

**Report of the**

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**FAO WESTERN BALKAN REGIONAL SEMINAR/WORKSHOP ON  
AQUATIC ANIMAL HEALTH**

**Sarajevo, Bosnia and Herzegovina, 19–22 May 2008**



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## **PREPARATION OF THIS DOCUMENT**

This document is the final report of the FAO Western Balkan Regional Seminar/Workshop on Aquatic Animal Health held in Sarajevo, Bosnia and Herzegovina, from 19 to 21 May 2008. This activity is one part of FAO Technical Cooperation Programme TCP/BiH/3101 Strengthening Capacity on Aquaculture Health Management.

This report was prepared by Dr Melba B. Reantaso (Fishery Resources Officer and also Lead Technical Officer of the TCP) with contributions from Dr Nihad Fejzić (National Project Coordinator), Dr Sanin Tanković and Dr Zorana Mehmedbašić (Secretary-General and Senior Associate, respectively, both of the State Veterinary Office of Bosnia and Herzegovina) and Dr J.R. Arthur (FAO Consultant).

## **ACKNOWLEDGEMENTS**

Many thanks are due to the staff and officials of FAO Subregional Office for Central and Eastern Europe, the State Veterinary Office of Bosnia and Herzegovina for various kind assistance in the organization of the workshop.

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#### ABSTRACT

The Western Balkan Regional Seminar/Workshop on Aquatic Animal Health (TCP/BiH/3101) held in Sarajevo, Bosnia and Herzegovina, from 19 to 22 May 2008 was participated by a total of forty representing fisheries and veterinary authorities and the private sector from Western Balkan countries (Bosnia and Herzegovina, Croatia, Montenegro, Serbia and The Former Yugoslav Republic of Macedonia) including representatives from the Food and Agriculture Organization of the United Nations and the World Organisation for Animal Health.

The regional seminar/workshop successfully disseminated the outcomes of TCP/BiH/3101 (Strengthening Aquaculture Health Management in Bosnia and Herzegovina); exchanged information on the status of aquaculture and aquatic animal health, diseases affecting aquaculture, and programmes for disease diagnosis and prevention in Western Balkan countries; and identified opportunities for seeking solutions to common problems related to pathogen issues affecting regional trade between Balkan states and other key European Union trading partners; and discussed and formulated a possible programme for regional cooperation.

A major outcome of this regional seminar/workshop was the development of a Technical Cooperation Programme Facility (TCPF) concept note “Assistance to Western Balkan countries for improving compliance with international standards for aquatic animal health” strongly supported by the above participating countries including that of Albania. This request for a TCPF funding will support the following activities: regional capacity and performance survey, regional field assessment, regional meeting and development of a further regional TCP proposal that will address several key areas recognized to be of high importance in the region. These include risk analysis, disease surveillance, monitoring and reporting, disease diagnostics including a regional reference laboratory, information and networking and targeted capacity building.

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## **BACKGROUND**

1. Bosnia and Herzegovina (BiH) has a long history of aquaculture production that was interrupted during the 1991–1995 war, destroying a large part of the production infrastructure. Since then, modern fish production and processing facilities have been established and trade in fish and fish products had resumed. The Government of BiH has recognized the importance of the development of aquaculture sector and strongly supported its further expansion.
2. During the process of negotiating export of live fish and fish products to Member States of the European Union (EU), the competent authorities of BiH, in particular the State Veterinary Office (SVO) of the Ministry of Foreign Trade and Economic Relations, have recognized certain lack of capacities related to aquatic animal health management and food safety. In order to fill this gap, the Government of BiH had requested FAO's assistance through a Technical Cooperation Programme (TCP). The project "Strengthening Capacity on Aquaculture Health Management" was officially approved on 14 June 2006, to be implemented for a period of 20 months. The development objective of the project is to increase the effectiveness and efficiency of the SVO/BiH in aquatic animal health management in order to support sustainable and healthy aquaculture production that will enable the country to improve the value and efficiency of aquaculture production through the implementation of international animal health and food safety standards, especially those of its trading partners in Europe and neighbouring countries.
3. One of the specific objectives of the above project is to disseminate the outcomes to neighbouring trading partners in order to promote future cooperation in aquaculture and aquatic animal health management in the region. A regional workshop will be used to explore possibilities for regional cooperation and development of regional project on issues concerning areas as networking and information exchange, regional disease reporting, sharing of technical expertise, etc.
4. As part of the above TCP, the FAO Western Balkan Regional Seminar/Workshop on Aquatic Animal Health was undertaken from 19 to 21 May 2008 in Sarajevo, Bosnia and Herzegovina. This regional seminar/workshop represents the final regional activity of the TCP.

## **OPENING OF THE WORKSHOP**

5. Mr Slobodan Puhac, Minister of Foreign Trade and Economic Relations, Dr Drago N. Nedić, Director and Chief Veterinary Officer of SVO/BiH, Dr Frank C.J. Berthe, Senior Scientific Officer of the European Food Safety Authority and representing the World Animal Health Organisation (OIE) and Mr Tomasz Lonc, Policy Officer of FAO Subregional Office for Central and Eastern Europe graced the opening ceremony of the seminar/workshop. All officials recognized the need for regional cooperation and expressed strong support for a future regional cooperative programme initiative in aquatic animal health
6. Mr Slobodan Puhac welcomed the participants and wished all a pleasant and fruitful work. He gave strong support to the implementation of the FAO TCP/BiH/3101, stressing the importance of strengthening the aquaculture sector in Bosnia and Herzegovina. The Minister also expressed strong support to the ongoing initiative to improve regional collaboration, exchange of experiences and information.

7. Mr Tomasz Lonc, FAO Policy Officer, welcomed all participants and guests to this workshop on behalf of Ms Maria Kadlecikova, FAO Regional Representative for Europe and Central Asia based in Budapest, Hungary. He specially thanked the Ministry for Foreign Trade and Economic Relations and the SVO for the smooth implementation of the project. He emphasized that FAO looks at fisheries as a way and instrument to diversify jobs and income generation sources in rural areas, the reason why export markets capacity is so important; obtaining an export certificate and licence is only the beginning of the process. He confirmed that FAO is ready to provide policy assistance and technical advice for Bosnia and Herzegovina in this field, as requested and tailored to the needs of the government ministries that would be involved, the private sector, as well as other interested countries in the subregion in the identification and formulation of a regional project as discussed. The full text of Mr Lonc's opening statement can be found as Appendix 1.

8. Dr Franck Berthe of the European Food Safety Authority, representing the World Animal Health Organisation (or the French acronym OIE), in a presentation on Setting Standards for Aquatic Animal Health, presented the role of OIE and its administrative organigram and described in detail the mandates and activities of the Aquatic Animal Health Standards Commission. He concluded his presentation by emphasizing that the many animal health challenges currently being faced by the aquaculture sector requires good governance of the veterinary services, a "whole-of-government" approach to aquatic animal health, including the private sector and embracing aquatic animal health as part of the "one-health" approach.

9. Dr Drago N. Nedić, Director of SVO, gave an introduction concerning the structure and competencies of the veterinary service in Bosnia and Herzegovina, including the current status and ongoing and future activities of the service. Dr Nedić gave strong support to improve regional collaboration in the fishery sector.

## **PURPOSE OF THE WORKSHOP**

10. The objectives of the regional seminar/workshop were to:

- disseminate the outcomes of the FAO Technical Cooperation Programme TCP/BiH/3101 "Strengthening capacity on aquaculture health management in Bosnia and Herzegovina";
- exchange information on the status of aquatic animal health, diseases affecting aquaculture and programs for disease diagnosis and prevention in Western Balkan countries;
- identify opportunities for seeking solutions to common problems related to pathogen issues affecting regional trade between Balkan states and other key EU trading partners; and
- discuss and possibly formulate a program and proposal for regional cooperation.

11. The seminar/workshop agenda is attached as Appendix 2

## **WORKSHOP PARTICIPATION**

12. A total of forty (refer to Appendix 3 for the List of seminar/workshop participants and a group photo as Appendix 6) from fisheries and veterinary authorities and private sector from Western Balkan countries (Bosnia and Herzegovina, Croatia, Montenegro, Serbia and The

former Yugoslav Republic of Macedonia) including representatives from FAO and the OIE participated in this event.

## **WORKSHOP HIGHLIGHTS –TECHNICAL SESSION**

13. A total of 15 presentations were made consisting of two opening presentations, one background paper, four country papers (excluding a paper from Albania read by SVO), five thematic papers on the work carried out in Bosnia and Herzegovina (i.e. aquaculture, aquatic animal health, aquatic animal health surveillance, fish quality and safety of aquaculture products and legal framework for food safety) and one each on national strategy, private sector presentation and concept note for a regional proposal. The list of presentations can be found in Appendix 4. Brief highlights of each presentation can be found below.

14. Dr Melba B. Reantaso of FAO, presented a backgrounder to TCP/BiH/3101 – Strengthening Capacity on Aquaculture Health Management in Bosnia and Herzegovina – from the time of the original request for technical assistance in 2003 through to the final approval of a TCP in 2006 and the subsequent implementation which covered many activities such as Inception Planning Workshop, training/workshops on five thematic areas, national stakeholder consultations, overseas training in virology, participation to an FAO workshop on risk analysis in aquaculture, provision of laboratory equipments and this regional seminar/workshop. She concluded her presentation by noting that the purpose of this workshop was to exchange information and experiences, define a uniform approach in resolving issues related to regional trade between Balkan states and EU trading partners and development of a regional cooperative programme concerning aquaculture and aquatic biosecurity issues.

15. Dr Sanin Tanković of SVO read the statement from Albania who was not able to send a representative. Albania has vast natural water resources (both coastal marine and inland water resources) that has great potential for fisheries and aquaculture development. The country has about 470 km of coast line and about 43 300 km<sup>2</sup> of inland surface waters including 11 main rivers and 247 lakes. These vast inland water resources present a great potential for culture of both finfish and molluscs and the possibility to increase supply of fish products for internal consumption and for export. Currently, the main aquaculture species are trout, seabass, seabream, common carp, silver carp, bighead carp, grass carp, shrimp, mussel and salmon.

16. Dr Ivana Lohman and Dr Mario Rogošić of the Veterinary Directorate of the Ministry of Agriculture, Fisheries and Rural Development, in their presentation on Croatian Aquaculture, briefly presented the structure of the competent authority, production data, relevant legislation, disease control programmes, and activities of laboratories. With respect to legislation, aquatic animal health related issues are contained in the Veterinary Act (O.G. 41/07) and the Food Act (O.G. 46/07). Ongoing activities include implementation of EU directives on aquatic animal health as part of accession to the EU. The official laboratory for aquatic animal diseases is the Croatian Veterinary Institute which has capacity for parasitology, bacteriology and virology. In 2006, total annual production of freshwater fish was 4 164 tonnes (2 309 tonnes of cyprinids and 1 865 tonnes salmonids). Total production from the Adriatic Sea was close to 11 000 tonnes (2 000 tonnes of seabass, 1 450 tonnes of seabream, 4 500 tonnes of tuna and about 3 000 tonnes of mussels and flat oysters). There are about 38 approved fish farms in the country (i.e. 33 seabass and gilthead farms; 5 tuna farms; 17 trout farms; and 13 carp farms); 9 production areas for bivalve mollusc culture and 2 areas

for harvesting and 22 purification centres for bivalves. A total of 132 establishments for fish products have been approved and 61 facilities have permission for export to the EU. In Croatia, 22 dispatch/purification centres for bivalves were approved.

17. Dr Gordana Braletić of Montenegro's Veterinary Administration described the structure and competencies of the veterinary service of the country and the fishery sector. The fishery sector in Montenegro has a very important role in the economy of the country. Annually, Montenegro produces around 3 000 tonnes of fish, consisting of 1 800 tonnes of sea fish, 950 tonnes of freshwater fish and 150 tonnes of molluscs. Aquaculture production comes mainly from trout, seabream, seabass and Mediterranean mussel. An important processing plant in Montenegro, Ribarstvo, is one of five active canning factories in the Balkan. Three laboratories are involved in diagnostic activities related to aquaculture on aspects concerning fish diseases, residue monitoring and other investigations.

18. Dr Olivera Karamanova of the Veterinary Directorate of the Ministry of Agriculture, Forestry and Water Economy (MAFWE), presented the status of aquaculture animal health and safety in The former Yugoslav Republic of Macedonia. The country has no marine resources and water resources are mainly from lakes, rivers, artificial reservoirs and aquaculture fish farms. Laws concerning animal by-products are contained in O.G. 113/07. The country has fully harmonized its veterinary legislation in accordance with EU directives. The rules for aquatic animal health and food safety control are in preparation. There are six processing establishments, four of which have export licence to EU. Yearly production is about 771 000 kg. Diagnostic investigations for viral haemorrhagic septicaemia (VHS), infectious pancreatic necrosis (IPN), bacterial kidney disease (BKD), spring viremia of carp (SVC) and infectious haematopoietic necrosis (IHN) are performed by three veterinary laboratories.

19. Dr Svetlana Jeremić of the National Scientific Veterinary Institute of the Republic of Serbia described the aquaculture and animal health status in the country. The fishery sector is mostly represented through farming of cyprinid and salmonid fish species. Enhancement of production consequently created favourable conditions for the development of certain fish diseases. Thus, the country constantly performs clinical and laboratory monitoring of the health status of aquaculture animals, in accordance with the legislation in force. All procedures in relation with monitoring are conducted in accordance with the EU and OIE requirements. With the implementation of surveillance and monitoring programmes, the following diseases were discovered: SVC, IPN, BKD, furunculosis, yersiniosis, and erythrodermatitis. While these diseases are now subject to legislation, however, existing disease control measures are not sufficient.

20. Dr Jasmin Omeragić, National Consultant on Aquaculture, in his presentation on Aquaculture Development in Bosnia and Herzegovina, gave a short introduction concerning the historical development of aquaculture in the country, the current status of aquaculture production including information on import and export. He also presented the potential as well as weakness of the sector and emphasized the need to harmonize legislation, perform farm registration and accreditation of laboratory for disease diagnosis.

21. Dr Adnan Jažić, National Consultant on Aquatic Animal Health Management, in his presentation on Health Status of Aquatic Animals in Bosnia and Herzegovina, gave a brief summary concerning the historical health status and activities of the Center for Fish Diseases, since its establishment in 1959 up to present. The role of the Center is primarily focused on

diagnostics, prevention and control of infectious diseases of fish. The presentation also provided an overview of registered fish farms, monitoring programme for viral fish diseases at the state level, details concerning appointment of authorized diagnostic laboratories, appointment of the National Reference Laboratory (NRL) for viral fish diseases and NRL's collaboration with the EU Community Reference Laboratory in Aarhus. It was emphasized that the SVO, in collaboration with the entity competent authorities and NRL, is working on the development of a disease control model and establishment of a system that will provide efficient disease control and monitoring of fish diseases in accordance with the OIE standards. The presentation specifically underlined that besides monitoring and control of the aquatic animal health, it is necessary to improve and pay attention to other factors that can influence health status of aquatic animals and status of the fishery sector in Bosnia and Herzegovina, like issuance of new legislation and harmonization of the existing legislation with the EU requirements, financing and equipping of the NRL, registration of fish farms, zoning, and movement/trading control.

22. Dr Davor Alagić, National Consultant for Epidemiology, in his presentation on BiH Aquatic Animal Health Surveillance – Current Status and Future Challenges provided the EU definition of the aquatic animal health surveillance, through active, passive and targeted surveillance, as well as the components of passive and active surveillance in BiH. His presentation also covered the results of the targeted surveillance conducted in BiH during the period from 2004 to 2007. He specifically addressed the general conditions and recommendations concerning organizational and structural issues, matters related to legislation, trade of aquatic animals in BiH, and specific recommendations concerning improvement of health surveillance, redefining of the national list of diseases, susceptible species, inspection control scheme, preparation of epidemiological inquiry guide, minimum criteria and recommendations for implementation of contingency plans for emerging and exotic diseases, and surveillance of wildlife fish.

23. Dr Muhamed Smajlović, National Consultant on Fish Quality and Safety, in a presentation on Fish Quality and Safety of Aquaculture Products in Bosnia and Herzegovina indicated that one of the final aim of the project is the harmonization of BiH aquaculture legislation and the food business sector with European Community legislation and specifications in order to be able to export the products to the EU or other countries with similar objectives. The aquaculture sector is seen as the main sector able to fulfill the guidelines faster than other sectors in BiH. The presentation gave an overview of measures taken by BiH legislation and the amount of their actual implementation in aquatic food business sector with respect to the new European food safety approach. The presentation mentioned the requirements for the implementation of hazard analysis and critical control point or HACCP-based systems, good management practices, and quality management systems which fish producers and processors need to comply in order to export to the EU. The organization of the official veterinary inspections was briefly mentioned, including the network of laboratories in charged with testing and monitoring of health hazards caused by aquaculture products.

24. Ms Anniken Skonhoft, FAO Legal Officer, made a presentation on the EU and BiH legal frameworks for seafood safety and quality. First, she made an introduction to the EU food hygiene rules, including Regulation no. 178/2002 and the “hygiene package.” Here, she elaborated on the fundamental concepts that underpin these regulations, like risk analysis, traceability and the food chain approach. She then gave a brief introduction to the BiH laws relating to food safety and veterinary control. Although some of the EU rules have already

been implemented into BiH legislation, she pointed to that there is a need to adopt implementing regulations to ensure compatibility with EU rules. The existence of inconsistencies between the state food law and the state veterinary law was another legal challenge that was pointed to, and which she said calls for revisions of the legal framework.

25. Dr Nihad Fejzić, National Project Coordinator, in his presentation on National Aquatic Animal Health Strategy for Bosnia and Herzegovina, narrated the planning process in the development of the national strategy (development of a policy, preparation of a strategy and implementation plan), the main difficulty being the lack of an aquaculture development plan. The vision of the national strategy is to “develop and maintain up-to-date an Aquatic Animal Health Management Strategy in BiH which will be able to support the sustainable development and management of the aquaculture sector, meet growing consumer demands for aquatic foods and products that are of high quality, safe, competitively priced and are produced in an environmentally responsible manner with maximum opportunity for profitability in all stages of the aquaculture product chain”. The national strategy consists of a background (statement of purpose, vision, guiding principles, the process for implementation) and 11 programme elements (i.e. policy, legislation and jurisdiction; pathogen list; risk analysis and quarantine; diagnostics and health certification; surveillance, monitoring and reporting; emergency preparedness; capacity building; research and development; information and communication; international collaboration and resources and funding). The strategy is a short policy document that will be supported by a detailed implementation plan outlining the goals of each activity, actions required and the manpower and financial resources that must be allocated. For each project, the following information will need to be developed: (i) objectives, (ii) specific work to be accomplished, (iii) outputs/measurable, (iv) timeframe, (v) manpower/expertise requirements, and (vi) budget.

26. Dr Sanel Sarić, Vice President of the Fishery Association of Bosnia and Herzegovina, presented key facts about the fishery sector in Bosnia and Herzegovina having a very long tradition with the first salmonid fish farm established as early as 1894 in Sarajevo, along the Bosnia river, while cyprinid farm was first established in 1905 in Priedor. Today, Bosnian freshwater fishery is leading in the region especially for trout production. Top quality products are guaranteed by veterinarianian inspection system, which fulfilled EU standards and norms in this sector, by modern technology used by fish farmers both in farming and processing and the natural top quality and quantity of fresh water in Bosnia. There are 137 known species of fish in the country. Based on above-mentioned facts, in the near future we expect fast development of this sector. There are 51 fish farms and four processing facilities in the country with total annual production of 6 329 tonnes consisting of 55 percent salmonids (44 fish farms of which 16 farms utilize cages and 28 farm use raceways), 44 percent cyprinids and 1 percent from mariculture. Since 1999, production in this sector had an average growth rate of 12 percent. This was possible by implementation of new technologies for existing farms and by building of new capacities. For salmonids, with an annual production of 3 430 tonnes (i.e. 2 100 tonnes in raceways and 1 330 tonnes in cages) placed Bosnia and Herzegovina in 9<sup>th</sup> place in production of portion sized trout (200–400 g) in Europe. Total area covered by fish farms is 16.6 ha. Further growth of production is expected in cage fish farms. There are five cyprinid farms (covering 3 276 ha) with an annual production is 2 807 tonnes. In recent years, production of carp started in cages in some lakes. Further growth of production is expected in cage facilities. Annual production from mariculture is 92 tonnes of fish, mainly seabass and seabream, and 15 tonnes of molluscs. There are only two farms in the country using 3.6 ha. Limited coast line in Bosnia prevents any bigger growth of mariculture. At present, there are four processing facilities in the

country, three specialized for freshwater species and one for processing of sea fish. During the past five years, veterinary authorities in Bosnia has been working with EU legislation for fishery and from March 2008, EU has listed Bosnia for export of fish products which was main precondition for further development of this industry but also growth of processing capacities in the country. Present processing annual capacity is estimated on 3 000 tonnes. It is clear that with new possibilities and new markets, fish processing will become the main basis for further growth of annual farming production.

## **WORKSHOP HIGHLIGHTS–WORKING GROUP SESSION**

27. Because of the relatively small number of attendees, the development of a West Balkans regional proposal was conducted as a single Working Group. Based on the presentations and discussions held over the course of the Workshop, the Working Group was charged with identifying the major components of a regional programme and the activities needed for development of a concept note (a preproposal) for submission for funding consideration.

28. The Workshop participants identified the following activities that need to be completed to establish a Regional Cooperative Framework:

- 1) Identify priority areas that will be the subject for a regional cooperative project for possible funding by FAO through a regional Technical Cooperation Programme Facility (TCPF) towards achieving the regional TCP proposal.
- 2) Use the TCP Facility (TCPF) mechanism to start the process.
- 3) Submission of a regional TCP proposal.

29. The Working Group identified completion of the following as needed to drive the process:

- Identification of specific activities, responsible persons and timeframe.
- Identification of a volunteer person/country to coordinate the above activities (this will be done on an ad hoc basis).
- Drafting of a generic letter of request to be sent to FAO by three or more countries.
- Identification of three or four countries that will send the official request for assistance through a TCPF and the key persons within each country who will send the letters.
- Preparation of a list of the activities and a timeframe to achieve the process.

30. The Working Group agreed that the tasks of preparing a preproposal (a concept note), a generic letter of request and a tentative list of activities and timeframe for the process (the “Way Forward”) would be undertaken by the FAO Project Officer and International Consultant for presentation during the final session of the Workshop.

31. As part of the final session, an FAO TCP Facility concept note “Assistance to Western Balkan countries for improving compliance with international standards for aquatic animal health” was presented in plenary by Dr J.R. Arthur for approval. The technical areas identified as having highest priority to assist all participating countries in developing capacity to implement international standards include: (i) risk analysis; (ii) disease surveillance, monitoring and reporting; (iii) disease diagnosis (including regional reference laboratories); (iv) information and networking; and (v) targeted capacity building. The request for a TCPF funding will support the following activities: regional capacity and performance survey; regional field assessment; regional meeting and development of a further regional TCP

proposal that will address the above-mentioned key areas of priority importance. A copy of the full concept note is attached as Appendix 5.

### **CLOSING OF THE WORKSHOP**

32. The workshop organizers thanked the representatives from FAO and OIE, all regional and local participants for their contribution to a very productive workshop. The NPC and the officials and staff of SVO were also gratefully acknowledged for excellent hosting of the workshop.



## APPENDIX 1

### **Opening statement by Mr Tomasz Lonc, Policy Officer, FAO Subregional Office for Central and Eastern Europe**

Excellency, Dear Workshop Participants,

I would like to welcome all participants and guests to this workshop on behalf of Ms Maria Kadlecikova, FAO Regional Representative for Europe and Central Asia in Budapest, Hungary, who sends her best regards and wishes for a successful meeting and congratulations on the completion of the TCP project and the excellent work done. Unfortunately due to previous commitments she could not join us today for this important workshop.

On behalf of the Food and Agriculture Organization of the United Nations, I would like to sincerely thank His Excellency Slobodan Puhalic, Minister for Foreign Trade and Economic Relations for his support and interest in the project and his presence and participation in the workshop. Thanks and appreciation are due to all national specialists and institutions that participated and contributed to the success of the project.

On behalf of the Regional Office for Central and Eastern Europe in Budapest and all colleagues that were involved and worked on the project, we would like to thank in particular Dr. Sanin Tanković from the State Veterinary Office of Bosnia and Herzegovina and Dr. Nihad Fejzić, National Project Coordinator and only those of who have worked on projects know how much work, time and effort is required and they have dedicated.

I would also like to thank Ms Melba Reantaso from the FAO Fisheries and Aquaculture Department and her colleagues who did such an excellent job as witnessed by the proposals and requests for follow up through a regional project or projects. Thanks also go to the Regional Office for Europe and Central Asia Project Operations Group, in particular Nedžad Ajanovic, Raimund Jehle and Goran Stavrik and, last but not least, Thomas Mothpoulsen, Fisheries Officer in the FAO Subregional Office for Central and Eastern Europe who ensured the smooth and professional running of the project.

With the Minister's permission, I would briefly focus on why this project was so important for Bosnia and Herzegovina and for FAO. First of all, the Ministry for Foreign Trade and Economic Relations was the national institution responsible – together with the State Veterinary Office under MOFTER – for the implementation of the project. This is important and a welcome change in the sense that there is a national level Government Ministry responsible for agriculture, working closely with the two entity Ministries of Agriculture, Forestry and Water Management.

The experience of other transition economies shows that as efforts and the process of approximation and European integration gets under way, the role of such a national level coordinating Ministry as MOFTER will become key role in the preparations for work with the European Commission and consultations and, prospectively, negotiations in the future. This is a vital experience learned by all European Union New Member States that have joined the EU – that one strong coordinator is needed in order to develop the national position for the agricultural and rural chapter in the pre- and later on accession negotiations.

There are three main outcomes of the TCP project that could be considered major successes:

1. Obviously, the capacity to monitor aquaculture health issues has been strengthened and has contributed to the improvement and upgrading of the operations of the State Veterinary Office.
2. A key development and achievement is the system and certificates that allows exports to the European Union markets; experience shows that improved quality, standards and certification of products for exports are the way to growth of exports to EU markets.
3. Very important and supported by FAO is cooperation in the region with neighbouring countries.

For FAO, the following conclusions and recommendations are most important:

- FAO welcomes and supports for proposal for follow-up regional project or projects, as discussed; this terminal workshop is a good opportunity to further review ideas and proposals for regional TCP that should comprise at least three countries.
- FAO looks at fisheries as a way and instrument to diversify jobs and income generation sources in rural areas; that is why export markets capacity is so important; obtaining an export certificate and licence is only the beginning of the process.
- Work that FAO does in many countries in South-Eastern Europe which are at various stages of starting or preparing for the pre- and accession negotiations, indicates that the key component in all countries is building institutions, developing a negotiating position, etc.

FAO presents as part of technical assistance the experience of the New Member States that have recently joined the EU – carefully selected for appropriate experience – of pre-accession and negotiations, particularly including rural development into the portfolios of the Ministries of Agriculture. Here it is important to note that the major part of European Union pre- and accession assistance will go to rural development diversification of jobs and incomes, e.g. fisheries and processing.

We are thus ready to provide policy assistance in advice on rural development for Bosnia and Herzegovina in this field, as requested and tailored to the needs of the Government Ministries that would be involved as well as the private sector of course.

We are ready to support the authorities of Bosnia and Herzegovina and the other interested countries in the subregion in the identification and formulation of a regional project as discussed.

Allow me to conclude with one more comment on fisheries in a more global context; the subject of impact of climate change on fisheries will be addressed by a number of FAO meetings in the coming months, such as the ***High level Conference on World Food Security; The Challenges of Climate Change and Bioenergy***, in Rome in early June 2008 and the FAO Regional Conference for Europe in Innsbruck, Austria in end June 2008 that in a special paper will look at the impact of climate change on fisheries. We hope that representatives of Bosnia and Herzegovina will participate in and contribute to both events.

Thank you for your attention.

## APPENDIX 2

### Regional seminar/workshop agenda

Date and time	Activities
<b>19 May 2008</b>	
15.00–18.00	Arrival of participants
19.00–20.00	Registration of participants and welcome cocktail
<b>20 May 2008</b>	
08.30–09.00	Registration of participants
09.00–10.00	Opening session
	Mr Slobodan Puhalac, Minister of Foreign Trade and Economic Relation of BiH
	Mr Tomasz Lonc, FAO Regional Office for Europe and Central Asia
	Dr Franck Berthe, OIE Aquatic Animal Health Standards Commission and European Food Safety Authority
	Dr Drago Nedić, Director of State Veterinary Office of Bosnia and Herzegovina
10.00–10.30	Press conference/Coffee break
10.30–10.50	Presentation of FAO TCP/BiH 3101 and Workshop Objectives Dr Melba Reantaso, Food and Agriculture Organization of the United Nations (FAO)
10.50–11.10	Aquaculture animal health and safety: Albania (presentation read by Dr Sanin Tanković)
11.10–11.30	Aquaculture animal health and safety: Croatia Dr Mario Rogošić
11.30–11.50	Aquaculture animal health and safety: Montenegro Dr Gordana Braletić
11.50–12.10	Aquaculture animal health and safety: The former Yugoslav Republic of Macedonia Dr Olivera Karamanova
12.10–12.30	Aquaculture animal health and safety: Serbia Dr Svetlana Jeremić
12.30–13.00	Discussion concerning morning session
13.00– 14.30	Lunch
	Presentation of Thematic Work of National Consultants
14.30–15.00	Aquaculture development in BiH, Dr Jasmin Omeragić, National Consultant
15.30–16.00	Aquatic animal health management in BiH, Dr Adnan Jažić, National Consultant
16.00–16.30	Aquatic epidemiology in BiH, Dr Davor Alagić, National Consultant
16.30–17.00	Coffee break
17.00–17.30	Food safety and quality in BiH, Dr Muhamed Smajlović, National Consultant
17.30–18.00	Discussion
20.00	Dinner: Golf Club Sarajevo

<b>21 May 2008</b>	
9.00–9.20	Legal framework for food safety and aquatic animal health in BiH, Ms Anniken Skonhofs, Food and Agriculture Organization of the United Nations
9.20–9.40	BiH National Strategy on Aquatic Animal Health, Dr Nihad Fejzić, National Project Coordinator
9.40–10.00	Working Group guidelines, Dr Sanin Tanković, State Veterinary Office, BiH
10.00–10.30	Coffee break
10.30– 11.00	Presentation of vice-president of fishery association in BIH, Dr Sanel Sarić
11.00–13.00	Working Group discussion on a possible proposal for a regional programme
13.00–14.30	Lunch
14.30–15.00	Presentation of Working Group outcomes
15.00–16.00	Presentation of a possible regional cooperative programme, Dr J.R. Arthur (FAO) and/or Dr Sanin Tanković (SVO)
16.00–16.30	Coffee break
16.30–17.00	Plenary discussion
17.00– 17.30	Conclusions
19.00	Dinner
<b>22 May 2008</b>	
9.00	Departure of participants

## APPENDIX 3

### List of participants

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## **APPENDIX 4**

### **List of presentations**

Presentation 1: Setting standards for aquatic animal health (Dr Franck C.J. Berthe, European Food Safety Authority and representing the World Animal Health Organisation)

Presentation 2: Aquaculture health management in Bosnia and Herzegovina (Mr Drago N. Nedić, Director and Chief Veterinary Officer, State Veterinary Office of Bosnia and Herzegovina)

Presentation 3: Backgrounder to FAO TCP/BiH/3101 (A) Strengthening Capacity on Aquaculture Health Management (Dr Melba B. Reantaso, Fishery Resources Officer and Project Lead Technical Officer, FAO)

Presentation 4: Croatian aquaculture (Dr Ivana Lohman and Dr Mario Rogošić of the Ministry of Agriculture, Fisheries and Rural Development, Veterinary Directorate, Croatia)

Presentation 5: Aquaculture animal health and safety in Montenegro (Dr Olivera Karamanova of the Veterinary Directorate of the Ministry of Agriculture, Forestry and Water Management)

Presentation 6: Aquaculture animal health and safety in The former Yugoslav Republic of Macedonia (Dr Olivera Karamanova, Veterinary Directorate, Ministry of Agriculture, Forestry and Water Economy)

Presentation 7: Aquaculture animal health and safety in Serbia (Dr Svetlana Jeremić, Chief of the Aquaculture Health Protection Department, Serbia's National Scientific Veterinary Institute)

Presentation 8: Aquaculture development in Bosnia and Herzegovina (Dr Omeragić Jasmin National Consultant on Aquaculture, Veterinary Faculty, University of Sarajevo, Bosnia and Herzegovina)

Presentation 9: Health status of aquatic animals in Bosnia and Herzegovina (Prof Dr Adnan Jažić, National Consultant on Aquatic Animal Health Management, Veterinary Faculty, University of Sarajevo, Bosnia and Herzegovina)

Presentation 10: BiH aquatic animal health surveillance – current status and future challenges (Dr Davor Alagić, National Consultant on Epidemiology, Veterinary Faculty, University of Sarajevo, Bosnia and Herzegovina)

Presentation 11: Fish quality and safety of aquaculture products in Bosnia and Herzegovina (Dr Muhamed Smajlović, National Consultant on Fish Quality and Safety, Department for Food Hygiene and Technology, Veterinary Faculty, University of Sarajevo, Bosnia and Herzegovina)

Presentation 12: Legal framework for seafood safety (Ms Anniken Skonhoft, Legal Officer, FAO)

Presentation 13: A National strategy for aquatic animal health for Bosnia and Herzegovina (Dr Nihad Fejzić, National Project Coordinator and Richard Arthur, FAO Consultant)

Presentation 14: Fishery sector in Bosnia and Herzegovina (Dr Sanel Sarić, Vice President of Fishery Association of Bosnia and Herzegovina)

Presentation 15: FAO TCP Facility concept note “Assistance to Western Balkan countries for improving compliance with international standards for aquatic animal health” (Dr J.R. Arthur, FAO Consultant)

## APPENDIX 5

### TCP Facility concept note

#### **“Assistance to Western Balkan countries for improving compliance with international standards for aquatic animal health”**

This activity was recommended by the recent West Balkan Regional Seminar on Aquatic Animal Health, an activity under the FAO/TCP/3101/BiH “Strengthening Capacity on Aquaculture Health Management in Bosnia and Herzegovina” held from 19 to 21 May 2008 in Sarajevo and is strongly supported by representatives of all participating countries (Bosnia and Herzegovina, Croatia, Montenegro, Serbia and The former Yugoslav Republic of Macedonia).

#### ***Background***

The seven countries comprising the West Balkans (Albania and the newly independent nations of the former Yugoslavia – Bosnia and Herzegovina, Croatia, Montenegro, Serbia, Slovenia and The former Yugoslav Republic of Macedonia) have a long history of aquaculture. These countries are in the process of developing modern aquaculture production systems as a means of providing healthy low cost protein to their citizens and generating export earnings. The region has an advantageous situation with regard to aquaculture development, having large areas of high quality fresh waters, skilled and relatively inexpensive labour, and proximity to large markets in the European Union (EU).

To realize this potential, Western Balkan countries are attempting to develop the capacity to meet international standards for trade in live aquatic animals (fish, crustaceans and molluscs) and their products. Primary among these are the standards of the World Organisation for Animal Health (formerly the Office international des epizooties, OIE) as expressed in the *OIE Aquatic Animal Health Code* and *the Manual for Diagnosis of Aquatic Animal Diseases*, the Agreement on the Application of Sanitary and Phyto-Sanitary Measures (SPS Agreement) of the World Trade Organization (WTO), and the standards for market access as required by the European Union, as expressed in various EU Directives. In this regard, it should be noted that all Western Balkan countries except The former Yugoslav Republic of Macedonia are members of the OIE, while Albania, Croatia, and Slovenia are members of the WTO. Slovenia is a member of the EU, Croatia and The former Yugoslav Republic of Macedonia are candidate countries and other Western Balkan countries are potential candidates. Achieving these goals requires meeting high standards for aquaculture production, including a high level of capacity to address issues related to the control and prevention of aquatic animal diseases.

This request for TCP Facility funding will support the development of a further regional TCP proposal to FAO that will address several key areas of high importance to all participating countries.

#### ***Components of a proposed regional TCP project***

The participants of the above-mentioned regional seminar identified the following technical areas as having highest priority to assist all participating countries in developing capacity to

implement international standards. These include risk analysis, disease surveillance, monitoring and reporting, disease diagnosis (including regional reference laboratories), information and networking, and capacity building. A brief narrative of each of these technical elements are presented below.

- **Risk analysis**

The movement of live aquatic animals involves a degree of disease risk to the importing country. Import risk analysis (IRA) is the process by which hazards associated with the movement of a particular commodity are identified and mitigative options are assessed. The results of these analyses are communicated to the authorities responsible for approving or rejecting the import. An effective IRA recommends measures that will reduce the identified risk(s) to a level acceptable to the importing authorities. Two of the most important conditions for import are the availability of aquatic animal health certification and the presence of established health management protocols at the source of export.

Risk analysis methodologies applied by Western Balkan countries should be consistent with those of the OIE *Aquatic Animal Health Code*, defined as: "... to provide importing countries with an objective and defensible method of assessing the disease risks associated with importation of aquatic animals, aquatic animal products, aquatic animal genetic material, foodstuffs, biological products and pathological material".

The ability to conduct risk analyses is an essential component of a national aquatic animal health programme and is mandated by the WTO SPS Agreement to justify restrictions on trade due to aquatic animal health concerns beyond those specified by the OIE.

The TCP Facility will define capacity building and information needs for establishing and improving risk analysis capacity in the Western Balkan countries and seeks ways that a regional TCP Project can address these needs.

- **Disease surveillance, monitoring and reporting**

To produce the meaningful reports on the disease status of a farm, zone, country or region demanded by international trading partners, a systematic process of gathering information about the occurrence of important diseases and pathogens must be in place (i.e. a disease surveillance system). Surveillance thus supports risk analysis, justifies import health certification requirements, and enables export health certification by providing evidence to substantiate claims of absence of a particular disease.

A national surveillance programme is a structured plan for the detection of specified diseases or pathogens in susceptible aquatic populations throughout a country. It involves input from personnel trained in disease recognition in the field, who report their observations, in a systematic fashion, to designated district or national health management personnel. The programme is supported by reporting and diagnostics procedures to ensure accurate and rapid identification of pathogens. This surveillance applies to detection of the emergence of a "new" disease situation, as well as to monitoring the status of established disease agents.

In addition to collection of data essential to support risk analyses and zoning programmes, countries with national reporting systems for surveillance of aquatic animal health status have a greater capability to detect and identify disease outbreaks, and to quickly implement contingency plans for disease containment and eradication. Surveillance and monitoring

programmes are also essential to national disease reporting systems and allow fulfillment of international disease reporting obligations required by the OIE and trading partners.

- **Disease diagnostics (including regional reference laboratories)**

Accurate disease diagnosis requires various levels of data, starting with farm- or site-level observations and progressing in technical complexity from basic microscopy and important laboratory examinations (parasitology, histopathology, microbiology, mycology, virology, water quality analysis, etc.) to electron microscopy, immunological and nucleic acid assays and other biomolecular methods. This means all levels of expertise, including that of farmers and extension officers working at the pond side, make essential contributions to rapid and accurate disease diagnosis. Diagnostic capability underpins many key areas of aquatic animal health, including quarantine, surveillance programmes, disease zoning, disease prevention and treatment, and issuance of international health certificates. At both regional and national levels, there is an urgent need for improved capacity to diagnose aquatic animal diseases. This includes training of appropriately skilled personnel and establishment and/or upgrading of regional and national diagnostic laboratories. In order to take full advantage of this training/up-scaling process, it is essential that the region move towards a standardization of diagnostic techniques. Procedures for the validation of the methods used by different laboratories should also be developed.

This activity will identify methods to increase the capacity of Western Balkan countries to diagnose key aquatic animal diseases and a TCP project is expected to involve training of national diagnostics staff. Mechanisms for international cooperation will be developed, and the possibility of establishing regional reference laboratories for key diseases will be explored.

- **Information and networking**

Sharing of expertise, technical information and experiences is an important means to increase national and regional capacity. Mechanisms such as networks, shared databases and working groups will be explored to find the most effective means of increasing information sharing and cooperation among key actors and stakeholders in regional aquatic animal health management.

- **Capacity building (targeted training)**

Targeted technical training is essential to develop the expertise necessary to implement national programmes in the key areas of regional concern. As such, the TCP Facility project will identify the types of training required and seek mechanisms for short-term and more intensive training as part of the regional cooperative framework.

### ***TCP facility implementation***

The TCP Facility will permit the following activities, which will lead to the development and submission of a regional TCP Project Proposal to FAO:

- **Conducting a regional survey of aquatic animal health capacity and performance**

A survey of aquatic animal health capacity, goals and development needs for the West Balkan countries will be conducted by development of a written survey questionnaire. The questionnaire will be prepared, distributed to aquatic animal health focal points and/or responsible authority for aquatic animal health and jointly analysed by an International

Consultant (IC) and the Regional Consultants (RC) under the supervision of an FAO Technical Support Service (TSS) Officer.

- Regional field assessments

Two teams, each consisting of a regional consultant (RC) (drawn from the experts participating in the current FAO TCP project in Bosnia and Herzegovina) and an international expert (one International Consultant and one FAO TSS Officer) will undertake follow-up visits to the seven participating countries. The field visits will be done from Sarajevo by surface transport, one group visiting the northern areas (Croatia, Serbia and Slovenia) and the second visiting the southern countries (Albania, Montenegro and The former Yugoslav Republic of Macedonia). The two teams will follow up on the survey questionnaires, undertake assessment visits to national laboratories and private aquaculture enterprises and gather information necessary to developing a regional consensus and implementation plan for the TCP proposal. The teams will meet in Sarajevo to synthesize the results of their consultations.

- Proposal preparation

Following the field visits, the FAO International Consultant, working in one of the participating countries or in the FAO field office in Budapest, will prepare a draft TCP proposal based on the results of the questionnaire survey and the field assessments.

- Regional meeting

Immediately following the above proposal preparation, a regional meeting of representatives from all participating countries will be convened in Budapest to present the draft proposal, discuss and undertake its revision, and prepare a final, approved version (including a detailed implementation plan) for submission to FAO, Rome for funding consideration.

- Proposed schedule of activities

- Conducting survey questionnaire and analysis (International Consultant, 2 weeks, during July/August)
- Field assessment (September, 10 days each, 2 RCs, 1 IC, 1 FAO TSS)
- Proposal preparation (September, 10 days, IC)
- Regional meeting (Budapest) (September, 4 days, 4 project staff + 2 attendees from each of 7 participating countries)
- Regional TCP proposal submission by October 2008





## APPENDIX 6

### Workshop group photo



Forty participants (fisheries and veterinary authorities and private sector representatives from Bosnia and Herzegovina, Croatia, Montenegro, Serbia and The former Yugoslav Republic of Macedonia; representatives from OIE and FAO) to the Western Balkan Regional Seminar/Workshop on Aquatic Animal Health held in Sarajevo from 19 to 22 May 2008.

**The Western Balkan Regional Seminar/Workshop on Aquatic Animal Health  
was convened by FAO as part of the implementation of the  
FAO/TCP/BiH/3101 Strengthening Aquaculture Health Management in Bosnia and Herzegovina  
in order to disseminate the outcomes of the project and to promote future cooperation  
in aquaculture and aquatic animal health management in the region. This regional workshop was used  
to explore the possibilities for a regional cooperation and development of a regional concept proposal  
to address common problems related to pathogen issues affecting regional trade  
between Balkan states and other key European Union trading partners.**

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