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REGIONAL INTERGOVERNEMENTAL MEETING TO INITIATE THE ESTABLISHMENT OF A CENTRAL ASIAN REGIONAL FISHERIES ORGANIZATION

Dushanbe, Tajikistan, 10 -12 November 2008

Towards Establishing a Central Asian Regional Fisheries Cooperation Arrangement (CARNFish)

Summary

The Regional Workshop on the Development Prospects of Inland Fisheries and Aquaculture in Central Asia (Beymelek, Antalya, Turkey, 11–14 December 2007) recommended the establishment of a "regional fishery body or regional network" as a mechanism for technical cooperation in fisheries development among the countries in the region. It envisioned this cooperation as a means to accelerate the development of fisheries and aquaculture; new technologies would be developed, proven technologies would be improved and these would be transferred. This discussion paper offers broad guidelines, specific examples, and relevant information to enable the governments of Central Asia to form their own decisions and devise measures to attain the objective of establishing a suitable regional arrangement. A brief overview of the status of fisheries in the region is intended to provide an understanding of the development context of the proposed arrangement. The options on cooperative arrangements for Central Asia, in terms of the legal status, mandates and organizational structure are described. Existing models of these options and the issues that relate to each model's membership, procedures for establishment, cost of establishment, and advantages and limitations are discussed. The strategies adopted by a number of existing regional networks (mostly in aquaculture) are described and analysed in terms of the concepts, procedures, strategies adopted to execute their mandates and sustain themselves and their operating mechanisms. Lessons that can be drawn from these models in relation to what makes a regional network arrangement work effectively are identified. The transformation of NACA as an arrangement created under the auspices of FAO to a functioning autonomous intergovernmental network organization in aquaculture is highlighted, in particular the strategies and procedures it had adopted to undertake such transformation. An illustration of a planning methodology is provided and a draft logical framework is devised for the governments to consider in planning the establishment of the Central Asian regional fishery body. Follow up actions to the decision made by the Meeting are outlined.

Abbreviations

ADB	Asian Development Bank
ADCP	Aquaculture Development Coordinating Programme
ANA	Aquaculture Network in the Americas
ANAf	Aquaculture Network in Africa
APEC	Asia Pacific Economic Cooperation
APFIC	AsiaPacific Fisheries Commission
AQUILA	Aquaculture in Latin America
UNDP	United Nations Development Programme
ARAC	African Regional Aquaculture Centre
CECAF	Committee for the Eastern Central Atlantic Fisheries
CERLA	Acronym for Regional Aquaculture Centre for Latin America in Spanish
CIDA	Canadian International Development Agency
CIFAA	Commission of Inland Fisheries and Aquaculture in Africa
COPESCAL	Acronym for Inland Fisheries and Aquaculture Commission in Latin America, in Spanish
EIFAC	European Inland Fisheries Advisory Committee
FAO	Food and Agriculture Organization of the United Nations
FIEL	International Institutions and Liaison Service (FAO)
FIMA	Aquaculture Management and Conservation Service (FAO)
FIMF	Fisheries Management and Conservation Service (FAO)
FFA	Forum Fisheries Agency (Pacific Region)
GFCM	General Fisheries Commission for the Mediterranean
HAKI	Research Institute for Fisheries, Aquaculture and Irrigation, Hungary
IDRC	International Development Research Council (Canada)
IGO	Intergovernmental Organization
IOTC	Indian Ocean Tuna Commission
JICA	Japan International Development Agency
LEGN	Development Law Service (FAO)
MEDRAP	Mediterranean Regional Aquaculture Programme
NACA	Network of Aquaculture Centres in Asia-Pacific
NACEE	Network of Aquaculture Centres in Central-Eastern Europe
ODA	Overseas Development Agency (now the Department for International Development of the United Kingdom)
OECD	Organization for Economic Cooperation and Development
RECOFI	Regional Commission on Fisheries in the Near East
REDLAC	Acronym for Network of Aquaculture in Latin America and the Caribbean

RFB	Regional Fisheries Body
RFMO	Regional Fisheries Management Organization
SEAFO	South East Atlantic Fisheries Organization
SIOFA	South Indian Ocean Fisheries Agreement
SPADA	Special Programme for Aquaculture Development in Africa
SWIOFC	Southwest Indian Ocean Fisheries Commission
TCDC	Technical Cooperation among Developing Countries
USAID	United States Agency for International Development
WCPFC	Western and Central Pacific Fisheries Commission
WECAFC	Western Central Atlantic Fishery Commission

I. Introduction

Regional cooperation among sovereign nations is a well-proven mode of promoting common interests in any field, from political to military, economic to cultural, and technical. In the field of fisheries there have been established numerous regional cooperative arrangements among governments. The governments of the Central Asian Region have decided to establish such arrangement for fisheries. This paper is intended to provide guidance to the governments of the region in making decisions as to which regional arrangement to adopt and the issues that need to be addressed to establish such arrangement. This paper is not a how-to-manual nor a what-to-do prescription; it only provides guidelines as well as examples for informed decisions.

II. Background and Scope

a. The regional fisheries development context

The Central Asian region has rich fisheries resources that seem as of now inadequately exploited. It shares a common legacy and development pattern with the Central and Eastern European Region: it is transforming into a market economy which has needed numerous adjustments and reforms in governance but especially economic institutions and processes.

Specific to fisheries, its production of aquatic products after 1990-91 took a steep decline at the same time as the relatively strong scientific support that it enjoyed during the years before 1990-91 considerably weakened. National and regional assessments of the status of fisheries and aquaculture in the region have cited similar weaknesses that characterize the sector, the most notable being that government plans place very low priority on fisheries. The result is inadequate national fishery sector policies or regulatory frameworks; no or weak fisheries agencies and therefore hardly any funding for the management of the sector which then results in a poorly managed fishery.

This lack of government priority results in more institutional support weaknesses: i.e. little technical and financial capacity for research to assess fisheries resources and support the development and management of fisheries, poor or inexistent extension services, no infrastructure for production and distribution of good quality fish seed for culture and enhancement and therefore no or insufficient restocking of inland water bodies. Furthermore, coordination hardly happens among the different stakeholders that use the water resources in a competitive way (e.g. irrigation, hydropower production, fisheries, etc).

The essential fisheries infrastructure, such as landing sites, ice plants and cold storage, and modern fisheries equipment, such as boats, GPS, fish finders and modern, on-board communication equipment are in poor state or lacking. Financial support services such as credit facilities from banks and incentives from the government in support of fisheries sector development are weak or non-existent; risk management schemes including insurance facilities are not extended to the fisheries sector (in contrast to insurance for the agriculture sector), and the marketing infrastructure and system is poor.

Probably the most critical weakness is the technological and manpower base. There is generally a low level of training and education of human resources in the sector, limited access to knowledge and technology from elsewhere and limited contacts with other regions. The information base for planning is either not there or not reliable. The public has little knowledge or interest in the sector which then translates to little public support.

On the positive side, the region has vast inland water bodies that can be better managed and enhanced for capture fishery or used for culture-based fishery to produce a much greater volume of fish. The expected impacts of a higher productivity would be increase in food supply, more employment, and higher incomes from the increased intensity of fisheries and the other economic activities that are generated.

The region's economic capital includes a labor force that is adequate, skilled and costs lower than, for instance, the Organization for Economic Co-operation and Development (OECD) countries; the region's demography skews towards a young generation that represents an increasing demand for food and goods, and a steady labor supply. Business arrangements such as long-term leasing, for at least ten years) of fisheries and renting sites is possible in most cases, which encourages investments in farm infrastructure and other capital improvements. Another plus is the relatively low occurrence of fish diseases in the region as a result of limited recent introductions and extensive production systems used.

For region-wide cooperation in economic development, the region has the advantage of its people sharing and having facility with common languages, namely, Russian and Turkish. Also, it has common species, especially carps which facilitates scientific and technical exchange. With carps, a popular and highly marketable species, the region has a long history of scientific development in breeding, farming and stocking in open waters. This is also true with sturgeon among some of the countries.

On balance, the region has abundant natural, a fairly good economic, and a high potential technological capital for fisheries development. Various national and regional assessments of the fisheries development status, potentials and opportunities that have been held in the region have unanimously suggested the creation of a formal regional cooperation mechanism to accelerate a region-wide development of fisheries.

b. Opportunities and initiative for a regional cooperation in fisheries

The Regional Workshop on Inland Fisheries and Aquaculture in Central Asia: Status and Development Prospects (held in Beymelek, Demre, Province of Antalya, Turkey, 11–14 December 2007) recommended the establishment of a "regional fishery body or regional network" as a mechanism for technical cooperation in fisheries development among the countries in the region. It envisioned this cooperative arrangement as a means to accelerate the development of fisheries and aquaculture through the development of new and improved technology and the transfer of proven technologies. Moreover, the Regional Workshop on the 1995 FAO Code of Conduct for Responsible Fisheries in the Central Asian region: a call to action, held in Tashkent, Uzbekistan, 8–10 April 2008 (FAO, 2008), reiterated the need for a regional meeting to discuss the establishment of a regional fisheries arrangement. The Regional workshop further called upon FAO to invite to regional activities in Central Asia also China and the Russian Federation, in view of the large number of transboundary water resources shared with these countries.

Regional cooperative arrangements have been promoted by FAO since 1949 when the Indo-Pacific Fisheries Commission (now the Asia-Pacific Fisheries Commission) was established in Manila. Several of these types of arrangements, Regional Fisheries Bodies (RFBs) and Regional Fisheries Management Organizations (RFMOs), have since been established including the European Inland Fisheries Advisory Commission, General Fisheries Commission for the Mediterranean, COPESCAL (or inland fisheries and aquaculture commission in Latin America and the Caribbean), the Regional Commission on Fisheries in the Near East (RECOFI), and the Commission on Inland Fisheries and Aquaculture in Africa (CIFAA).

The role of Regional cooperative arrangements in fisheries has been increasing since the mid-20th century. Regional cooperative arrangements in fisheries (RFBs, RFMOs and networks) have been established with many different objectives and purposes, including amongst others the following:

- To support the effective use of scarce resources and the sharing of benefits among members.
- To promote liaison and cooperation among and within governmental organizations.
- To facilitate technical information generation, packaging and dissemination together with technology transfer.
- To help resolve or avert conflicts among countries such as poaching in fisheries resources, pollutant discharges, and allocation of water supply.
- To allow prevent and mitigate transboundary fishery management problems and conflicts.
- Contribute to knowledge generation and raising the awareness about fisheries in the region.
- To make it possible to improve and harmonize standards, laws, regulation in aquaculture and fisheries at regional level – create a level playing field.
- To formulate and recommend to national Governments, appropriate measures: (i) for the conservation and rational management of living aquatic resources; and (ii) for the implementation of these recommendations.
- To keep under review the state of the fisheries resources, including their abundance and the level of their exploitation, as well as the state of the fisheries based thereon.
- To encourage, recommend, coordinate and, as appropriate, undertake research and development activities, including cooperative projects in the areas of fisheries and the protection of living marine resources.

Together with the greater role of regional cooperative arrangements, their importance and their expected contribution to sustainable and responsible fisheries management on a global basis has increased. While the role and priorities of RFBs vary according to their mandates and other factors, including the political will of the members, trends include:

Management: increasing roles of RFBs in responsible fisheries management, the ecosystem approach to fisheries, bycatch concerns and IUU fishing.

Science and research: increasing roles of RFBs in terms of producing scientific advice that meet decision-makers' needs (including integrating fisheries and environmental information), the need for continuing, accurate, comprehensive stock assessments, and assessments of associated species and ecosystems at national and regional levels;

Institutional: increasing attention by RFBs to institutional aspects. Financing activities in the regions of their membership and strengthening external cooperation are becoming more important activities. Capacity building, information exchange and human resource development interventions of RFBs show an increasing trend.

Development: increasing support to responsible aquaculture development, keeping track of aquaculture and artisanal fisheries development impacts, and assisting member States with the change in balance between subsistence and commercial fisheries.

The evolving role of RFBs in decision-making for international instruments for conservation and management measures was particularly reviewed in one publication (Swan J., 2004). Key areas relating to decision-making in RFBs described in the international instruments included the precautionary approach, agreement on decision-making procedures that facilitate the adoption of conservation and management measures in a timely and effective manner, transparency in the decision-making process, decision-making procedures for dispute prevention and strengthening decision-making to implement relevant policies. Members request the RFBs generally to take an active role in the implementation of the United Nations Convention on the Law of the Sea in 1982

(UNCLOS), the United Nations Fish Stocks Agreement (1995), the Code of Conduct for Responsible Fishing (1995) and of other important agreements which have significant implications for the management of fisheries resources, such as the 1992 Biological Diversity Convention, the 1982 Convention on the Conservation of Antarctic Marine Living Resources, and the 1972 World Heritage Convention.

FAO's advocacy of technical cooperation among developing countries (TCDC) and providing technical assistance in the development of aquaculture networking arrangements that operate on the principle of technical cooperation has also a long history. This began with the Kyoto Strategy of 1976. The FAO-based UNDP-supported Aquaculture Development Coordinating Programme (ADCP) that operated from 1977 to 1989 implemented the Kyoto Strategy. The Strategy was a product of a series of regional meetings and a global conference that FAO carried out with UNDP support. African, Asian and Latin American regional workshops were held in Accra, Bangkok and Caracas during 1975 and the Kyoto Conference in May 1976. The Strategy conceived a global network of regional aquaculture centres established in Africa (ARAC), Asia (NACA), Latin America (CERLA) later supplanted followed by a programme called AQUILA (Aquaculture in Latin America), and a regional programme in the Mediterranean (MEDRAP).

The regional aquaculture networks coordinated by FAO through the ADCP developed to varying degrees. The one in Asia, the NACA, evolved into an intergovernmental organization. In this regard, the Sub-Committee on Aquaculture of the FAO Committee on Fisheries in its first sessions in 2002 and 2003 recognized the success of NACA and the importance of self-reliant autonomous regional aquaculture networks to expand and promote sustainable aquaculture development through cooperation among countries. The Sub-Committee encouraged FAO to provide support to such initiatives which would revive efforts to establish the regional aquaculture networks in Africa and in Latin America and the Caribbean (LAC), and promote the establishment of a Network of Aquaculture Centres in Central-Eastern Europe (NACEE). Among the current activities is the transformation, or upgrading, of NACEE into an intergovernmental network organization which is envisaged to possess the same legal status as NACA's. The latest initiative is this one that would be developed for Central Asia.

III. Models of regional cooperation in fisheries

At present, there are two notable groupings of the types of regional cooperative arrangements in fisheries involving sovereign governments: FAO (or FAO-associated) regional fishery bodies including regional fisheries management organizations (RFMOs); and non-FAO RFMOs or arrangements. There are variations within this basic grouping depending, among others, on the fisheries, preferred degree of autonomy (from FAO), membership, scope or mandate. These considerations should be borne in mind in choosing a suitable regional fisheries cooperative mechanism. The variations can also be separated into two other distinguishable groups on the basis of whether they are a regional cooperative arrangement for the provision of advice or to manage/regulate fisheries. The latter function (management/regulation) is typical of trans-boundary multi-jurisdictional (including high seas) resources e.g. tuna RFMOs or arrangements. The specific options distinguishable largely in terms of manner of establishment, legal status, mandate and organizational structure are:

1. A body established under Article VI of the FAO constitution (Article VI body);
2. A body established under Article XIV of the FAO constitution (FAO Article XIV body);
3. A body or arrangement established through the adoption of a either a binding agreement facilitated by FAO but operates outside its constitutional framework or negotiated and operates outside the framework of FAO (Non FAO RFB/IGO or Network);
4. Other - i.e. An entity operating under the laws of one member (and host) country

a. Article VI body

This is a body established under Article VI of the FAO Constitution. Most of the existing fishery bodies were established under Article VI-1 and are referred to as Commissions but there are also RFBs established as committees pursuant to Article VI-2 (e.g. CECAF).

Article VI bodies are established by resolution of the FAO Conference or the Council. The Statute of the Article VI body is normally adopted simultaneously with the adoption of the resolution to establish the body (e.g. in the case of SWIOFC) but a statute can also be promulgated by the Director General of FAO after adoption of the resolution on the authority of the Council (e.g. CECAF). The initiative for the establishment of an Article VI body is normally taken through a series of meetings.

A typical statute of an Article VI RFB sets out the body's geographical area of competence and the species to be covered, membership, objectives and functions, general principles, institutional structure, reporting, observers, rules of procedure and cooperation with other bodies/arrangements or participation by international organizations.

Membership of Article VI bodies is open to FAO Member Nations and Associate Members. For regional commissions, membership is open to all Members or Associate Members whose territories are situated wholly or in part in one or more regions.

Article VI bodies typically perform an advisory role, specifically, "*to advise on the formulation and implementation of policy and to coordinate the implementation of policy*." They are not empowered to regulate or adopt binding resolutions or measures for fisheries management. As a technical body established under the FAO Constitution, they are naturally not autonomous. In practical and legal terms, this means that they cannot by themselves enter into contracts or agreements or have relations with other international entities except through FAO. In addition they are staffed and wholly funded by or through FAO. In the context of the lean budgetary situation of FAO in recent times, members of Article VI bodies have been encouraged to make specific contributions to fund the operations of the relevant body.

The success of Article VI RFBs in terms of performance particularly in relation to follow-up on advice and implementation of recommendations may be influenced by its terms of reference which may require updating from time to time to allow the RFB to respond to new developments. Ultimately however, the success of the RFB depends on the will and actions of its members and the investment in terms of time, effort and resources they put into the RFB and its work.

An Article VI body will be a good option where its prospective members decide that the cooperative mechanism they want is one that is created and functional under the auspices of FAO, has no financial autonomy and is solely to perform an advisory and coordinating role in relation to the formulation and implementation of policy.

At present, there are six RFBs established under Article VI namely CECAF, CIFAA, COPESCAL, EIFAC, SWIOFC and WECAFC. Three of these (CIFAA, COPESCAL, EIFAC) cover inland fisheries and aquaculture.

b. Article XIV body

RFBs can also be established under Article XIV of the FAO Constitution. This Article provides for the approval of global agreements related to food and agriculture by the FAO Council and their submission to FAO Members for their acceptance. Agreements are normally adopted by the FAO Council on the recommendation of a technical conference or series of technical meetings comprising Member Nations. They enter into force on the deposit of the required number of acceptances in accordance with the provisions set down in the agreement.

Membership to Article XIV RFBs is open to FAO Members and Associate Members. Agreements may provide for participation also by non-member States of FAO, provided they are members of the United Nations or a specialized agency of the UN or the International Atomic Energy Agency. Only States can participate in such Agreements.

Typically, an Article XIV RFB agreement will have provisions on the establishment of the RFB, area of competence, species covered, membership, objectives, functions and responsibilities, sessions, observers, administration, decision making, implementation, information, subsidiary bodies, finances, cooperation with other organizations and the usual final clauses including acceptance and entry into force.

Agreements under Article XIV of the FAO Constitution have the same legal status as other international agreements and can provide the same flexibility in respect of final clauses etc. Since such agreements are adopted within the constitutional framework of FAO, their subsidiary institutions will remain linked to FAO in accordance with the provisions set out in the FAO Basic Texts. However, there would automatically be a measure of institutional and financial support from FAO.

An Article XIV RFB would be a suitable model if it is desired that the RFB should be autonomous financially and, for the most part, functionally autonomous while remaining under the framework of FAO.

Up to now, 16 conventions and agreements have been adopted under Article XIV of the FAO Constitution. Four of these agreements establish RFBs namely APFIC, GFCM, IOTC and RECOFI. While IOTC and GFCM can adopt binding conservation and management measures (subject to an objection procedure in the case of GFCM), the other two (APFIC and RECOFI) are only mandated to formulate and recommend measures for implementation by its members. Thus Article XIV RFBs are not necessarily bodies established to take binding decisions as their role can be limited by their agreements.

c. Non FAO RFB/IGO or Network

The standard instrument through which formal international relations, including through entities or a mechanism for cooperation between two or more sovereign states is established, is an international agreement (regardless of whether it is referred to as an agreement, convention or treaty). Examples abound in the field of fisheries and aquaculture on various forms of agreements in respect of the approach adopted for negotiating and concluding the agreement, name, form and substance.

For the purposes of this discussion, two options with regard to the manner in which the agreement is conceived are discussed. These options are: The RFB/IGO or Network established with the facilitation of FAO; the RFB/IGO or Network established independently of FAO. Either option fundamentally results in the establishment of a non FAO international entity that is structurally, financially and functionally autonomous.

The main difference between the two options is that with the first option, FAO is involved it setting it up. The decision for FAO's involvement in this manner rests with the prospective parties which may include FAO Members or the decision is expressed in a meeting of one of the Governing bodies of FAO or in some other internationally accepted way.

Where FAO's involvement is invited, the practice has been that FAO convenes a diplomatic conference to negotiate and adopt an international agreement establishing the cooperative mechanism or entity. The Agreement will contain the usual clauses of a multilateral agreement similar to those found in FAO Article XIV Agreements although the former agreement can be elaborate in particular the clause on finances and responsibilities of parties. Agreements adopted in this manner do not need to be linked to FAO in any formal way, although of course they can be linked if so required.

It can be noted from past practice that Agreements which were negotiated and adopted through FAO as a convener of the diplomatic conference or meetings were driven by the appreciation for FAO's earlier involvement in the work of the entity to be established or evolved from FAO Projects (e.g. in the case NACA, INFOFISH and INFOSAMAK), the need to ensure FAO's technical input in the future work of the entity (e.g. NACA) or the entity evolved from a FAO entity established under FAO's Constitution (e.g. SIOFA). Typically, the option to establish an autonomous entity through a multilateral agreement offers flexibility to the prospective contracting parties from the point of view of timing in that they can be concluded at any time without necessarily awaiting a session of the FAO Conference. However, the negotiation process and procedure for adoption can be protracted and costly. Funding for the negotiation and adoption process of the agreement and later the administration and operations of the entity will come from any agreed contributions of member governments.

States could decide, at their own initiative (without FAO's input) to establish a RFB/IGO/Network as the cooperative mechanism for fisheries and aquaculture through a multilateral agreement. To this end, they could convene a diplomatic or high level governmental conference for the purposes of negotiation through to adoption of the agreement. Recent examples of this are the process for negotiation and adoption of WCPFC and SEAFO agreements. The Agreements of these type of RFBs will contain typical multilateral agreement clauses although they will be elaborate in terms of area of competence or scope, membership, institutional structure (including the governing body, secretariat and subsidiary technical bodies) decision making, finance and budget, obligations of parties and others, cooperation with other organizations, non parties, implementation, dispute settlement and final clauses.

This option (whether or not facilitated by FAO) will be suitable if the entity desired is one which is institutionally, financially and functionally autonomous. The entity has legal international personality (i.e. it can enter into contracts/agreements, sue and be sued, purchase and own property and enter into diplomatic relations, among others).

It should be noted that not all (non FAO) autonomous RFBs adopt binding measures; some are mandated to adopt recommendations only and it is left to individual members to implement the recommendations (e.g. FFA).

d. Other

This option is to establish the cooperative mechanism as a non profit organization - a legal body incorporated under the legal system of the host nation, hence there is no need to convene a formal diplomatic conference.

The host country should present the most adequate conditions for the proper functioning of the organization such as the provision of facilities or counterpart support. The institution will operate, to some extent, on a commercial basis and provide services against payment but would benefit also from Government contributions and funds from other sources. Other international organizations may support and develop close cooperation with it. Its operating costs would be significantly lower that those of an intergovernmental body. Its members could decide to transform the entity later to an autonomous intergovernmental organization or to integrate it into an existing organization. However, the international character of its activities would not be recognized fully. It would be subject to the local laws of one country and would not have international legal personality.

This option will not be discussed further as this arrangement does not seem to be in line with the Beymelek recommendations for a regional cooperation.

e. Considering the options?

The specific examples of the fisheries commissions and aquaculture networks are reviewed here for reference. The models described in Annex 1 are as follows:

1. intergovernmental organization;
2. a regional network association of technical structures including research centres and institutes as well as industry associations,
3. an additional regional activity of an existing regional organization;
4. a regional technical commission; and a
5. regional general commission.

Six examples of these five possible arrangements are provided in Annex 1. These examples include two network organizations that are independent (NACA whose members are government and NACEE whose members are national centres and institutions as well as national farmer associations), a regional body established as a subactivity of an existing regional technical body, in this case a Commission, (ANAf), two regional technical commissions (APFIC and EIFAC) and one regional general commission (GFCM). They were all created under the initiative of FAO. The commissions are provided for under FAO's constitution (Article VI-1 in the case of EIFAC and Article XIV in the case of APFIC and GFCM,).

From the experiences of ongoing initiatives, it should be mentioned that a regional network organization can go through an interim phase before it evolves into an autonomous IGO. The three examples are as follows:

1. As a regional network of centres and institutions over a certain period before it transforms into an IGO. This is being considered by the Network of Aquaculture Centres in Central-Eastern Europe (NACEE).

2. As a regional intergovernmental network embedded into a larger regional body while it evolves into on IGO. This is the option decided for the Aquaculture Network for Africa (ANAf), which will operate under the Commission on Inland Fisheries and Aquaculture in Africa (CIFAA)[1].

3. As a regional project funded by a donor or a consortium of donors, with the ultimate objective of attaining an autonomous status as IGO, as in the case of the Network of Aquaculture Centres in Asia-Pacific (NACA). It was from 1980 to 1989 an FAO /UNDP regional project (Title: A Project To Establish the Network of Aquaculture Centres in Asia-Pacific) before it evolved into an autonomous regional IGO in 1990.

f. Lessons from selected regional cooperative arrangements

For the purposes of this paper, the "lessons" described in this section are derived from the origins, nature, objectives and operational mechanisms of the various examples.

(i) Lessons in concepts and approaches

1. NACA was initiated as a UN funded, FAO executed project. It began operations in August 1980 and turned intergovernmental in January 1990. Over $7 million dollars were invested in the first 10 years in building up the network functions, including considerable investment in the R&D capacity of its Lead Centres. NACA conducts development assistance projects throughout the region in partnership with governments, donor foundations, development agencies, universities and a range of non-government organizations and farmers. It supports institutional strengthening, technical exchange and the development of policies for sustainable aquaculture and aquatic resource management.

NACA is an IGO with 17 member governments who have signed up to an "Agreement" A Governing Council composed of Government member representatives, FAO (as a non-voting member, as well as a member of the technical advisory committee), associate members and invited agencies is the policy-making body; a Technical Advisory Committee whose membership is drawn from governments -- with participation by invitation of the private sector, NGOs, industry and farmer organizations -- formulates with assistance of the Secretariat, the program of NACA. Financial resources are provided by members as a contractual part of their membership, as are contributions 'in kind' through the support to the national agencies responsible for aquaculture and work of the national lead centres. A separate agreement between NACA and the Thai government provides for hosting of the Secretariat.

In assessing the history of NACA as an institution it is necessary to ask the question whether its success has been dependant on the major investment that was made in the initial project phase. There is no definitive answer, but given the relative weakness of the Central Asian fisheries and aquaculture research centres compared to the ones in the NACA member countries, we can assume it would be a priority for CARNFish to attract investment into coordinated regional research programmes, working with partners such as Turkey's MARA and other more advanced research and educational institutions in neighbouring states, including China. These will be the source of technology and expertise for adaptation in Central Asia.

[1] ANAF.2008. Draft report of the Working Group on Aquaculture Meeting, Jinja, Uganda 25-28 Aug 2008.

Nevertheless, a prime ingredient for NACA's success has been repeatedly identified as the strong and sustained commitment of its member governments to support its work and to collaborate together in this sector.

2. NACEE. The Network of Aquaculture Centres in Eastern Europe is different in character to NACA in that it presently has objectives strictly as described in the organisation's title. The Network is a voluntary association of Central and Eastern European aquaculture institutions who signed a formal Founding Document and agreed on the structure and the operational framework of NACEE, in which all members maintain their full independence. Activities are coordinated by the Research Institute for Fisheries, Aquaculture and Irrigation (HAKI) of Hungary. The institutions adopted the By-laws and Rules of Procedure of NACEE, thus laying down the operational framework of the Network. FAO have granted official 'liaison status' to NACEE.

It has 41 member institutions in 15 Central-Eastern European countries; each member provides a yearly contribution of Euro 300 to a fund managed by the Coordinating Institution. NACEE has also designated a Coordinator, who was then the Director of the Coordinating Institution. As mentioned earlier it is now considering transforming into an inter-governmental organization. NACEE's mission statement is research-orientated. Its R and D program or the region is implemented through Working Groups (WG- five at present), each WG being responsible for an Research and Development (R and D) area. Each WG R and D area is hosted by a centre of excellence. The five working groups are: Fish Genetics; Sturgeon Aquaculture; New and High-Value Species; Aquaculture Education; and Innovation in Aquaculture.

3. ANAf. The Aquaculture Network in Africa is still being formed and it has not adopted a founding document. The planning is undertaken, with FAO's technical advice through a Working Group composed of senior fishery officials of its eight founding members. It has been promoting its profile among national governments and private sector as well as with international organizations through (i) a series of regional workshops to develop the strategy and aquaculture development agenda, (ii) in-country consultations conducted by the Working Group member of the country, among the various stakeholders, namely, government agencies responsible for fisheries/aquaculture and other relevant agencies (environment, water, agriculture, etc), private sector including farmer associations and industry associations such as feed millers, and non-government organizations. Its latest planning workshop developed a framework for institutional development and regional aquaculture development through a logical framework analysis exercise. It has chosen the option of operating in the interim under the Commission on Inland Fisheries and Aquaculture in Africa. As such it will perform the networking functions for CIFAA, specifically implementing the Special Programme for Aquaculture Development in Africa.

4. REDLAC and ANA. The development of the network in the Americas is being carried out by two parallel and complementary initiatives, one by FAO (REDLAC which is the Spanish acronym of the Network of Aquaculture Centres in the Latin America and Caribbean), the other called Aquaculture Network in the Americas or ANA by the Asia-Pacific Economic Cooperation (APEC). The APEC-assisted ANA was established formally in April 2008 with Peru as host of the secretariat and with the APEC members in that side of the Pacific (Canada, Chile, Mexico, Peru, Canada and the USA) plus Brazil and Ecuador as participating countries. FAO is working to develop a more extensive network and focusing on food security and bringing experiences and technology from Latin American and Caribbean countries whose aquaculture industries and science and technology foundation are more advanced than the others.

The lessons for Central Asia in concepts and approaches from the various networking initiatives and regional collaborative arrangements described above can be distilled into the following:

1. Show immediate and measurable results. Probably the most valuable lesson, from NACA and NACEE, is that a regional body has to provide justification that it is worth investing resources by governments and donor organizations. NACA in its initial years adopted the strategy of increasing yields and productivity through the exchange and adoption of improved technologies. These are measurable achievements which policy makers and government budget managers pay attention to. It also gave time for researchers to develop or further improve the farming systems technologies for subsequent dissemination and adoption by the farmers. A strategy however should depend on the circumstances and needs of the member countries. A trade and export oriented strategy might work better in proving the organization's worthiness.

2. Prove cost-effectiveness over an alternative arrangement. The FAO Kyoto Technical Conference on Aquaculture of 1976 cited one single factor as the reason for a network organization of aquaculture centres: the great diversity of aquaculture species and farming systems. Corollary to this is that the species comprise vertebrates, invertebrates and plants grown in water usually with a soil substrate, in three different environments, namely, freshwater, brackishwater and marine. To an already challenging field for research and development is the added complexity of countries having different levels of economic and aquaculture development. This complex situation led the Conference to favour a network organization of already existing national centers (many of which would be later upgraded by their governments with UNDP/FAO assistance) over a new regional or international R and D institution. They reasoned that such a network would be able to address the different problems more cost-effectively. The next issue was to devise a mechanism to manage and operate it efficiently. That mechanism took the form, in NACA, of a coordinated and structured regional program of work.

3. Show distinctive competence. As the networking arm of a larger regional body, this is the strategy chosen by the Aquaculture Network for Africa (ANAf). It will take on the networking responsibilities for the Special Programme for Aquaculture Development in Africa (SPADA), during which period it will prepare to evolve into an autonomous intergovernmental network organization. At the termination of the program, ANAF, which will have become a full-fledged network organization, carries on the regional aquaculture development program. By that time it will have a stronger capability from the experience acquired in implementing SPADA activities.[2]

4. Go for regional self –reliance. REDLAC's focus on the most pressing common concern of the region which is food security by using the regional competence especially the technology and expertise of the more advanced countries demonstrates regional capacity and self-reliance to solve its own problems. Self-reliance does not mean "autarky" or complete self-sufficiency (such as the policy of DPR Korea); it means the capability to solve ones' problems with one's resources without having to completely depend on external assistance. External assistance is thus seen as a complement to local initiatives and resources, not as a substitute for what is lacking. Self-reliance also implies the ability to develop one's agenda without being dictated to by external interests. The practical expression of this capability is that the regional organization should be able to develop its work program based on its members' priorities rather than based on the interests of donors.

(ii) Lessons in institutional development

[2] Draft report of the Third Meeting of the CIFAA Working Group on Aquaculture Networking, Hotel Paradise, Jinja, Uganda , 26 to 28 August 2008.

The NACA story represents almost three decades of work. For the purpose of this meeting only the efforts of NACA to evolve into an IGO are relevant . The narrative on the NACA story (attached as Annex 2**)** highlights the strategies and steps that were followed in the evolution of a project into an independent organization. The reason for citing NACA's experience is not that it is a great model to emulate but because so far it is the only functioning autonomous regional network organization in aquaculture whose members are governments. (The others, in fisheries marketing and trade information as well as technical assistance, are INFOFISH and INFOSAMAK). The lessons are therefore drawn from the processes and strategies that NACA adopted.

III. Objectives and Terms of Reference for CARNFish

This section is purely illustrative. The vision statements, mission statements, goals, and activities are provided as examples only. They are not recommendations. In this regard, a draft logical framework structure is proposed. It appears as Annex 3. The draft logframe gives an example of the vision and mission statements, a supergoal to which CARNFish will contribute to attaining, a goal for the organization which it shall try to attain, results or outputs that will attain the goal and the activities to produce each result. A complete logframe analysis could be developed in a subsequent meeting, or by a task force or working group which shall then present its result of its work to a regional meeting.

IV. General Principles

There are guiding principles that would ideally apply to an autonomous regional organization some of which could be applied to a regional commission.

a. Key success factors.

As food for thought, the list of "key success factors in networking" produced by a brainstorming session during the recent Working Group meeting of the Aquaculture Network for Africa (ANAf) [3] is cited here:

• clear purpose • clear responsibilities • commitment of members • added value to members • sharing ideas to solve common problems • using others' experience • pooling resources	• high degree of transferability of knowledge • economies of scale • good communications network • effective communication • effective facilitation • sustainability

The international community expects regional fisheries arrangements (networks, RFBs, RFMOs) to play a central role in the implementation of international agreements, conferences and conventions. The RFBs and alike can only do so if the requirements fall within their mandate and/or functions, and if financial and human resources enable the RFBs to assist.

[3] From the brainstorm session on the question "What makes a network work?" at the workshop to discuss ways forward for the Aquaculture Network for Africa (ANAf) held in Jinja Uganda on 26-28 August 2008.

Some major constraints to the successful functioning of many networks and RFBs in fisheries and aquaculture, as are reported by these to FAO (see also Swan, J. 2000), include (amongst others):

- the consensus nature of decision making processes (in RFBs with regulatory functions), which is complicated by its various elements (technical, political, enforcement and national and international implications,
- Uneven implementation and enforcement of RFB decisions by the members (in RFBs with regulatory/management roles),
- Uneven data collection collaboration among the members,
- Non-members jeopardizing the work of the REFB, and
- Limited or not any financial support from the members in assistance of the meeting attendance and operational (including secretariat) costs of the RFB.

b. Essential attributes, enabling conditions and Guiding Principles

An IGO would have essential attributes and enabling conditions for it to be effective and sustainable. The article "Why and how does a 'NACA' work?" (Bueno, 2007[4]) identifies and explains five essential attributes and four enabling conditions. The essential attributes include: collective commitment of members, continuity of participation, common objectives, a coordinating mechanism, and cost effectiveness.

The enabling conditions are partnership and collaboration in the programme, relevance, adaptability to changes, and rapid response to needs.

The pitfalls to a network's continuity are also described: politicization of the organization would be the most serious and probably fatal.

[4] Bueno, P. 2007. Why and how does a 'NACA' work ? FAO Aquaculture Newsletter (38): 22-27 ftp://ftp.fao.org/docrep/fao/010/a1441e/a1441e11.pdf

From the experiences of various networks and from the above information, a set of guiding principles could be distilled:

Principles/Features	Non FAO IGO	FAO Article XIV Comm'n
1. It operates on the principle of Technical Cooperation among its members	X	X
2. It adheres to the democratic principle of one-member one-vote and on consensus to arrive at decisions	X	X
3. It observes the principle of equitability in assessing contributions and requesting further contributions to its operations in terms of resources other than financial	X	X
4. Its programme of work reflects the common priorities and needs of members but respects the unique problems and needs of individual members	X	X
5. Its objectives are clearly identified and understood and the responsibilities and obligations of members are clearly understood	X	X
6. It operates with the maximum of flexibility to address emerging and respond to urgent issues and concerns of members	X	X
7. It operates with the maximum of political support and no political interference	X	X
8. It maintains independence and operates in the best interest of its members	X	
9. It enters into mutually beneficial collaboration with international and other regional organizations and institutions.	X	X

V. Management and Operational Structure

The guiding principles suggest a management structure that endows the body independence and self-reliance, and an operational mechanism that gives it relevance, flexibility and responsiveness.

a. Article VI: Regional Fisheries Body

The example briefly described is the European Inland Fisheries Advisory Commission or EIFAC[5], a statutory body of FAO established in 1957 as an intergovernmental forum for collaboration and information exchange on inland fisheries and aquaculture among all European countries. It describes itself as a "network of knowledge", linking policy-makers, managers, scientists and others working on inland fisheries and aquaculture issues. It usually calls on the expertise of scientists, managers and practitioners from its member countries and other specialized groups. Through exchange of expertise, knowledge and experiences, it enables the provision of guidelines for organizations, institutions and

[5] http://www.fao.org/fi/eifac.htm

agencies involved in managing inland fisheries and aquaculture to formulate policies, strategic plans or technical guidelines. The scientific work is undertaken mainly in Working Parties by specialists from EIFAC member countries and official observers.

FAO's Fisheries and Aquaculture Department provides the Secretariat at FAO headquarters in Rome. The secretariat organizes biennial sessions and symposia, provides technical advice on request, and works to link those who seek technical expertise to those who can provide it.

On matters of common interest EIFAC has established collaboration with various partner organizations such as the International Council for the Exploration of the Sea, European Anglers Alliance, Federation of European Aquaculture Producers, European Aquaculture Society, Network of Aquaculture Centres in Eastern Europe, The World Conservation Union, and others.

EIFAC's formal sessions held every two years provide an opportunity for collaboration between fisheries professionals and policy-makers. Member countries host the sessions with the approval of the Director-General of FAO.

EIFAC has advised its European members, including the European Commission, on many important technical and environmental issues as part of an informed decision-making process; provided periodic overviews of the state of inland fisheries and aquaculture in its member countries; developed codes of practice and a manual of procedures on introductions of aquatic species, and a Code of Practice for Recreational Fisheries.

b. [Article XIV] Regional Fisheries Commission

As noted above, a Commission established under Article XIV may be preferred if the intention is for the cooperative mechanism to maintain financial and functional autonomy and remain under the FAO framework. This option would be a simpler prospect in terms of its establishment as the process is prescribed and facilitated by the interested States and FAO. The Commission members are State representatives nominated by their governments and its secretariat is normally provided by the regional FAO office, with the regional fisheries officer as the secretary.

As with the existing commissions, working parties or working groups would be constituted to take responsibility for thematic programs. Such programs could be problem-oriented (i.e. seed quality, health management) or activity oriented (i.e. breeding, stock enhancement). Each theme would have the research, training and information components. Still another way of establishing working groups is in line with a species such as carp or sturgeon or trout development with research, training and information components. Or, there could be just a specific working group for Education and Training, for Information Development and Exchange, for Marketing and Trade, etc There are many ways by which working groups could be organized. These are not mutually exclusive; there could be a combination of these working groups (carp breeding and hatchery; manpower development; health management; marketing and trade, etc). There will also be occasions when problems of an emergency nature occur. A task force can be organized by the Commission to deal with it.

The working groups would depend on a regional plan developed by the Commission, which in turn depends on regional priorities. Each working group would develop its own programme of work and these are coordinated by the secretariat.

Government focal points for the Commission's program are usually the agencies responsible for fisheries. These directorates or bureaus or instituted of fisheries would provide the national coordination for in-country activities. They would also be expected to coordinate the technical inputs of the various relevant national institutions into the Commission's work programs.

The commission's regular meetings can be yearly or every other year and hosted in turn by the governments. However it can organize special inter-sessional meetings as needed. The working groups can set their own working schedules.

c. Regional Network IGO

A regional network body has usually three organic bodies: a governing or controlling body, a technical advisory body and a coordinating unit (or secretariat). The governing body is also composed of government representatives of the same level as those of the commission i.e. ministers level or directors general or directors of the agency responsible for fisheries. It sets the policies, adopts the management and financial guidelines and instruments, and approves the program of work and resource requirements (budget, staffing pattern) of the network organization; elects or appoints its Coordinator and establishes the Coordinating Unit. The Governing body is chaired by a Chairperson who is elected during its regular yearly meeting. Other than its policy functions, the members of the Governing body can take a proactive role in projecting the profile of the Organization inside their respective countries.

A technical advisory body is composed of specialists from the public and private sector. It drafts, with the assistance of the Coordinating Unit, the work program and provides the technical advice to the Governing body. The technical advisory committee of NACA consists of government technical experts. However, a different composition could be that of a small group of technical experts who are appointed by the governing body.

The coordinating unit is headed by the Coordinator. It manages the implementation of the regional work program The Secretariat's administrative structure consists of the Coordinator as the executive officer administering the Secretariat and managing the work program, professional staff who are specialists in the needed disciplines or fields of work (fisheries management, environment, education and training, information, economics, genetics and ecology, etc). The secretariat also coordinates advisory services to governments and other clients and develops and implements fund raising strategies.

As with the Commission, the national focal agencies are the agencies responsible for fisheries. However, governments can also designate centres of excellence in the relevant fields or disciplines as national fisheries centres for the Organization.

The network organization's structure can be illustrated by that of NACA, which appears as Annex 4.

VI. Immediate and Medium Term Priorities

Following a consensus among the governments at this regional meeting, there are three immediate priorities to address: (i) official declaration and plan of action, (ii) establishment of the regional body, and (iii) development of a programme of work.

a. Formulate and sign a Declaration and Plan of Action for Regional Cooperation in Fisheries Development. The countries of the region will need to place their intentions formally and officially. The broad regional agreement needs to be officially expressed in a declaration and plan of action for regional cooperation. This is a short document that encapsulates the vision, goals and purposes of the cooperation. The document serves the purpose of building consensus and support among the different stakeholders in each country and getting recognition and support for the cooperation from other international and regional organizations.

b. Establish the institution and develop a constituency. The second priority is to establish the regional body. Therequires a broad range of activities that include establishing its governance systems, working mechanism, and a structured regional work programme (which is the third priority). The steps to produce these and what they comprise are enumerated below:

- Constitute the provisional controlling or governing body
- Constitute a technical advisory body
- Agree on a host country for and establish/designate a Coordinating Unit or Secretariat
- Adopt a Constitution and By-Laws
- Agree on a funding scheme by governments
- Draft and adopt the management guidelines and instruments which include the Rules and Procedures for the Organization, Financial Regulations, Employment Conditions, and Staff Regulations

c. Formulate a Regional Programme of Work

This is the central document, reflecting the priority needs of the members. It specifies the socio-economic goals of member countries to which achievement aquaculture development would contribute. The Work Programme consists of the following:

- Regional Research and Development strategy and plan
  a. Information on research and development needs and priorities among countries and their respective R and D capacities
  b. Common regional priorities
  c. Projects to address the regional priorities
  d. Projects to address priorities common to a subgroup of members
  e. Thematic activities (environment, trade and marketing, etc) that support or complement the projects.
  f. Network participants and clearly defined responsibilities in the work programme implementation.

- Capacity building and training strategy and plan
  a. An assessment of national capacities and needs in research, education and training, extension as well as joint ventures, and matching of national needs with other national capacities that can meet those needs..

a. A TCDC workshop to validate the survey and to agree on TCDC exchanges.

- Information exchange and communication systems
  b. Web-based information mechanism
  c. Expert exchange scheme

- A regional collaborative consensus with other regional and international bodies operating in the CEE region.
- A strategy to raise the resources to support all the above activities.

The Programme of Work is essentially the justification for existence of regional cooperative body. It should be developed through various consultations and technical forums. The widely accepted planning process of logical framework analysis would be extremely useful. This would part of a region-wide and iterative planning and programme development process.

Examples of prospective outputs from a regional work programme. The regional and national workshops and status reviews have provided broad as well as specific issues and their relative importance to the region. The SWOT analysis has yielded a useful indication of the priority regional concerns. At this point however, this paper can only come up with examples and shall not prescribe or recommend what the regional body should be producing. Generally, the products would be policy guidelines, technological innovations, trained people and information.

- Studies in aid to policy to identify and resolve key factors that inhibit private sector participation and development, and, conversely, to improve the participation of the private sector.
- Studies in aid to policy that assure investors into fishery and aquaculture projects that their investments are protected.
- Studies that improve the institutional services for fisheries and aquaculture, enable effective access markets and make the industry more competitive in international markets.
- Best management practices that improve food safety, conserve or enhance biodiversity, and encourage social responsibility.
- Technology to unblock key bottlenecks in production.
- Information and information system that alerts the fishing and aquaculture sectors to imminent impacts from natural and economic risks
- Technology and practices to enable fishers and farmers to manage risks better.
- A manpower development programme for the region including the development of a training course or courses to produce expertise for planning and implementation of development projects; for research and extension; and for practical skills in production.
- A management and conservation programme for the inland fishery resources.

This is by no means a comprehensive list and, to reiterate, a logical framework analysis would yield a much broader range of issues ranked in terms of their importance. Specific outputs and the activities to resolve the prioritized issues will also depend on the capacities and resources available. If not available, a strategy should be developed to acquire the capacities and resources. These are to be specified in the work programme, and discussed in the next section.

VII. Resources (Material and Financial Support)

An institution established under Article VI of FAO's constitution will benefit from funding support by FAO. But this support is not unlimited and it is usually earmarked for certain activities such as organizing technical consultations. In addition, in light of the current lean financial situation experienced in FAO, members of Article VI entities have been encouraged to contribute directly to the work of the entities.

There can be funding support from FAO for an Article XIV Commission but the trend is that Article XIV bodies should be self funding for the most of its administration and operations. This is the case with IOTC and GFCM as stipulated in the agreements establishing these entities. Cost of participation in the commission's annual meeting is the responsibility of individual members. There will be need for members to contribute funding for most other activities and in-kind resources for collaborative projects. .

The level of funding will depend on the Work Programme. Realistically, a newly independent regional body will not have the resources to execute the entire Programme, it will likely have the barest minimum resource to maintain basic operations. Initial expenditures will be on recruitment and staffing of the Secretariat, start-up costs, and recurring operational costs. This would include salaries, essential travels, running an information system, and developing project proposals. How would this start-up work be supported? A combination of sources is described below; based on NACA's experience and on the financial provisions of the GFCM

NACA

- Governments' mandatory contributions. This source of funding is the most important. It indicates commitment, it is a step towards self-reliance, and it assures others especially donors that the Organization is worthy to invest resources in or to partner with.
- Host government hosting contribution in cash and in kind. NACA's host government (Thailand) provides the local administrative support staff or the remuneration for local administrative staff hired by the Secretariat, provide a headquarters office, and bears the cost of maintaining the HQ office (utilities, security and repairs) except communications.
- Secondment scheme to the Secretariat. Initially, member governments could second young and promising technical personnel to the Secretariat, some of whom might eventually be integrated. Projects, coordinated by the Secretariat, also provide technical expertise within the Secretariat. FAO as well as other donor agencies could also provide Associate Professional Officers in key fields of expertise.
- Technical services. Payments against technical or consultancy services generates the additional revenue. It is important to develop the capacity of the network (including that of the Secretariat) to provide consultancy services for bilateral projects that are usually awarded to government. The projects must of course be in line with the objectives of the Work Programme and clear guidelines that set limits to consultancy time of Secretariat technical staff should be laid down.
- Project overheads and staff. If one or two regional projects are being implemented at this juncture, the project staff would earn overhead costs and the project staff could take up secretariat responsibilities, thus enabling NACEE to accumulate its membership fees.

GFCM[6]

- **Sources of funds.** Financial resources come from (i) the regular contributions of Members and (ii) donations and other forms of assistance received from organizations, individuals and other sources. (In cases of emergency, the Secretary is authorized to accept additional contributions from a Member or Members of the Commission or grants from other source).

- **Members contributions.** A member contributes annually its share of the autonomous budget in accordance with a scale of contributions. The amount of the contribution of each Member of the Commission is based on a formula (see box below).

- **Custody and administration of funds.** Contributions and donations and other forms of assistance received shall be placed in a Trust Fund administered by the Director-General in conformity with the Financial Regulations of the Organization.

- **Responsibilities for certain expense items**

  - The expenses of delegates and their alternates, experts and advisers to **a**ttend sessions of the Commission and the expenses of representatives sent to committees or working parties shall be paid by the respective Members.

  - The expenses of the Secretariat, including publications and communications and the expenses incurred by the Chairman and Vice-Chairmen of the Commission, when performing duties on behalf of the Commission between Commission sessions paid from the budget of the Commission.

  - The expenses of research and development projects undertaken by individual Members of the Commission, whether independently or upon recommendation of the Commission, shall be paid by the Members concerned.

  - The expenses incurred in connection with cooperative research or development projects shall be determined and paid by the Members in the form and proportion to which they mutually agree. Contributions for cooperative projects shall be paid into a trust fund to be established by the Organization.

  - The expenses of experts invited to attend meetings of the Commission, committees or working parties in their individual capacity shall be borne by the budget of the Commission.

[6] Sources: GFCM Agreement and GFCM Financial Regulations www.gfcm.org (accessed 13 Oct 2008)

Factors for calculation applicable to the GFCM autonomous budget

Membership: a fixed proportion of the budget; equally shared among members

Wealth component: the wealth of the Member

Catch component: the total capture fishery and (marine) aquaculture production of the Member.

Membership: 10 percent

Wealth component: 35 percent

Catch component: 55 percent

Measurement of the factors:

Membership: all Members

Wealth component: according to per caput GDP (measured in US $ as published by the World Bank); members falling into four categories: below US$ 1 000; between US$ 1 000 and US$ 9 999; between US$ 10 000 and US$ 29 999 and US$ 30 000 and above.

< 1000	exempt from the wealth component.
1000-9999	pays one share
10000-29999	pays 10 shares
30000 pays	pays 20 shares.

(There are provisions for exceptions; see www.gfcm.org)

Catch component: A formula is applied based on catch/production figures; see GFCM Financial Regulations www.gfcm.org.

The establishment of a regional fisheries arrangement in Central Asia may benefit from the Central Asia Regional Programme for Fisheries and Aquaculture Development (FishDev – Central Asia). This regional Programme was developed based on three regional expert workshops held in 2007 and 2008, and with the inputs from numerous experts from the region.

Within the framework of the FAO Turkey Partnership Programme (FTPP), the Turkish Government, through its Ministry of Agriculture and Rural Affairs (MARA) provides assistance to the countries of the sub-region for which the FAO Sub-regional Office for Central Asia (SEC) is responsible within FAO. These countries include: Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan, and Uzbekistan.

The Fish Dev –Central Asia programme addresses the scope of the FTPP, and particularly focuses on the fisheries and aquaculture sector. It includes among its outcomes "a formally established regional fisheries and aquaculture arrangement in the form of Regional Fishery Body or Network" (Outcome 1). When the programme will be approved, towards the end of 2008, it will strive towards supporting the following outputs and activities:

Output 1.1: An agreement amongst the participating countries on the purpose, the scope and the modalities for the regional fisheries and aquaculture arrangement.

Activity 1.1A: Organization of semi-annual Senior Fisheries Officials meetings and annual intergovernmental consultations.

Activity 1.1B: Arrange for the participation of Senior Fisheries Officials from the region in international conferences and meetings that are relevant to them.

Activity 1.1C: Provision of advice to those working on the regional arrangement from specialists involved in successful regional fishery bodies and fishery and aquaculture networks.

Output 1.2: A work programme for the regional fisheries and aquaculture arrangement formulated and agreed upon by the member countries.

Activity 1.2A: Organization of semi-annual regional Senior Fisheries Officials meetings and annual intergovernmental consultations (this activity can be combined with 1.1A above).

Activity 1.2B: Provision of technical and policy advice to the member countries involved in the arrangement on a range of issues.

Output 1.3: National correspondents and secretariat staff of the regional fisheries and aquaculture arrangement competent in their tasks through pertinent capacity building activities.

Activity 1.3A: Capacity building of national correspondents and secretariat staff in the tasks they will have to fulfill in support of the regional arrangement, in order to be properly skilled and competent to carry out their tasks in an excellent manner.

Output 1.4: An interim secretariat established and a Technical Secretary appointed and supported by the member countries.

Activity 1.4A: Recruitment of the staff of the interim secretariat

Activity 1.4B: Appointment of a Technical Secretary by FAO for the regional arrangement (if considered necessary by the countries and depending on the arrangement proposed)

Activity 1.4C: Search for a host country for the regional arrangement/secretariat (if considered necessary by the countries and depending on the arrangement proposed) and obtaining of financial and in-kind support from the member countries to the secretariat.

The budget under FishDev- Central Asia for above outputs and activities is however rather limited, with about US$ 340 000 (spread over 5 years), thus additional support will be required from the member countries. The FishDev – Central Asia programme will be able to support the type of regional arrangement that is preferred by the countries in the region. Moreover, the FishDev-Central Asia Programme can be of assistance in the implementation of the regional work programme, although funds available under the programme will be rather limited and will cover only some activities in the

first few years. Nevertheless, the funds will provide an opportunity to the arrangement that many other similar regional arrangements did not have when they were established. Budgetary support from the members for operational expenses would however need to be sought from the start of the regional arrangement for Central Asia.

VIII. Conclusion

Regional cooperation arrangements, whether commissions or network organizations, have shown that they can be an effective and economical mechanisms to promote the development of fisheries. The examples cited in this review had been established under the auspices of FAO and have benefited from the linkage with the Organization. Whichever legal status the Central Asian governments choose -- a regional commission or a regional network organization -- it would necessarily have to address similar procedural issues for establishment. The lesson from the initiatives that have been reviewed is that establishing and developing the regional body must go hand in hand with implementing its development objective. In short, there are two goals to pursue: establishing the institution and developing the fisheries of the region. In a pragmatic sense, the second is the justification for the first.

This strongly suggests two complementary and simultaneous processes: establishment and strengthening of an institution and strengthening the technological- and human resources and policy- and institutional support for capture fisheries and aquaculture development.

An important strategy for a newly formed regional body is to provide as quickly as possible measurable evidence to all stakeholders especially governments of the benefits of a regional cooperation arrangement.

IX. Suggested decisions and follow up actions

This meeting could decide which legal status and organizational structure to adopt. This is followed by these steps:

- Designate focal points in governments
- List down the preparatory activities using clear time-lines and constitute task forces to work on each activity
- Identify requirements and confirm commitments
- Identify responsible persons or institutions for the tasks and set deadlines.
- Conduct consultations among the key players within the countries.
- Initiate consensus-building among primary stakeholders
- Develop the legal foundation for the regional body, including formulation of a draft Outline (for a future Agreement, by laws and other legal and administrative documents).
- Specific inputs by FAO, if requested to assist (e.g. in terms of drafting the necessary legal and administrative documents).
- Determine funding requirements for the above activities and raise the resources.
- Propose/discuss the date and place of the 2nd Regional Inter-governmental meeting to Initiate the Establishment of a Central Asian Regional Fisheries Organization

The technical expertise will be provided by the countries, with the technical assistance of FAO SEC and the relevant services in Rome including LEGN, FIEL, FIMA, FIMF etc, and the relevant agencies of the Government of Turkey.

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Annex 1

Models of Regional Cooperation Bodies in fisheries and or aquaculture

Six options for regional cooperative arrangements in fisheries and aquaculture are described below. Two are network type of organizations that are independent, one is regional body established as a sub-activity of an existing regional political or economic (or both) cooperation, and three are commissions created by FAO.

1. **Inter-Governmental Organisation (IGO).** This would be a new organisation, created and governed by country members through some treaty or agreement. Commitments are made by governments, even though they will be represented by national institutions (example is the Network of Aquaculture Centres in Asia-Pacific -NACA). Although it was established by an FAO/UNDP Project, NACA evolved to become an independent regional network organization with its own Governing Council, Technical Advisory Committee, and a Secretariat as the Coordinating Unit. Members contribute to the core budget of the IGO according to a formula based on GDP. The objectives of NACA are to expand aquaculture development in the region and promote rural development through sustainable aquaculture. NACA seeks to improve rural income, increase food production and foreign exchange earnings and to diversify farm production. Current membership includes Australia, Bangladesh, Cambodia, China, Hong Kong SAR, India, Indonesia, I.R. Iran, Korea (DPR), Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnam. Other participating (non-member) governments include Rep. of Korea, Lao PDR and Singapore. The Secretariat of the Pacific Community is an associate member. More information on NACA can be found at: http://www.enaca.org/

2. **An Association of technical structures, such as research centres and science and technology institutes**. This is an association of institutions (state, public or private) who themselves constitute the members of the association, represented by their directors – some of the members are state supported institutions. An example of this type of organization is the Network of Aquaculture Centres in Central and Eastern Europe -NACEE). Governments are not the members, unlike NACA. NACEE is thus a non- government network organization. Membership is open to all research and educational institutions and producer associations in Central and Eastern Europe. Current membership includes 41 institutions and organizations from 15 countries.

The Network is a voluntary association of Central and Eastern European aquaculture institutions who signed a formal Founding Document and agreed on the structure and the operational framework of NACEE, in which all members maintain their full independence. Activities are coordinated by the Research Institute for Fisheries, Aquaculture and Irrigation (HAKI) of Hungary. The institutions adopted the By-laws and Rules of Procedure of NACEE, thus laying down the operational framework of the Network. FAO granted official 'liaison status' to NACEE. More information on NACEE can be found at: http://agrowebcee.net/subnetwork/nacee/

3. **An additional activity of an existing institution**. There is no need to develop a new membership, the members of the initiating institution/organization are already in place. The members are usually governments and the institution could be a geopolitical regional association such as ASEAN (Association of Southeast Asian Nations), Interstate Coordination Water Commission (ICWC) or SAARC (South Asian Association for Regional Cooperation). A regional body could be created under this geopolitical association as its sub-activity. There is no need to create a separate legal entity. An example is the Regional Aquaculture Information System (RAIS) under the Regional

Commission on Fisheries of the Near East. RAIS does not have such a wide remit as NACA or NACEE and at present is focussed on information provision and exchange. It is also dealing with a much smaller group of member countries. However, it is an example of how regional cooperation might be implemented as an activity inside an existing regional cooperation body in Central Asia. This requires no new initiatives to create a separate organisation but would still need resources from participants to operate it. More information on ASEAN, ICWC and SAARC can be found at the following web links: http://www.aseansec.org/;http://www.icwc-aral.uz/secretariat.htm; http://www.saarc-sec.org/main.php

4. A regional fisheries commission such as the Asia-Pacific Fisheries Commission. The Asia-Pacific Fishery Commission (APFIC) was established under an agreement formulated in the Philippines in 1948, which entered into force on 9 November 1948. At its Fourth Session in 1948, the FAO approved the establishment of this body under Article XIV of the FAO Constitution**,** under the title "Indo-Pacific Fisheries Council. In subsequent amendments it became the IPFCommission and then the APFCommission. As an FAO regional body, membership of the Commission is open to Members and Associate Member nations of FAO, non-member States, which are members of the UN, or any of it's specialized agencies. As of January 2005 its members include Australia, Bangladesh, Cambodia, China, France, India, Indonesia, Japan, Korea (Rep. of), Malaysia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Sri Lanka, Thailand, United Kingdom, United States, and Vietnam.

The FAO acts as the Secretariat for the Commission. The functions of the Commission are to promote full and proper utilization of the living aquatic resources of the Asia-Pacific area, in particular by the development and management of fishing and culture operations and by the development of related processing and marketing activities in conformity with the objectives of its members. More information on APFIC can be found at: http://www.apfic.org/

5. The General Fisheries Commission for the Mediterranean (GFCM), under the provisions of Article XIV of the FAO constitution, was approved by the FAO Conference in 1949 and entered into force in 1952. Consisting of 23 Member countries along with the European Community, the GFCM's objectives are to promote the development, conservation, rational management and best utilization of living marine resources, as well as the sustainable development of aquaculture in the Mediterranean, Black Sea and connecting waters. The Contracting Parties contribute to an autonomous budget for the functioning of the Commission. The GFCM has the authority to adopt binding recommendations for fisheries conservation and management in its Convention Area and plays a critical role in fisheries governance in the Region. The GFCM holds its regular session annually. It implements its policy and activities through the Secretariat, based at its headquarters in Rome, Italy, and operates during the inter-sessional period by means of its committees, namely the Scientific Advisory Committee (SAC), the Committee on Aquaculture (CAQ), the Compliance Committee (CoC) and their respective subsidiaries.

More information on GFCM can be found at: http://www.gfcm.org/gfcm

6. European Inland Fisheries Advisory Commission (EIFAC)

Established in 1957 by the FAO Council under Article VI-1 of FAO Constitution, EIFAC held its first session in 1960 in Dublin, Ireland. EIFAC aims to assist in the dissemination of information; to promote cooperation among and within governmental organizations; to advise on the development of inland fisheries and aquaculture.

EIFAC serves as a network, linking policy-makers, managers, scientists and others working on inland fisheries and aquaculture issues. The scientific work is undertaken mainly in Working Parties by specialists from EIFAC member countries and official observers.

The FAO Fisheries and Aquaculture Department provides the Secretariat at FAO headquarters in Rome. The secretariat, staffed by fishery and aquaculture experts, organizes biennial scientific symposia in close coordination with the host countries of the biennial sessions. The secretariat also provides technical advice on request, and assists to link those who seek technical expertise with those who can provide it. Members of EIFAC are: Albania, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, European Community, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. The Russian Federation often participates as observer in the EIFAC sessions. More information at: http://www.fao.org/fishery/rfb/eifac

Annex 2. The NACA Story in Brief: From Project to Organization

What would immediately stand out in the NACA story is the length – nearly ten years – it took to evolve from a project to an autonomous IGO. The keen interest in aquaculture during that period could be attributed to the widely seen promise of aquaculture as a new and profitable investment by entrepreneurs, and of national aquaculture development as an assistance area by development banks and donors; and the global awareness created by a global aquaculture programme (the Aquaculture Development Coordinating Programme of FAO, 1977 to 1987) that promoted its potentials to improve social and economic development, particularly its being the answer to a slowing growth of capture fisheries. That awareness was translated into a substantial and sustained support for capacity building and technology development and transfer. NACA found itself growing up in this global situation.

The NACA Project was approved in 1979 and became operational in August 1980 with project headquarters at the Department of Fisheries of Thailand in Bangkok.

Project Objective: Establish NACA

Development Objective: "Expand viable aquaculture systems through the improvement of existing technologies and development of necessary technical expertise for planning and implementing aquaculture development programs and achieving production targets."

Specific Objectives (Phase I and II, 80-83/84-86). For the first two phases that spanned the period 1980-1986, the development objective was translated into specific objectives that addressed research, training and information needs of aquaculture development, as follows:

- Carry out multidisciplinary research on selected farming systems to adapt, improve, or develop new technologies;
- train core personnel needed for aquaculture development
- maintain a regional information system for the provision of appropriate data and information for development planning, research and training.

Specific Objectives (Phase III 1987-89). Having established a functioning regional aquaculture development program carried out through networking this final phase was then devoted to:

- Consolidate the establishment of a network of aquaculture centres
- Strengthen institutional and personnel linkages between national and regional aquaculture centre
- Achieve regional self-reliance in aquaculture development through the establishment of a self-supporting network operating within the framework of TCDC

Implementation Strategy. The project followed a structured strategy to implement the regional program. The project focused on three priority needs, two developmental and the third a strategic organizational objective, which was linked to the effective achievement of the first two objectives. These were to:

- increase aquaculture production through effective transfer of established technologies in the region,
- train senior personnel in the planning and execution of aquaculture development and production , and
- help justify government financial support to national aquaculture project.

Research approach. In line with the first objective the research program followed an approach to produce immediate and measurable results. The approach to research was therefore to:

- Improve on known technology for immediate application to increase commercial production.
- Emphasize on the biotechnical aspects, a high priority in the newly developing field of aquaculture.
- Achieve higher yields and production to provide the justification needed by the government technical departments to obtain more financial support from their governments. It also allowed time for researchers to produce results to fill the numerous gaps in technology.
- Carried out only relevant adaptive and applied research that facilitated increasing production, and worked with universities and academic institutes on the basic problems.

R and D Mechanism

- R & D was mainly done in the four Regional Lead Centres (in China, India, Philippines and Thailand) on systems and species that each RLC had distinctive competence to do.
- Research areas were of priority to the country in which a Lead Centre is located.
- Results were exchanged through training and information.
- Some research results were adapted to country situations by the National Aquaculture Centres and the associated institutions (such as bureaus and directorates through their fisheries centres and stations).

Training Strategy

The manpower development program focused on aquaculture development planning and project implementation, development of production skills, and transfer of improved technology for direct application in national production programs.

Training approach was guided by a situation analysis which identified the following:

- Constraint: lack of trained personnel with broad-based knowledge and experience in the practical aspects of aquaculture production,
- Situation: Short-term training courses were being conducted in the region on specific topics or techniques, with little coverage of interrelated disciplines needed to make a whole and viable aquaculture system.

Based on the analysis, it recommended the following approach:

- Train key personnel - senior aquaculturists and technicians -- in planning and implementing aquaculture development program providing them better appreciation of and skills in multidisciplinary approach to aquaculture development planning

The key outcomes of the training program were:

- It fortified the manpower base for technology development,
- enhanced regional cooperation in aquaculture development by building a human network, and
- helped aquaculture attain a higher priority in national planning and policy formulation.

Information Strategy

In concert with the research and training program, the information program was designed to serve aquaculture production needs while complementing and supporting training and technology transfer. Specific information vehicles (this was pre-Internet era) included publications, audio-visuals, a

computer-based aquaculture information system, NACA Newsletter, working papers, technical publications in the World Food Day Series, book on *'Integrated Fish Farming in China'*.

A special venture into developing a numerical database and farm performance data of selected farming systems and technologies to help in the formulation of investment projects (AQUIS or Aquaculture Information System) provided some useful lessons but did not live up to expectation. Experts visits and exchanges between Centres were part of the information strategy and they were operated under TCDC arrangements.

Preparing for IGO-status

As originally planned, the NACA Project was terminated in December 1989. Having demonstrated the effectiveness of the network of regional collaborative efforts in developing aquaculture, the Project was recommended to become the Intergovernmental NACA, be strengthened further, and continue to establish collaborative arrangements with UNDP/FAO and international and donor agencies. Consultations with participating governments and institutions showed the need for international assistance in the early stages of the newly independent organization. The assistance would:

- firm up the foundation for the intergovernmental body by providing advisory activities and funding support that would help to consolidate and improve ongoing regional activities and to initiate new programs, mobilize funding support and liaise with other institutions in and outside the region,
- prepare the Governments to fully assume the funding for the core program through their contributions, and
- allow NACA to continue to engage the services of the regional and national experts who had been seconded to the project by their governments and therefore were already trained in the various activities required to operate the network.

Institutionalizing the network organization

Efforts to transform NACA into an intergovernmental organization culminated when the Intergovernmental NACA Organization was established during the First Governing Council Meeting held in Dhaka in December 1989. The major documents prepared to support this objective were:

- The draft Agreement on NACA, which was adopted at the Conference of Plenipotentiaries convened by FAO at its Regional Office for Asia and the Pacific (RAPA) in Bangkok in January 1988.
- Administrative and Legal Documents, as follows:
    - Schedule of Government Contributions
    - Rules and Procedures for the Organization
    - Financial Regulations
    - Employment Conditions
    - Staff Regulations
- The first Five-Year Work Program for Regional Aquaculture Development under the Intergovernmental NACA.
- The Headquarters Agreement between the Government of Thailand and NACA was developed, with Thailand continuing to host the project coordinating office of NACA and provide various immunities and privileges for the organization and staff.

These were the essential documents needed to establish an autonomous intergovernmental organization.

Initiatives were taken to generate collaborative support from donor governments and agencies to implement priority field activities under the Work Program. In another effort to lay a strong

foundation for the intergovernmental organization, a consultative meeting of agencies and organizations implementing aquaculture and related development programs was organized by the project. The meeting adopted a set of recommendations meant to foster closer collaboration among participating organizations and to assist and strengthen the governments in managing the intergovernmental body.

A core group of five regional experts recruited under Special Services Agreements was trained to take over the operation of NACA. Specialists from the Network centres can also be called upon to assist countries of the region in various disciplines related to aquaculture research and development.

The strengthening of the Network centres attracted the collaboration of other organizations and agencies. An autonomous NACA with its core program funded by member governments created a conducive environment for bilateral and multilateral agencies to channel their assistance, thereby supporting the governments at managing NACA and further strengthening their collective efforts in expanding aquaculture development.

The obligatory contribution of member governments, based on an approved formula, was seen as sufficient only to maintain a core staff of nationals seconded by the governments or recruited directly at a special scale lower than international rates. Therefore, donors had to be found for most of the field programs. In this connection, the Five-Year Work Program approved by the Third Provisional Governing Council Meeting held in Bangkok in January 1989 proposed a number of ways to obtain external funding support. One called for NACA to undertake the responsibility of implementing projects of international agencies like UNDP and FAO, as well as the World Bank and Asian Development Bank that fall within the field of interest and competence of the organization.

UNDP/FAO project funding to the NACA Project totalled US$ 7.2 million, with an additional US$ 800 000 for the Seafarming Development and Demonstration Project that NACA also managed from 1987 to 1991. Participating governments contributed to the NACA Project US$ 804 500 from 1985 to 1989 including US$ US 400 000 by China PR (TCDC/IPF) and the Thai Aid Programme in support of special activities, and voluntary contributions from Bangladesh, Indonesia, India, DPR Korea, Malaysia, Nepal, the Philippines, Singapore, Sri Lanka, and Viet Nam, which were then participants of the Project. In-kind contributions could not be estimated but the Chinese, Indian and Thai governments upgraded from their own national funds, with assistance from UNDP, the Regional Lead Centres (in Wuxi, Bhubaneshwar and Bangkok) to very high standards in line with their participation in the network as lead centres. The Philippines' Aquaculture Department of SEAFDEC hosted the Regional Lead Centre in the Philippines as well as the Senior Aquaculturist Training Programme, which ran for 9 years graduating 137 senior personnel from eight classes (the degree was awarded by the University of the Philippines in the Visayas (UPV), which collaborated in teaching the program). Investments to the 10-year project and an additional year for the Seafarming Project (1987-1991) was therefore around US$ 9 million. Various other sources of assistance, mostly from donor organizations like IDRC, ADB, CIDA, Commonwealth Fund, JICA, USAID, ODA (now DFID), the AusAid and ACIAR, were generated for the numerous specific training, research, and information activities and for exchange of experts.

The diversity of problems in the region needed cooperative regional action for solutions. The network mechanism has shown the effectiveness of pooling of resources and sharing of responsibilities, as well as results of research and development in approaching common problems. Increasing aquaculture production was done by increasing the area or intensifying the production systems. In either case, either approach spawned associated and linked socio-economic and environmental constraints. The region's countries needed to adopt a collective approach in dealing with common problems through planning and adoption of realistic policies for orderly development.

NACA's work program for 1990–94 was planned with the above issues in consideration. Proposals for the support of research and training activities in this direction were then formulated.

The success so far of NACA has been its pursuit of a strategy for self-reliance and continuing relevance to its members. The strategy, which had to be adopted once NACA turned independent is summarized as follows:

a. become self-sustaining in order to finance core activities such as technical advice, information exchange and network coordination and administration,

b. generate revenues by provision of services against payments,

c.develop programs and projects for collaborative assistance, and

d. forge partnerships with other institutions.

These measures made it possible for NACA to continue as a focal point for the implementation of multilateral and bilateral projects. This four-point strategy also makes it clear that it is the institutional foundation of a functional inter-governmental network that alone makes the organization, but that it serves its members and the broader region (as well as its own sustainability) by carrying out collaborative projects under the guidance of a regional work programme.

Annex 3

Example

Draft Logical Framework Analysis for Establishing CARNFish and Developing its Work Agenda

Vision Statement:

For the Region: The Fisheries and Aquaculture sectors become a significant contributor of sustainable social and economic development.

For the Organization: A strong and self reliant regional fisheries organization that fosters sustained cooperation among members.

Mission Statement:

Through regional cooperation and extensive partnerships, the Organization shall improve the capacity of the region for fisheries and aquaculture development. It will achieve this by developing and adapting advanced technology and systems, and by improving the region's expertise to manage sustainably its fishery resources, improve production and post production systems, improve access to markets, increase the effectiveness of extension and other support services, and strengthen the educational and research institutions.

Supergoal:

Improve the production of fisheries, culture based fisheries and aquaculture in Central Asia

Goal:

Research, training, technical assistance, and information exchange improved

Purpose*:*

CARNfish established and operationalised

Results:

R1 Institutional status/development of CARNFish determined

Activities

R1.1 Define and set up institutional and administrative structure of CARNFish with operational guidelines at regional and national levels
R1.2 Identify a host country and prepare a host country agreement
R1.3 Set up interim coordination facility in the host country
R1.4 Prepare participating country agreements including benefits and responsibilities
R1.5 Consolidate focal point persons (FPPs) and national working groups (NWGs) in all member countries

R2 Regional aquaculture research and development strategy formulated

R2.1 Identify leading research and development centres (regional) and their fields of expertise
R2.2 Arrange consultations / meetings / workshops to prioritize research and development needs and agree on collaboration
R2.3 Identify research and development mechanisms at country level

R3 Information exchange and communication systems operational

R3.1 Identify information needs and target audiences (categories, stakeholders)
R3.2 Develop communication and information transfer strategies for various stakeholders, target groups, etc
R3.3 Establish / upgrade national ICT centres
R3.4 Establish information exchange agreement with other regional organizations

R2 Capacity-building and training approach and methods developed

R4.1 Identify target groups for capacity-building and training and assess needs
R4.2 Identify and assess existing training materials
R4.3 Disseminate training materials

R5 Technical assistance mechanisms established

R5.1 Identify and categorize needs for technical assistance
R5.2 Identify capacity to provide technical assistance in the different categories
R5.3 Develop cooperation between member countries in provision of technical assistance

R6 Network governance, management, and coordination structure and systems in place

R6.1 Identify and train personnel in network management and coordination
R6.2 Establish Coordinating unit (or secretariat) and determine its staff requirement, equipment; annual programme of activities; budget
R6.3 Establish management structure
R6.4 Constitute the governing body
R6.5 Constitute technical advisory committee
R6.6 Develop administrative and financial management instruments

Annex 4: NACA's Structure

STRUCTURE OF THE NETWORK ORGANIZATION