

Report of the

**SCOPING WORKSHOP ON REGIONAL COOPERATION PROGRAMME
FOR RESPONSIBLE AQUACULTURE AND FISHERIES
DEVELOPMENT IN THE CENTRAL ASIAN AND CAUCASIAN
COUNTRIES**

Urumqi, Xinjiang Urumqi Autonomous Region, China, 4–8 June 2012



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Cover photograph: Participants of the FAO Scoping Workshop on Regional Cooperation Programme for Responsible Aquaculture and Fisheries Development in the Central Asian and the Caucasian Countries, Urumqi, China, 4–8 June 2012 (courtesy of FAO/Mohammad Hasan).

PREPARATION OF THIS DOCUMENT

This document contains the proceedings and results of the FAO Scoping Workshop on Regional Cooperation Programme for Responsible Aquaculture and Fisheries Development in the Central Asian and Caucasian Countries, 4–8 June 2012. The workshop was jointly organized by the FAO Fisheries and Aquaculture Department (Aquaculture Service [FIRA], Marine and Inland Fisheries Service [FIRF] and the Statistics and Information Service [FIPS]), the FAO Technical Cooperation Department (Integrated Food Security Support Service [TCSF]), the FAO Subregional Office for Central Asia (SEC), the FAO Regional Office for Europe and Central Asia (REU) and the FAO Representation in China in collaboration with the Ministry of Agriculture of the People's Republic of China through the Bureau of Fisheries and the Department of International Cooperation of the Ministry of Agriculture. The report was prepared by Dr Mohammad R. Hasan (Aquaculture Officer, Aquaculture Service, FIRA) and Mr Pedro B. Bueno (FAO Consultant).

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ABSTRACT

This report comprises the workshop proceedings and the strategy for regional cooperation that was developed by the participants; the latter was the principal output of the workshop. The major inputs to the discussions to craft the strategy were the country reports that described their priorities in five areas, namely research and technology development, manpower development, extension and information, management and policy; and their own assessment of their weaknesses and strengths in these areas. The deliberations on regional priorities and technical areas for cooperation and potential co-operators in each area were informed by presentations from institutions, projects and agencies that are working or have associations with either or both the Central Asia and Caucasus regions. A significant result of this process is a matrix that matches potential co-operators (provider country or institution) and hosts (recipient country) for various and specific capacity building needs, which were identified as common regional or subregional priorities. To start the programme, the workshop recommended seven activities that need to be initiated as soon as possible, as follows: (1) development of regional projects, organization of training/workshops, and capacity development on feed production and management on a pilot scale; (2) provision of technologies and equipment for the development and production of specialized fish feeds for different species from local raw materials; (3) training workshop on project development designed to improve project development skills by actually formulating projects that are based on the identified priorities; (3) an action plan for the upgrading of national laboratories in order to comply with international standards for certification of fish and fish products; (4) workshop on harmonization of institutional management structure and legislation in fisheries and aquaculture in accordance with international fisheries and aquaculture laws/policy for responsible fisheries and aquaculture; (5) development of an action plan to identify activities for sharing and providing broodstock and seed material that are of high genetic quality, complemented by training on broodstock management; (6) programmes for increasing and conserving endemic fish stocks in inland water reservoirs; and (7) establishing a working group linked to the TAC (Technical Advisory Committee) of CACFish (Central Asian and Caucasus Regional Commission on Fisheries), to support the follow-up of the scoping workshop recommendations and immediate action plans. This set of recommendations was addressed to the Food and Agricultural Organization (FAO) and China but should also involve concerned government institutions, technical experts of governments and regional institutions in certain areas, and the CACFish.

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BACKGROUND TO THE WORKSHOP

The issue: effective delivery of technical assistance to developing countries

The need to increase the capacities of developing countries for aquaculture management and development has received renewed impetus from recent global forums such as the meetings of the FAO Committee on Fisheries and the COFI Sub-Committee on Aquaculture. Specific areas of the world were particularly identified for urgent assistance, among which were the Central Asian and Caucasian countries. The organizers (i.e. FAO, the Ministry of Agriculture of China and the Provincial Government of Xinjiang) and the participating countries subsequently agreed that 'assistance' would be best delivered and implemented through technical cooperation. The workshop was thus designed to produce an outcome that would foster and strengthen cooperation in aquaculture and fisheries development among Central Asian (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Caucasian (Azerbaijan, Armenia, Georgia) countries and to facilitate the bilateral cooperation between China and its neighbouring countries in central and south Asia.

The context

After their independence in 1990, when the then Soviet Union was dissolved, the fisheries and aquaculture outputs of most of the countries that formed the Union fell steeply and continuously. The capacities for management, education, research, extension and production went into a general decline. Most affected were the countries of Central Asia and a number of those in the Caucasus region such as Armenia, Azerbaijan and Georgia. Not only were their fisheries resources hardly contributing to the production of food and generation of wealth, but the years of neglect and poor management had jeopardized their sustainability. Recent efforts at helping governments to revitalize the fisheries but particularly the aquaculture subsector of Central Asia by FAO in partnership with the Government of Turkey as well as Finland have borne small but promising results. This renewed interest facilitated the formation of a Central Asian and Caucasus Regional Commission on Fisheries (CACFish). All these have fuelled the interest of governments and some technical assistance and donor agencies in investing more into the modernization of the aquaculture subsectors. Assessing the prospects for a broader and more intensified assistance, FAO felt that the proven approach of technical cooperation among developing countries (referred to as Technical Cooperation among Developing Countries [TCDC]) would be a cost-effective strategy. TCDC would foster closer cooperation among the participating countries while they shared their experiences, pooled resources and expertise. China, with its advanced technical, scientific and production capacity for aquaculture and a lengthy experience in cooperating in aquaculture development with developing countries in Asia, Africa, Latin America, the Pacific and Near East, was approached by FAO to participate, as a co-operator in a scheme of regional technical assistance to Central Asian Caucasus and other Asian countries, that will operate under TCDC. The word co-operator is the technical term for a provider country in the language of South-South Cooperation.

SCOPE AND ORGANIZATION OF THE WORKSHOP

The workshop was co-organized by relevant FAO units and offices including the Fisheries and Aquaculture Department (Aquaculture Service [FIRA]/Marine and Inland Fisheries Service [FIRF]/Statistics and Information Service [FIPS]), the Subregional Office for Central Asia SEC, the Regional Office for Europe and Central Asia [REU], the Integrated Food Security Support Service [TCSF] of the Technical Cooperation Department [TC] and the FAO Representation in Beijing in collaboration with the Bureau of Fisheries and Department of International Cooperation of the Ministry of Agriculture, the Fisheries Research Institute of Xinjiang Autonomous Region in Urumqi, China, and the Freshwater Fisheries Research Centre in Wuxi, China.

Objectives

The workshop had the following objectives:

- a. Strategic: Develop a strategy to revitalize aquaculture and fisheries development in the region, identifying the development needs that could be better met by regional cooperation among the Central Asian, Caucasian and other Asian countries, and identifying areas for cooperation between China and the countries of the two regions.
- b. Operational:
 - i. review recent activities and present status of regional, subregional and national aquaculture and fisheries development;
 - ii. identify emerging issues, opportunities and challenges and analyse advantages and constraints, including experiences and lessons learnt;
 - iii. develop a regional aquaculture and fisheries development strategy that contains programmes, outcomes and activities and areas that require regional cooperation through a matching exercise to identify potential areas of bilateral and multilateral cooperation;¹
 - iv. identify possible development partners, regional and/or international organizations and donors that are active in the region; and
 - v. discuss the formation of a regional network without duplicating the initiatives/activities to be undertaken by CACFish, as well as possibly explore the formation of one or more thematic-based networks under the umbrella of CACFish.

Outputs

The major output was a strategy for regional cooperation, which comprised a matrix that matches potential co-operators (provider countries or institutions) and hosts (recipient countries) for various and specific capacity building needs that were identified as common regional or subregional priorities. The meeting formulated a short list of seven activities that need to be initiated as soon as possible, as follows: (1) development of regional projects, organization of training/workshops, and capacity development on feed management and feed production on a pilot scale; (2) provision of technologies and equipment for the development and production of specialized fish feeds for different species from local raw materials; (3) training workshop on project development: designed to improve project development skills by actually formulating projects that are based on the identified priorities; (3) an action plan for upgrading of national laboratories in order to comply with international standards for certification of fish and fish products; (4) workshop on harmonization of institutional management structure and legislation in fisheries and aquaculture in accordance with international fisheries and aquaculture laws/policy for responsible fisheries and aquaculture; (5) development of an action plan to identify activities for sharing and providing broodstock and seed material that are of high genetic quality, complemented by training on broodstock management; (6) programmes for increasing and conserving endemic fish stocks in inland water reservoirs; and (7) establishing a working group linked to the Technical Advisory Committee (TAC) of CACFish to support follow-up of scoping workshop recommendations and immediate action plans.

Participants and workshop venue

The workshop participants consisted of government representatives, mostly from the ministries in charge of fisheries and aquaculture, of the countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), Azerbaijan and Georgia of the Caucasus region, China, the Islamic Republic of Iran, Mongolia, Pakistan and Turkey; representatives of the CACFish, the intergovernmental

¹ The cooperative arrangements would be (i) between China (Fisheries Research Institute, Urumqi, Xinjiang and FFRC, Wuxi, Jiangsu), Central Asian countries (CAC), Caucasus countries and selected Asian countries to include Afghanistan, Iran (Islamic Republic of), Mongolia and Pakistan; (ii) between China and its neighbouring countries; and (iii) among CAC, Caucasus countries and selected Asian countries, and through TCDC (Technical Cooperation among Developing Countries) or south-south cooperation and inter-regional cooperation (CACFish-FAO/China/Government of Turkey-NACEE-NACA, all inclusive) with emphasis on two levels of cooperation, namely regional and between groups of countries.

organization of the Network of Aquaculture Centres in Asia and the Pacific (NACA), the Network of Aquaculture Centres in Central-Eastern Europe (NACEE); the Freshwater Fisheries Research Centre in Wuxi; the Xinjiang Fisheries Research Institute; and officers of the various units of FAO including FIRA (Aquaculture Service), FIPS (Statistics and Information Service), FIRF (Marine and Inland Fisheries Service) from Rome, FAO Subregional Offices in Central Asia (SEC) and FAO Regional Office for Europe and Central Asia (REU), and the Technical Cooperation Department. The workshop was attended by 45 participants. The workshop was hosted by the Ministry of Agriculture of China and held at the Xinjiang Royal International Hotel.

The opening ceremony of the workshop was inaugurated by Mr Cui Lifeng, Deputy Director General of the Bureau of Fisheries of the Ministry of Agriculture, China. Other speakers were Mr Qu Sixi, Deputy Director General of the Department of International Cooperation, Ministry of Agriculture (MoA), China; Ms Gulinu Abudurezake, Director General of the Bureau of Fisheries, Xinjiang Urumqi Autonomous Region, China; Dr Rauf Hajiyev, Deputy Minister for Ecology and Natural Resources of Azerbaijan; and Dr Devin Bartley, Senior Fisheries Officer, on behalf of Mr Jiansan Jia, Chief of the Aquaculture Service, FAO, Rome.

Workshop procedures and materials

The preparatory stage of the workshop consisted of a comprehensive consultation within FAO, which involved the Fisheries and Aquaculture Department, the subregional office Central Asia and the Regional Office for Europe, the Technical Cooperation Department, and the CACFish to agree on the concept and objectives of the workshop, develop the workshop agenda and design the methodology, and identify the country and institutional participants. A guideline for the presentation of the country status and prospects was developed and provided to the national focal points. The workshop agenda was then advised to the institutional participants that were invited to the workshop as their reference in developing their overview presentations.

The country reports of the status and prospects of fisheries and aquaculture² followed a standard format that described the natural, physical and manpower resources, institutional capabilities for sector management, policy and regulatory framework, and broad assessments of the priority needs for production, technology development and transfer, manpower training, and institutional strengthening. The format was generally adhered to and the reports were prepared and presented in PowerPoint mode. Some reports were in English, the others in Russian. Simultaneous translation in Chinese, English and Russian was provided by a panel of interpreters.

Overview reports of their initiatives in the areas and countries represented in the scoping workshop were provided by the following institutions: FAO/SEC, FAO/REU, CACFish, NACA, NACEE, the Freshwater Fisheries Research Centre (FFRC) Wuxi and the Xinjiang Fisheries Research Centre. A thematic presentation on the concept, mechanics and experiences in South-South Cooperation was provided by FAO.

The workshop consisted of plenary sessions and working group sessions. The plenary sessions provided the inputs for the working group sessions and the opportunity to present and discuss their results.

There were three group sessions – Caucasus, Central Asia, and other Asia (China, the Islamic Republic of Iran, Mongolia, Pakistan and Turkey). The sessions aimed at producing a series of outputs: the first was the raw material for the second group session, whose output became the raw material for the third session. The outputs of the third group session were compiled into a working table for the final discussion session, which was held in plenary. The working group outputs, produced in progression, were: (1st) a list of

² Countries reporting were Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan from Central Asia; Azerbaijan and Georgia 'from the Caucasus'; and China, Iran, Mongolia, Pakistan and Turkey. In the workshop discussions, salient information on Armenia, which was unable to attend, was provided by the Fisheries Officer of FAO Subregional Office for Eastern Europe (FAO/REU).

common subregional priorities³, (2nd) strategic collaborative actions to address these subregional priorities; (3rd) a matching of prospective providers and beneficiaries of the collaborative actions to meet the identified priority issues, and (4th) a short list of priority actions recommended for immediate implementation, i.e. initiated within 2012 or early in 2013. The fourth and final discussion session also adopted the vision of the programme of cooperation and drafted its strategic goals and specific objectives. The outputs of the Programme are represented by the priority actions recommended for implementation (3rd and 4th outputs).

The workshop agenda and timetable is presented in Appendix 1 and the list of participants in Appendix 2. A Technical Secretariat comprising Mr Jiansan Jia, Chief of FIRA, FAO, Dr Mohammad R. Hasan (FAO/FIRA), Dr Devin Bartley (FAO/FIRF), Mr Zhou Xiaowei (FIPS), Mr Liu Zhongwei (TCA/TCSEF), Dr Haydar Fersoy (SEC), Dr Thomas Moth-Poulsen (REU) and Ms Kiyal Guzel (FAO/SEC) was responsible for the technical coordination of the workshop. Appendix 3 presents a summary of statements made during the opening and closing ceremonies. The synthesis of the country presentations focusing on capacities and priority needs in research and technology development, education and training, extension, policy, and production is provided in Appendix 4 and a summary of the presentations of the regional and other organizations is provided in Appendix 5.

STRATEGY FRAMEWORK FOR REGIONAL COOPERATION

Rationale

This Strategy Framework is founded on the principle of TCDC or Technical Cooperation among Developing Countries. The participating countries are at different stages of economic development and fisheries advancement, and possess varying levels and types of technical expertise, experience and assets. Their fisheries sectors have common as well as unique problems even though some of them have already experienced and devised resolutions for some of those problems. Technical cooperation would be an efficient and economical means of solving common issues and enhancing the sharing of experiences and transfer of technology. From the perspective of donor and development agencies, it is a cost-effective means of providing assistance. The Strategy was informed essentially by (a) the country status reports on aquaculture, culture-based fisheries and inland fisheries development presented by the participating countries; (b) the overviews of regional as well as subregional programmes and activities of the regional organizations and institutions in fisheries and aquaculture with operations in Central Asia or Caucasus regions, as well as those in the other Asian countries that took part in the workshop; and (c) reports of the programmes and activities of two freshwater fisheries research and development institutions in China.

Vision of the Programme of cooperation

In line with the agreed mode for delivering development assistance, the workshop adopted a vision statement that is underpinned by technical cooperation in support of national development initiatives:

“Our vision is for the fisheries and aquaculture development efforts of our respective nations to be supported, hastened and sustained by regional and interregional cooperation.”

Strategic goals of the Programme of cooperation

The workshop distilled from its deliberations five strategic goals of the Programme of Cooperation, as follows:

³ In keeping with the content of the country reports, the seven categories of issues are (1) production; (2) research and technology development; (3) manpower development; (4) information development and exchange; (5) management and institutional strengthening in the aquaculture sector; (6) management and institutional strengthening in the capture fisheries sector; and (7) market access.

- a. Assurance of national food and nutritional security through increased and sustainable productivity;
- b. Improvement of livelihoods through diversification and generation of more employment opportunities along the value chain;
- c. Wealth generation from higher economic returns and improved market access for fisheries products;
- d. Sustainability of livelihood assets through environmentally sustainable practices; and
- e. Adaptive capacity and resilience to all types of risks.

Specific objectives of the Programme of cooperation

Three specific objectives were defined:

- a. To strengthen capacities in all areas that support aquaculture and fisheries development through TCDC;
- b. To address cost-effective common regional and subregional issues; and
- c. To facilitate access to external technical and funding assistance.

The core of the Programme comprises a set of priority problem areas common to a number of countries and the indicative activities that would address those problems through technical cooperation; one or more countries would have the distinctive capability to provide the solution to those problems faced by the other countries. This indicative programme of cooperation was reached by an analysis of the strengths and weaknesses and identification of the priority needs of each country in the five spheres of fisheries and aquaculture management and development: policy, research and technology development, education and training, extension, and production. The priority needs and strengths were then matched and countries as well as their national institutions were identified as 'donors' and others as 'recipients'. The Programme is envisioned to be facilitated through additional technical assistance from regional and international organizations under whose work programmes most of the activities are included.

The TCDC/South-South Cooperation Programme

This section presents the outputs of three working groups (Tables 1, 2 and 3) and the synthesis of the three outputs into an indicative regional programme (Table 4)

Table 1. Working Group for Caucasus: Azerbaijan, Georgia and Armenia⁴ (joined by FIRA and FAO/REU)

Priority issues in the aquaculture and fisheries sectors of the Subregion	Options to address each priority	Countries, institutions (national, regional, international) that are suggested to have the lead and collaborating role
1. Production (species, inputs, technology, health management, etc.)	1.1. Construction of feed production enterprises for fodder for salmon and carp and sturgeon. 1.2. Organization of workshops on feed formulation, production and management. 1.3. Development of efficient feed formulations on the basis of local and imported ingredients (small-scale production of feed) and culture of live food organisms and seaweed.	1.1.–1.3. China (Chinese Academy of Fisheries Science, CAFS) and Turkey (institute to be identified), FAO (to facilitate and provide technical assistance and training).

⁴ Armenia was represented by FAO/REU.

	<p>1.4. In Georgia – enterprises are needed for fish processing.</p> <p>1.5. Establishment of pilot farms for sturgeon and salmonids based on new private pilot farms (new upgraded equipment).</p> <p>1.6. Cooperation to share seed material between countries and farms (fish larvae, fingerlings, eyed eggs, etc.).</p>	<p>1.4. Turkey, Azerbaijan (e.g. Caspian Fish Co.).</p> <p>1.5. Turkey, China, Armenia.</p> <p>1.6. China, Azerbaijan, Georgia, Kazakhstan, Armenia, Iran (Islamic Republic of), Turkey, Russian Federation: Ministry of Fisheries and private enterprises.</p>
2. Research and technology development	<p>The fisheries sector research institutes of most of the Caucasian countries do not have the financial capacity to undertake the necessary research to assess fisheries resources and support the development and monitoring of fisheries management regimes. Concerning technology, it should be noted that most fishing fleets and hatchery facilities are old, ill-equipped and generally in a poor state.</p> <p>2.1. Improvement of equipment for fisheries research institutes.</p> <p>2.2. Introduction of new production technologies (including closed-water recirculation system).</p> <p>2.3. Introduction of new methods at different production stages.</p> <p>2.4. Institutional capacity building of research institutes.</p>	<p>2.1. – 2.4. China (CAFS), Iran (Islamic Republic of) (IFRO⁵), Turkey (CFRI⁶), Russian Federation (VNIRO⁷) and FAO (to facilitate and provide technical assistance and training).</p>
3. Manpower (production, technical, scientific, extension)	<p>3.1. Sharing experience with the leading international aquaculture centres. Human resource development (ichthyologists, fisheries technologists, veterinarians/fish disease control).</p> <p>3.2. Improvement of formal educational capacity (including curricula at the university level) and capacity building for training and extension institutions that address the needs of the fisheries sector and aquaculture.</p>	<p>3.1. – 3.2. China (CAFS), Turkey (CFRI, Trabzon) Russian Federation, Iran (Islamic Republic of) (IFO⁸) and FAO (to facilitate and provide technical assistance and training).</p>

⁵ Iranian Fisheries Research Organization.

⁶ Central Fisheries Research Institute, Trabzon, Turkey.

⁷ Russian Federal Research Institute of Fisheries and Oceanography.

⁸ Iranian Fisheries Organization (SHILAT).

<p>4. Information</p>	<p>4.1. Establishing a regional aquaculture website to share information between countries.</p> <p>4.2. Improve the system for statistical data collection for both government and private sectors as appropriate.</p> <p>4.3. Training workshop on data collection for aquaculture and fisheries.</p>	<p>4.1. – 4.2. China (CAFS), NACA, Turkey (MARA⁹), Russian Federation (VNIRO) and FAO (to facilitate and provide technical assistance and training).</p> <p>4.3. FAO.</p>
<p>5. Management of the aquaculture sector (capacity of government agencies, regulations, policy, better practices, organization, etc.)</p>	<p>5.1. Improvement of aquaculture legislation for the aquaculture sector at national level.</p> <p>5.2. Elaboration of technical instructions for the promotion of the sustainable development of aquaculture.</p> <p>5.3. Establishment of an agency (National Agency for Aquaculture Management) if appropriate.</p> <p>5.4. Development of national programmes and strategies for aquaculture development for the period 2013–2020.</p> <p>5.5. Establishment of associations of fisheries and aquaculture owners/managers.</p> <p>5.6. Institutional capacity building and preparation and practical training of qualified staff.</p>	<p>5.1. – 5.6. China, Turkey, Russian Federation and FAO (to facilitate and provide technical assistance and training).</p> <p>CACFish (development of regional management frameworks for aquaculture).</p>
<p>6. Management of the fisheries sector (regulations, policy, capacity of government agencies, biodiversity protection, etc.)</p>	<p>6.1. Improvement of fisheries legislation at national level.</p> <p>6.2. Improvement of the system of fisheries management.</p> <p>6.3. Development of national programmes and strategies for fisheries and aquaculture development for the period 2013–2020.</p> <p>6.4. Establishment of an association of fisheries and aquaculture owners/managers.</p> <p>6.5. Improvement of a system of evaluation of fisheries resources and determination of capture quotas.</p>	<p>6.1. – 6.5. China, Turkey, Russian Federation, Iran (Islamic Republic of) and FAO (to facilitate and provide technical assistance and training).</p> <p>CACFish (development of regional management frameworks).</p>

⁹ Ministry of Agriculture and Rural Affairs, Turkey.

	<p>6.6. Institutional capacity building and preparation and practical training of qualified staff.</p> <p>6.7. Regional cooperation on stock assessment.</p> <p>6.8. Co-management of lakes (e.g. Lake Sevan in Armenia).</p>	<p>6.6. – 6.8. Russian Federation, Azerbaijan, Iran (Islamic Republic of) and FAO (to facilitate and provide technical assistance and training).</p> <p>Kyrgyzstan (e.g. experiences from the FAO project on the management of Lake Issyk Kul).</p>
<p>7. Market access (food safety, standards, trade terms, etc.)</p>	<p>7.1. Organization of certification systems for aquaculture. Establishment of accredited/reference laboratory(s) to provide certification/ensure product quality.</p> <p>7.2. Provision of technical assistance to implement the certification scheme for aquaculture and fisheries products.</p>	<p>7.1. – 7.2. FAO (Codex Alimentarius), Eurofish, and CITES¹⁰ (to assist in trade issues) European Union, and Turkey.</p>

¹⁰ CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

Table 2. Working Group for Central Asia: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan (joined by FAO Project in Kyrgyzstan)

Priority issues for aquaculture and fisheries sectors for the Subregion	Options to address priority issues	Countries, institutions (national, regional and international) that are suggested to have the lead and collaborating role
<p>1. Production (species, inputs, technology, health management, etc.)</p> <p>1.1. Improvement of the diversity of species (common carp, silver carp and grass carp, trout, whitefish, peled¹¹, catfish, sturgeon, paddle fish, and pike-perch)</p> <p>1.2. Specialized feeds for fish</p> <p>1.3. Good quality seed</p> <p>1.4. Intensification of production systems</p> <p>1.5. (Anti-)epizootic activities.</p>	<p>1.1. Application of innovative technologies for fish production.</p> <p>1.2. Plant for production of balanced/extruded feeds; development of efficient feed recipes (formulations) based on local and imported ingredients (small-scale production of feed)/production of live organisms (living resources) and seaweed.</p> <p>1.3. Construction of hatcheries. Development of programme for quality assurance of broodstock in compliance with local legislation. Carrying out a regional hatchery management training programme for staff members of Department of Fisheries.</p> <p>1.4. Introduction of intensive methods in aquaculture sector.</p> <p>1.5. Development of programme for regulation and prophylactic activities for fish safety and health.</p>	<p>1.1 – 1.2. Collaborating countries: Turkey, China, Iran (Islamic Republic of), Hungary, Russian Federation, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan; Department for Fisheries of Kyrgyzstan, Fish Enterprise of Tajikistan, MoA¹² of Kazakhstan, MAWR¹³ of Uzbekistan, State Committee for Fisheries of Turkmenistan; Turkey, China, Russian Federation and other countries.</p> <p>1.3. China, Turkey, FAO, CACFish, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan.</p> <p>1.4. – 1.5. China, Turkey, FAO, CACFish, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan.</p>

¹¹ *Coregonus peled*

¹² Ministry of Agriculture.

¹³ Ministry of Agriculture and Water Resources.