaculture, that will maximize resource use,

---

<sup>7</sup> Income elasticity being 1 indicates that given other things remaining the same, a one-percent increase in per capita income would cause one percent increase in fish demand.

<sup>8</sup> Merino, G., Barange, M., Blanchard, J.L., Harle, J., Holmes, R., Allen, I., Allison, E.H., Rodwell, L.D. 2012. In press in *Global Environmental Change*. Can marine fisheries and aquaculture meet fish demand from a growing human population in a changing climate? <http://www.sciencedirect.com/science/article/pii/S0959378012000271>

provides the best opportunity to sustainably increase global fish production, particularly for food security, without exerting further pressure on aquatic resources.

### **WHAT NEEDS TO BE DONE IN ORDER TO FULFILL THE VISION**

22. Capture fisheries and aquaculture will need to ensure that *ecosystem well-being* and *human well being* are incorporated into the vision to 2050. The goal of the vision component relating to ecological well being is that *aquatic ecosystems are utilized in an optimal way to achieve and maintain social, economic, food and ecosystem service benefits*. Implied in this goal is the notion that maintenance of biodiversity and ecosystem services is essential to maximize the social and economic benefits. Given also that aquatic ecosystems are used for a broad range of human activities, the goal can only be meaningful if fully shared by society at large.

23. Means to achieve the goal can be identified, each with specific constraints and opportunities, and in the future, each influenced by various drivers such as population growth, income and resource competition. Improved governance and operations as well as improved information will be essential.

24. The goal for the vision component on *human well-being* is that capture fisheries and aquaculture produce and sustain optimal societal benefits. Benefits relate to economic, social, cultural and other dimensions of human well-being. This goal comprises human, social and institutional dimensions, and has as a prerequisite an effective and socially interactive system of fishery management and aquaculture best practices. FAO's corporate goals prioritize food security and poverty alleviation, and the protection of the most vulnerable population groups. The various dimensions of fisheries and aquaculture, namely socioeconomic development, food and nutrition security, cultural and religious aspects, cannot be maximized concurrently. Countries need to strategize tradeoffs between these dimensions. Balancing these objectives requires political decisions, and if possible, the policy processes involved should be based on sound principles and evidence.

25. Governance has a major role to play in fulfilling the vision of ecosystem and human wellbeing. The high uncertainty and volatility characterizing the future can best or only be addressed by the world community taking a strong stewardship role. Transitioning to good governance will involve short, medium and long-term interventions.

### **Means to achieve the vision for capture fisheries**

26. As the last major food-producing sector based on the utilization of resources from the wild, capture fisheries production is extremely dependent on the health and sustainable use of aquatic ecosystems, and is highly threatened by widespread unsustainable fishing practices. Key drivers of overfishing include a lack of fully realized management systems resulting in open access to fish resources, excess fishing capacity and unsustainable fishing practices. To achieve the vision the following factors need to be addressed<sup>9</sup>:

- inadequate governance both within fisheries and across social and environmental institutions and industry sectors;
- lack of alternative livelihoods, particularly in rural areas or difficulty in setting up decommissioning systems particularly in poor countries;
- poor allocation of rights appropriate to the social and economic context of the fishery;
- limited knowledge about the resources, their ecosystems and human communities; and
- greater access to markets may also drive over-exploitation by providing fishers with an incentive to fish even after local demand had been satisfied<sup>10</sup>.

<sup>9</sup> The State of World Fisheries and Aquaculture. SOFIA 2010. FAO Fisheries and Aquaculture Department. Rome, 2010.

<sup>10</sup> Caddy and Cochrane. 2001. A review of fisheries management past and present and some future perspectives for the third millennium Caddy, J.F., Cochrane, K.L. 2001. Ocean and Coastal Management 44 (9-10), pp. 653-682.

27. The following actions addressing both ecosystem and human well-being will play a key role in achieving the vision:

- improve land-use and water-use planning to enhance ecosystem productivity and value;
- develop new fisheries, where opportunities allow and using an ecosystem approach;
- develop technologies to make capture fishing safer and more environmental friendly;
- increase positive impacts of interactions between aquaculture and fisheries;
- reduce poverty, and secure livelihoods that are resilient to environmental and economic change;
- ensure participation of fishers, fish workers and other stakeholders in decision-making;
- recognize small-scale fisheries in sector and cross-sector policies and decision-making forums and ensure that their contribution to national economies and food security is recognized, valued and enhanced;
- *eliminate fishing overcapacity and eliminate subsidies that enhance fishing effort;*
- strengthen Regional Fisheries Management Organizations in order to successfully manage resources, including highly migratory species and straddling stocks;
- include recreational fisheries as a part of overall fisheries management;
- ensure that harvested fish meets international standards on quality, safety and consumer protection;
- help ensure that fishing communities (and countries) are less vulnerable and better able to prepare for and respond to the impacts of natural disasters, including those related to climate change;
- promote the role of women in fishing communities in order to realize their full potential as productive members of society; and
- eliminate inappropriate child labour (e.g. forced labour or labour that inhibits the development of a child's full potential) from the capture fisheries sector.

28. For capture fisheries, governance has an especially important role to play in achieving the vision in the short, medium and long-term. The Ecosystem Approach to Fisheries provides a framework for translating high level goals to practical realization through a thorough and participatory management process that considers the three pillars of sustainable development, i.e. the ecological, social and the economic one. The framework, to be applied to specific fisheries or areas, encourages the contextualization of priorities as regards measures to be taken. Examples of priority measures include:

- Short-term transition measures:
  - consultation and awareness raising;
  - reducing fishing effort;
  - re-deploying fishers;
  - stock assessment, management decisions and enforcement; and
  - develop local knowledge-based governance systems, using self-regulation.
- Medium-term transition measures:
  - proceed to a more formal rights-based system of fishery management;
  - improve efficiency in the remaining fleet.
- Long term transition measure and an outlook into the future:
  - formation of specialized and fine-tuned arrangements by small and larger groups of fishers;
  - Linking public, private and civil society interests in inland, coastal and offshore waters, so that fisheries will have turned from a “race for all” to full cooperation, maximizing the value of the catch throughout the year;
  - Increased environmental stewardship and adoption of ethical frameworks that respect nature and human dignity.

### Means to achieve the vision for aquaculture

29. A variety of drivers have contributed to aquaculture's spectacular growth in recent decades.

According to a number of recent publications and reviews<sup>11</sup>, the relative importance of the growth factors or drivers varies with location and context and that, while each has a definable influence, positive features of all are usually required. The major drivers include:

- initial availability of inland waters, lagoons and sheltered bays, with suitable water quality, production temperatures and nutrient supply for shellfish and other systems;
- available or improving transport, power, communications, access to major markets, good information system, scientific support structure;
- good demand and high prices for selected species in traditional markets offering initial targets for producers; steadily growing developed markets for major species;
- emerging and rapidly establishing techniques for hatchery production, husbandry, feeds, ponds, cage and other culture systems; improvements to traditional systems;
- local, national and regional private, commercial and institutional investment; incentives and support schemes for development;
- initial nucleus of primary technical skills, developed through pioneer companies and development centres; increasing level of management skills in core groups;
- generally positive and proactive environment, providing strategic research inputs, adapting to the changing needs of industry and developing legal and regulatory systems; and
- efficient institutional support and extension in aquatic animal health.

30. There are also many production efficiency drivers. In broad terms, these drivers can be grouped as biotechnology – based around the farmed organism and its environmental interactions with improved production system performance, and more generic sectoral level efficiency changes. In modern aquaculture sectors, biotechnology has been a particular focus and might be expected to make significant impact towards the sustainable development of the sector. These biotechnologies include breeding and genetics, efficient feeding and feed management, disease diagnosis and health management, and other research and development-led technology developments.

31. Despite having achieved good progress in terms of expansion, intensification and diversification, the aquaculture sector is confronted by a set of key issues and challenges that need to be proactively addressed in order to achieve its goal of producing a sustainable and equitable supply of food fish to meet the increasing demand. These challenges include; (a) availability and accessibility to a wide variety of natural resources at affordable costs, (b) economically viable and cost effective high quality feeds with reduced dependence on wild harvested fish, (c) adequate supply of cost effective high quality seed, (d) improved disease control and health management, (e) energy efficient production systems, (f) improved governance and efficient institutional support, (g) sound financial services and (h) the need for an ecosystem approach to aquaculture that ensures a proper balance between environmental and socioeconomic objectives with special attention to equity and that facilitates the integration with other sectors and users of common resources.

32. Technically, there are several critical areas where emphasis should be placed, by all stakeholders in the aquaculture sector, for the sustainable development of aquaculture. Aquaculture should be widely considered as a part of the whole food system and promote integrated approach to nutritious food production, equitable distribution and hunger reduction. Whilst there is a need for more research into finding alternate protein sources for animal feeds, it is imperative that non-fed species production is substantially increased and that fed species production is focused on herbivorous and omnivorous species, with both approaches having significant impacts on food security and income generation. Health management and disease control in most aquaculture systems needs further

<sup>11</sup> FAO. 2011. Muir et al. 2009. (FTP 500/1); FAO/NACA, 2012. *Farming the Waters for People and Food*. R.P. Subasinghe, J.R. Arthur, D.M. Bartley, S.S. De Silva, M. Halwart, N. Hishamunda, C.V. Mohan & P. Sorgeloos, (Eds.) Proceedings of the Global Conference on Aquaculture 2010, Phuket, Thailand. 22–25 September 2010. FAO, Rome and NACA, Bangkok. 896 pp.



attention. Efficiency of small-scale aquaculture should be improved and small holders require further empowerment. Production systems and practices should be sustainably intensified towards increasing per unit production and reducing per unit cost of production. Mitigation against and adaptation to climate change are key considerations.

33. As mentioned above, there is a need for a better understanding and promotion of an ecosystem approach to aquaculture (EAA)<sup>12</sup>. EAA can be implemented at all scales, at a local cluster farm level, in aquaculture zones, in countries and in water bodies, and at regional and global levels. Much effort is required to ensure sustainable ecosystem services and improved human well-being.

### THE WAY FORWARD

34. The elaboration of the vision for capture fisheries and aquaculture in the preceding pages provide a framework for discussion and further exploration into the future of fisheries and aquaculture. It is recognized that this is not a complete vision for fisheries and aquaculture as post-harvest and marketing issues and information systems and requirements will be covered in two further Future Vision 2050 paper. The material presented here will be revised as new information becomes available, situations change and new opportunities arise; these are *living working* documents that are not meant to be the *last word* on fisheries and aquaculture.

35. It is clear from the above that major changes can be expected and that they will require the coordinated marshalling of a range of resources, investments, institutional functions and policy development processes. There is therefore a major task ahead in connecting the aquaculture and capture fisheries sector, its people and its issues with broader development processes, ensuring adequate recognition of its role and building the political capital needed to bring about positive and sustainable change.

36. A variety of drivers and scenarios will influence aquaculture and capture fisheries today and into the future. There are also a variety of means available to help achieve ecosystem and human well-being. They do not all have the same priority or feasibility, and, in many cases, they overlap or interact with each other. Prioritization of actions will be needed, in the context of FAO's Strategic Thinking Process being undertaken during 2012. It is essential that FAO continue to develop strategic partnerships with relevant organizations from governments, academic institutions, the private sector and civil society.

37. Factors to consider in prioritizing the actions and vision components include:

- is it in FAO's mandate and is it supported by Member States;
- does FAO have a comparative advantage and;
- what is the importance and impact in terms of responsible fisheries and the Code of Conduct for Responsible Fisheries?

38. A key issue will be that FAO has the means to develop a genuinely coherent approach that strikes towards what has been expressed here as a positive future vision for the sector.

---

<sup>12</sup> FAO. 2010. Aquaculture development. 4. Ecosystem approach to aquaculture. *FAO Technical Guidelines for Responsible Fisheries*. No. 5, Suppl. 4. Rome, FAO. 2010. 53p.  
<http://www.fao.org/docrep/012/i1359e/i1359e00.htm>