

Report of the Meeting of the Working Group of Experts on the FAO Aquaculture Questionnaire “FISHSTAT AQ”

1 BACKGROUND AND RATIONALE

The role of FAO in collating global aquaculture statistics and in the preparation of information on the global status and trends of the world aquaculture sector is unique. Such global data and reports are important in alerting regional organizations, national policy makers and advisors, industry, donors, banks and other financing institutions, NGOs and the public to the global aquaculture situation and global issues which can influence the regional and national levels. In recent years the demand for reliable data and information and for separate reporting on fisheries and aquaculture has greatly increased, driven by the need to formulate and monitor the impact of sound policies and development plans for sustainable aquaculture development, and management of resources and the environment; and the increasing public demand for transparency and accountability.

Systematic collection of aquaculture statistics separate from capture fisheries, by the FAO Fishery Information, Data and Statistics Unit (FIDI) started in 1984, when the questionnaire, FISHSTAT AQ, designed in consultation with regional experts and HQ Aquaculture experts, was introduced to enable yearly reporting of aquaculture production statistics and selected structural data at the national level. The FAO questionnaire and its instruction sheet intended to (a) promote standardized usages of variables to facilitate international comparability of data and meaningful world aggregates and (b) improve monitoring and analysis of trends in aquaculture development. There have been no substantial changes in the structure and content of the questionnaire since then.

The FAO aquaculture database, formed by pooling together validated national statistics collected through the questionnaire, currently reports aquaculture production in terms of quantity and value, in marine, brackish and freshwater environments, and provides information on rearing facilities. There is great variation in the quality of the national data submitted to FAO. Some of the received (e.g. hatchery output and structural) data are not published because of completeness and quality issues. A growing percentage of production is identified to the family/order level only, and some problems arise from inadequate harmonization of terms and definitions.

The development of the FAO aquaculture statistical database is still in progress. FAO efforts to improve the completeness and quality of the data are a continuous process, and much remains to be done. However, the growing need for the collection of additional information not now included in the questionnaire, together with other reporting required in connection with international agreements and sustainability issues, will probably put a strain on certain developing Member countries and pose problems in terms of country response. Accordingly, any modification of FISHSTAT AQ must take this into consideration, and should perhaps aim at the collection of priority basic data for global reporting that is, optimally, also of priority at the national

level, and at approaches and tools which will help simplify and reduce the cost of data collection, while ensuring data reliability, particularly in countries with limited capacity and resources. Modifications to the questionnaire must also be carefully evaluated and should be made, as far as practicable, in consultation with the data “providers”.

Other international fora have identified information needs for aquaculture as a priority area for attention at the national, regional and global level and some designated improvement of the quality of FAO global aquaculture statistics, including establishment of unified standards and guidelines for data collection and clearer definitions as a priority area of work for FAO. It was also suggested that a minimum set of data should be collected for global reporting on status and trends of aquaculture.

The FAO Fisheries Department convened the Working Group in response to these recommendations and needs, to specifically address practical and achievable modifications to the FAO aquaculture questionnaire, FISHSTAT AQ.

2 OBJECTIVE AND SCOPE

The overall objective was to improve the information base for global reporting within the practical limits of national capacities and resources while responding to the extent possible to changing management perspectives and widespread concerns about sustainable development, and management of the environment and natural resources.

The purpose of the Working Group was to provide expert advice and guidance concerning the FAO questionnaire, FISHSTAT AQ and its instruction sheet, in order to identify and prioritize modifications that are deemed most necessary to improve the FAO database on aquaculture.

Specifically, the Working Group was called to review the FISHSTAT AQ questionnaire in its content and user friendliness, to provide recommendations on what modifications are necessary and feasible (e.g. in terms of scope, harmonization of terms and classifications, definitions, periodicity of data collection, adequacy and clarity of the instruction sheet, user-friendliness), as well as to prioritize the suggested modifications and to identify specific approaches and actions to achieve them to meet global information requirements.

The WG was also requested to take into consideration in its deliberations the following:

- the discussions and recommendations of the preceding Expert Consultation on Improving Information on Status and Trends of Aquaculture regarding:
 - minimum essential data needs
 - national issues and priorities for improving statistical data
 - issues concerning the FAO global statistical data base on aquaculture
 - modifications to FISHSTAT AQ suggested earlier (for the Asia region), and
 - the response of concerned Member States
- possible need for modifying the scope of statistical data collected to meet new management perspectives and to respond to increasing public concerns about resources and the environment, including minimum needs for relevant indicators;
- the revised definitions and additions to structural and non-structural statistics suggested in the FAO publication “Guidelines for the collection of structural aquaculture statistics”;
- differences in development stages of the sector;
- issues relating to the collection, processing and dissemination of statistical data and information at the national level, as reported and discussed in the preceding Consultation; and
- the need to address effects of modifications of the FAO questionnaire on the integrity of historic data sets at the national, regional and international level.

3 ORGANIZATION AND VENUE

The Working Group was convened in the German Room at FAO headquarters in Rome, Italy, from 26 to 28 January 2004. It was held in English and its deliberations were conducted in plenary sessions.

4 PARTICIPATION

The list of participants is attached as Annex 2.

5 OPENING

Dr Richard Grainger, Chief of the FAO Fishery Information, Data and Statistics Unit (FIDI) welcomed the participants and invited them to provide their advice on how to improve the reliability of the global data on aquaculture to contribute to management needs and to better understand the links with other sectors. He recalled the importance of reliable statistics in measuring the current contribution of aquaculture to economic, social and food security goals. He recalled the process through which data are collated by FAO. He highlighted the need to revise the form after some twenty years of being used in its current form, in the light of dynamic technical developments in aquaculture and of increasing demand for data and information.

6 APPOINTMENT OF CHAIRPERSON

Mr David Cross was appointed Chairperson of the Working Group.

7 ADOPTION OF THE AGENDA

The Agenda was adopted as proposed. (Annex 1).

8 IDENTIFICATION OF A CORE SET OF ESSENTIAL DATA FOR GLOBAL REPORTING

Introducing agenda item 4, the secretariat informed the Working Group of the discussions which had taken place in the Expert Consultation the week earlier. Various key questions were addressed. The question "why we collect data?" was followed by "what data should be collected?" and "how should these data be collected?" Annex 4 of the report of the Expert Consultation, titled "Status and trends reporting in aquaculture: a draft analytical framework for discussion and development" was proposed as guidance for the Working Group discussion under this agenda item. That document outlined six primary areas and their data needs:

- aquaculture production, species, and values
- environment and resources
- social impacts and employment
- food security and poverty alleviation
- economies and trade
- institutions to support responsible development of aquaculture

The discussion began with the issue of which indicators should be collected to address the national and global information needs on aquaculture production, species and values. Aquaculture production, in metric tons by species, was recognized by the Working Group as the single most fundamental data element and its inclusion was assumed on any questionnaires and revisions that were discussed.

8.1 Number of units

Questions were raised whether the current version of the FISHSTAT AQ questionnaire should be changed in such a way that the number of units per method of culture (ponds and tanks, enclosures and pens, cages, raceways and silos, and barrages) should be replaced by the number of establishments, as the size of the units differ considerably

and the resulting information obtained was thought to be of little use. The secretariat explained that originally “units” was included as means for measurement to allow control and validation (to some extent) of the reliability of the production data reported.

It was argued that some establishments can include different types of units and that the term “establishment” implies that a certain type of license or registration is in place which is not often the case in many countries. Non-registration would then lead to non-inclusion in the completion of the questionnaire, leaving out major parts of the aquaculture production. The use of the terms “aquaculture operation” or “farm” was proposed, both of which would make it possible to include both commercial and non-commercial ventures in the statistics. It was agreed that “farm” would probably be the best term. It was argued that the number of farms should be collected, preferably by species or species group produced. Although species-specific data were considered important, it was argued that it was not essential to include them in the questionnaire in view of the complications in collecting data at national level arising from polyculture and sequential aquaculture, as well as for the general desire of simplifying the questionnaire.

8.2 Volume and Area

Although area under culture can change considerably during the year it was generally considered to be an important indicator. The national authorities should report the most appropriate measure of area and advice concerning this should be included in the notes for completion. It was suggested that countries should indicate the time of the year when the area measurement was taken. Information on area is easier to obtain than information on volume of water used. For planning and environmental management purposes, the area under culture would be of greater importance than the volume of water used.

In view of the rather low response rate from the member countries on this subject it was suggested to keep “area” as an indicator in the annual FISHSTAT AQ questionnaire. Inclusion of volume may be considered in the future.

8.3 Value

Following the recommendations of the Expert Consultation, clarification of the reporting of value at first point of sale (also known as “farm-gate” value as opposed to wholesale or retail value) was endorsed. The instruction sheet specifies this value but the current format of the FISHSTAT AQ questionnaire merely requests “Price/kg.” It was suggested that total farm gate value might be easier to report for practitioners and authorities. The experts agreed the option for reporting either price/kg at first point of sale or total (usually farm gate) value should be included in the questionnaire, as one can be calculated from the other. Total value should be the preferred option. However, the Working Group noted that the value of the final product may be distorted in operations which process (or add value) to the aquaculture production. Relevant explanations and clarifications to guide respondents should be provided in the notes for completion.

8.4 Level of intensity of culture

Although it is not present in the current FISHSTAT AQ questionnaire, it was suggested by some of the participants to include a question on the intensity of production, distinguishing culture practices into the categories: extensive, semi-intensive and intensive. This change would support management decision-making processes and environmental monitoring. It could also show that some systems are under-utilized, as demonstrated by an example of intensive culture systems of tilapia in Mexico. Although many countries will not be able to provide these data on culture practices,

it was generally felt that the collection of data on this subject should be promoted and should be accompanied by capacity building on this subject.

Collection of data on the volume (metric tons) and area (hectares) might also give an indication of the intensity of production, as does stocking density and feeding system used, but still preference was given to include the distinction between extensive, semi-intensive and intensive in the FISHSTAT AQ questionnaire, accompanied with clear definitions of each. Concerns were raised whether there is a need to collect this information on an annual basis or if less frequent collection would suffice. The need to develop clear, internationally accepted definitions for these terms was also emphasized. The Working Group suggested that this matter should be referred for technical advice to a future working group on aquaculture statistics (as recommended by the Expert Consultation) and for its policy implications to the COFI Sub-Committee on Aquaculture.

8.5 Culture environment

The current breakdown in culture environment (freshwater, brackishwater and marine) was considered complicated by many of the experts and left to the subjective criteria of reporters. Instead, a simple distinction between freshwater and saline water (marine/brackish) was proposed. This would solve most of the problems related to reporting on this subject, such as the measurement of salinity levels and changes of salinity levels over the year. In view of the very limited loss of information when the two environments (marine and brackishwater) would be combined, the few responses obtained from countries on this subject and the fact that a number of countries do not make the distinction among the three groups, the Working Group suggested a change to the questionnaire to collect data on only these two environments.

8.6 Hatcheries

It was noted that hatchery production can contribute both to the enhancement of natural populations and to on-growing for market production. Regarding production for release into the wild, data on volume (as opposed to numbers) was considered sufficient. However, production volume for on-growing should not be included with final aquaculture production volume, as this would be "double counting". A specific note should be included in the FISHSTAT AQ questionnaire instructions on this subject. The currently collected hatchery data were considered to be important for providing an indication of the economic value produced by the hatchery sub-sector of the aquaculture sector. The questionnaire should be revised to specifically allow reporting on this value. It was also suggested to collect information on the number of hatcheries and the employment in hatcheries under the FISHSTAT AQ questionnaire.

One country reported that they are able to provide an indication of the life stage of the organisms released to a controlled environment. However, the Working Group considered that this was not practicable to collect through the FISHSTAT AQ questionnaire.

The Working Group recognized there could be difficulties in obtaining value and prices particularly in vertically integrated operations. While the Working Group recognized the importance of collecting this information at the national level for its contribution to employment, trade and management purposes, the inclusion of these data were not recommended for the FISHSTAT AQ due to limited global relevance.

8.7 Wild caught fry (e.g. eel, oyster and other mollusc seed)

It was proposed to collect volume and value of the wild caught fry under the FISHSTAT AQ questionnaire. The Working Group noted the importance of this information for management especially at national level. It also noted the difficulty of accurately

measuring these variables and therefore it was recommended that they should not be included in the FISHSTAT AQ at this time.

8.8 Data for monitoring the environment and resource use

Reference was again made to the Annex 4 of the report of the Expert Consultation, titled “Status and trends reporting in aquaculture: a draft analytical framework for discussion and development” and participants generally agreed that it was important to get information on land, water, chemical, energy, nutrient and species use and disease occurrence. However, the indicators could be collected on a less frequent basis than the annual FISHSTAT AQ questionnaire. Availability levels for the information requested are low. The importance of guidance to the member countries, through a document specifying the guidelines for aquaculture data collection, was raised. Such guidelines might encourage countries to collect this type of information.

Some information such as land area use and classification of integrated agriculture-aquaculture production may be available from other sources including the agricultural statistics system.

A point was raised that there were possibilities that some environmental performance indicators were readily available or could be derived from statistical data in the agriculture sector. However, it was noted that limitations of such data do exist as problems of completeness and timeliness are also prevalent with agriculture statistics.

There are opportunities of generating environmental performance indicators if countries exercise environment licensing/permission schemes for aquaculture practices, yet the number of countries with such schemes has been very limited.

Having reviewed all the limitations and constraints with environmental performance indicators, the Working Group viewed that it would be premature to include these indicators in the FISHSTAT AQ questionnaire. It was, however, noted that the importance of these indicators cannot be denied, and hence the Working Group recommended that the subject be kept under review and further discussed by a coordination body to deal with aquaculture information and statistics⁹.

8.9 Social impacts and employment

The Working Group was reminded that the Expert Consultation had identified key indicators to monitor social and employment aspects of the aquaculture sector, including the number of employees by gender, educational status, age, income, and nationality, and information on ownership and the presence of associations.

It was reiterated that the primary importance of employment data lies in the fact that it is a viable social indicator to assess the contribution of the aquaculture sector to poverty reduction. Furthermore, employment data can be used to indicate the needs for education, training and extension as upstream supporting services for the sector. However, care should be taken because inclusion of employment data in the questionnaire could lead to situations where countries provide inaccurate data when accurate national employment data for the aquaculture sector are absent. Such information would probably underestimate employment benefits.

It was recognized that data collection on employment requires the significant efforts and resources. Although inclusion of employment data in the FISHSTAT AQ questionnaire may encourage countries to consider this aspect of the aquaculture sector, it could be too demanding for countries to conduct such a survey on an annual basis. It was noted that in some countries where fishery employment data are collected aquaculture is not separately identified.

⁹ The Expert Consultation endorsed the need for a working group, comparable with the Coordinating Working Party on Fishery Statistics, to consider all aspects related to aquaculture information and statistics.

The Working Group agreed that basic employment data for the time being should continue to be collected annually through the FAO FISHSTAT FM questionnaire.

8.10 Food security and poverty reduction

Indicators for food security and poverty reduction identified by the Expert Consultation include contribution of aquaculture to the Gross Domestic Product (GDP), per capita consumption, degree of self-sufficiency and trade balance. Price elasticity of aquaculture products was also regarded as important information. The Working Group agreed that these indicators could be derived from existing sets of data outside the FAO scope of global compilation rather than requiring direct measurements of aquaculture activities. As such, the Working Group unanimously agreed that there was no need for additional data to be requested in the FISHSTAT AQ questionnaire for this purpose.

8.11 Economies and trade

Similar to indicators for food security and poverty reduction, indicators for economics and trade are available from the existing data sets FAO traditionally compiles, and hence no specific amendments for FISHSTAT AQ questionnaire were required. However difficulties in monitoring trade balance of aquaculture inputs/outputs were recognized since international trade classifications do not distinguish products of capture fisheries and aquaculture.

8.12 Institutions to support responsible development of aquaculture

It was noted that indicators for institutional aspects such as government/public institutions, educational/research institutions, non-governmental institutions and banking/finance institutions were qualitative rather than statistical. Therefore, the FISHSTAT AQ questionnaire may not be an ideal means to take charge of collecting such data. On the other hand, the National Aquaculture Sector Overview (NASO), which has been compiled by the Fisheries Department of FAO, will provide a well-suited platform for collection and disseminating of the qualitative information on the aquaculture sector.

9 CURRENT ISSUES WITH FISHSTAT AQ

The secretariat introduced agenda item 5 "Discussion of current issues with FISHSTAT AQ" by summarizing the forms used for collecting aquaculture data from FAO member nations. Issues with the FISHSTAT AQ were highlighted including the sparseness of the data received for hatchery production, structural statistics, and to a lesser degree, the average farm-gate value. Production by species was recognized as the best-reported data item. The need for clear, concise, and harmonized definitions throughout the FISHSTAT AQ was noted. The Working Group was asked to comment on the current issues and suggest improvements on the design and content of the FISHSTAT AQ.

It was suggested that data items in FISHSTAT AQ questionnaire be divided into two categories; one as a primary set of data to monitor global status and trends that requires annual reporting (mainly production related parameters), and the other that requires reporting only when the data become available (e.g. structural data). Categorization of data items can be decided based on their requirements for collection frequency. It was noted that presence of a large number of blank items in the questionnaire (simply because of unavailability of such data in the national data collection system) often resulted in significant delays or even deterring the submission of the questionnaire. It was expected that provision of "options" in the questionnaire format to suite widely-varied countries' monitoring capabilities would encourage national respondents to

provide their best available data and hence lead to improved coverage and timeliness of the global compilation of aquaculture statistics. The Working Group suggested looking into increasing the flexibility of the questionnaire.

9.1 Other issues and suggestions for FISHSTAT AQ

Other suggestions made during the discussion concerning the content of the form included:

- Raceways and tanks should be in one category on the FISHSTAT AQ questionnaire
- Ponds should be retained in a separate category
- Silos should be removed
- Rice fields should be added to the methods of culture
- The definitions in the notes for completion should be revised accordingly and, in general, the notes for completion of the FISHSTAT AQ questionnaire should be made clearer
- A glossary of terms should be compiled and submitted to accompany the questionnaire
- Agriculture and Fisheries Censuses could be used for structural trends reporting by collecting specific aquaculture data, such as stocking density, ownership structure and tax information. A five or 10 year basis would be appropriate as the exercise of complete enumeration is very costly

9.2 Recommendations from questionnaire design experts

Based on the recommendations made by the Expert Consultation and on extensive personal interviews with selected national data providers conducted in the preceding three days, a team of two questionnaire design experts presented a proposal for a revised format for the FISHSTAT AQ questionnaire and the rationale for the proposed changes (Annex 3). They proposed suggestions for the improvement of the “unwieldy” form, but also noted that it was important to separate the role of the form from the intrinsic problems of data availability. This first prototype of the redesigned form included only the data elements from the current FISHSTAT AQ form.

A major amendment made in the new form is the introduction of a single clear reporting unit with a one page data sheet rather than multiple data sheets. This prototype requests one line of data for each species/method/environment/area combination so that production and value data attached to a species/method/environment/area cell will be entered in a single row.

The new format was designed with the following goals:

- To be simple and user-friendly
- To focus on the basics and collect accurate data
- To enable timely dissemination of data
- To make it comparable to capture fisheries data
- To make sure that the data collected are useful and in fact are used
- To provide a uniform data structure
- To facilitate data processing

A key need recognized in developing the new questionnaire was that of “selling the form” to the data providers. If countries recognize the objectives of global data collection together with major uses of data collected, and if consequently countries clearly view the national benefits of reporting national statistics to FAO, it would be reasonable to expect that they would invest more resources (may not be in monetary terms but resources in kind such as staff time) to the activity. Therefore, it would be important to direct some efforts to make the FISHSTAT forms “marketable.”

It was explained that an advantage with the new format is the flexibility for adding or reducing data columns in the future as required. The designers of the new form proposed the use of a Web site to assist countries in the data reporting process.

The Working Group expressed appreciation for the work done and considered the proposed form a remarkable improvement. After discussion, the Working Group endorsed the following additional recommendations:

- Adopt the widely used and preferred A4 paper format rather than the larger A3 format. Many offices need to photocopy the form for dissemination to regional offices and use of a common form would facilitate this
- Separate the instructions from the definitions in the instruction sheet
- Use of diagrams, maps, charts and examples in the instruction sheet in order to make the instructions simpler and easier to understand
- Avoid the trilingual format where possible. Separate instruction sheets should be printed for the three languages
- Add a cover page that briefly and clearly explains why the requested information is required and how it will be used

Although a web-based data compilation system could reduce administrative burdens for FAO, at this time, it was thought that it would not be workable in many countries. The concept will certainly remain valid for the future, however, and development of such a system should not be ruled out.

9.3 Recommendations for inclusion of core data in the FISHSTAT AQ questionnaire

To further refine the questionnaire with the goal of producing a form consistent with the previous recommendations, a discussion was held regarding the core data elements as detailed by the Expert Consultation, and agreed by the Working Group. The following list of parameters would be important to include in an annual survey for analysis of the status and trends in aquaculture:

- Volume of production by species by method of culture
- Aquatic environment and area
- Production in volume
- Production in value
- Area under culture
- Volume of water
- Hatchery production released to the wild
- Hatchery production put in controlled environment
- Number of farms/hatcheries
- Employment in full time equivalent
- Production by intensity level
- Environmental indicators
- Input of fry/juveniles from the wild.

Some of these elements were not recommended for inclusion in the FISHSTAT AQ at this time due to conceptual, technical and other problems. In particular, the level of intensity, the volume of water and inputs from the wild were eliminated.

The questionnaire design experts strongly recommended keeping the FISHSTAT AQ form as short as possible, at least for the first revised version. Additional items such as employment could be considered for inclusion at some future date once the core version of the form has been well established.

Noting the recommendations of the questionnaire experts, the recommendations of the Expert Consultation, and their preceding discussions, the Working Group drafted and agreed to a revised form for the FISHSTAT AQ questionnaire (Annex 4).

9.4 Definitions

There was a discussion concerning the definition of “aquaculture.” Discussions also touched upon the terms included in the definition of aquaculture such as aquatic plants (submerged and surfaced), ornamental fishes, amphibians, reptiles, and pearls. The consensus was finally formed that the current definition of aquaculture should stand as it is¹⁰. However, footnotes should be provided to clarify whether or not to include data for some practices in aquaculture such as fattening of wild-caught species.

The Working Group was informed that FAO will continue discussions on aquaculture definitions and related terminologies. It was advised that unresolved complexities in separating capture fisheries and some aquaculture practices merit further discussions, possibly by a joint group of capture fisheries and aquaculture experts. The Working Group was informed that the establishment of such a group is a matter for FAO to pursue.

10 IMPLICATIONS OF AMENDMENTS TO FISHSTAT AQ AND ACQUISITION OF OTHER RELEVANT DATA

The Working Group discussed the other form used by FAO to collect aquaculture statistics, the FISHSTAT NS AQ questionnaire, (NS meaning “National Summary”). This data collection form is intended to be used by countries to report updates to the aquaculture data already provided to FAO in the FISHSTAT AQ questionnaire, or estimated by FAO in the case of non-reported data. Countries are asked to check the production and value for the latest seven years.

It was noted that because there are two data collection forms, any revisions of either form should consider how the two data collection forms complement each other. The FISHSTAT NS AQ questionnaire should be considered as a supplement to the FISHSTAT AQ questionnaire.

It was argued that the FISHSTAT NS AQ questionnaire format could have a more “friendly” style and that a cover page could be added to emphasize the purpose of the questionnaire – i.e. that it is intended for the revision of data and not for reporting the data for the current year.

In general, the issue of ensuring that FAO questionnaires are sent to the appropriate person for completion was discussed. It was noted that although the questionnaire officially has to pass through certain channels, such as responsible Ministries or Departments, it would also be advisable to send a duplicate form directly to the person involved in completing the form, where this person is known.

Agenda item 6 titled “Discussion on the implications of amendments to FISHSTAT AQ” was presented by the secretariat. While it was noted that all the implications of change could not be assessed so quickly, it was thought that the proposals made for changes to the current questionnaire would not have serious implications for FAO. Continuity of the databases would be guaranteed and there would not be any significant loss of information due to the changes. Only the proposed combining of the brackishwater and marine environments into one category would have a significant effect on the databases.

The electronic and paper versions of the FISHSTAT AQ questionnaire would have to be revised. In view of the time required it will not be possible to be implemented for the 2004 (2003 data) inquiry. More time and resources from FAO would be required for modifying the databases and the data storage and reporting procedures (e.g. FAO yearbooks, FISHSTAT +, FIGIS).

¹⁰ Rana, K.J. Guidelines on the collection of structural aquaculture statistics: supplement to the Programme for the World Census of Agriculture 2000. FAO. Rome, 1997.

The impact of the suggested changes on the reporting offices of Member countries was considered to be fairly limited and may even stimulate countries to invest more in data collection.

To facilitate the discussion on this item it was agreed that agenda item 7 entitled "Discussion of how to acquire essential data for global reporting that cannot be collected with FISHSTAT AQ" be combined with agenda item 6. The presentation of agenda item 7 included a list of other procedures / partnerships for obtaining information on status and trends, information on the possibility of introducing multiple forms of the FISHSTAT AQ questionnaire and the potential incorporation of occasional additional test questions. The presentation posed two key questions: "How to achieve essential data that can not be collected by the FISHSTAT AQ?" and "If the data are considered "essential" are there alternative methods which are feasible?"

10.1 Alternative methods

During the discussion following the presentations, it was argued by various Working Group participants that a specific questionnaire conducted less frequently than annually (perhaps every five years) might be an appropriate way to collect essential data that cannot be captured under the FISHSTAT AQ questionnaire. Other possible ways to obtain additional information on aquaculture might include the World Census on Agriculture, dedicated national censuses, or special surveys. The cost of a census was considered too high to allow a specific aquaculture census. It was suggested that FAO and national authorities involved in aquaculture statistics should do their best to include an aquaculture "module" with key questions within planned agricultural censuses, for use in countries where there is significant overlap between agricultural holdings and aquaculture operations. The idea of a specific aquaculture census should be kept in mind as a long-term option.

The proposed introduction of a more detailed, periodic survey was discussed in the light of the recently initiated FAO National Aquaculture Sector Overviews (NASO) project, in which most of the additional essential data could be incorporated. The need for sustainability of this important but costly exercise for FAO was noted. Also it was considered that another means of data collection (a 5 yearly questionnaire in addition to NASO and the FISHSTAT AQ questionnaire) could create more confusion and that inclusion of more questions to the FISHSTAT AQ questionnaire or FISHSTAT NS AQ questionnaire on a five yearly basis might result in lower response rates.

Suggestions were made that the issue of new data collection efforts to collect the additional essential information should be raised in the third session of the COFI Sub-Committee on Aquaculture scheduled for 2006. The Working Group emphasized that although not all the necessary information could be collected through the FISHSTAT AQ, ways should be found to collect this additional information. This was raised as a priority issue for discussion of a future working group on aquaculture statistics, as proposed by the Expert Consultation.

10.2 Donor support

The arguments of some participants from developing countries that statistics do not have priority when funds were lacking was brought into the discussion. It was stressed that it is also in the interest of developed countries to support the collection of aquaculture statistics in developing countries, as a large part of aquaculture products for consumption originates there and traceability concerns are increasing among consumers. However, official requests for donor assistance on aquaculture statistics issues have been limited and it was stressed that developing countries should more actively search for support on this subject. In this respect it was mentioned that the strategy and outline plan for improving information on status and trends of aquaculture, which was one of the outcomes of the Expert Consultation on Improving Information

on Status and Trends of Aquaculture, would be a useful tool to attract donor support in assistance to the implementation of the proposed changes with regard to the collection, analysis and reporting of aquaculture data.

10.3 Code of Conduct for Responsible Fisheries

Reference was made to the Code of Conduct for Responsible Fisheries on various occasions during the discussions. The topic of promotion of the collection and analysis of aquaculture statistics and trends is very much related to the “Code” and a document, similar to the one entitled “What is the Code of Conduct for Responsible Fisheries?” might be used to emphasize the importance of aquaculture statistics.

10.4 Partnerships and collaboration

The issue of partnerships was discussed in depth under agenda items 6 and 7. It was suggested that FAO intensifies collaboration with regional bodies involved in aquaculture such as NACA (Network of Aquaculture Centres in Asia-Pacific), SEAFDEC (Southeast Asian Fisheries Development Center), APFIC (Asia-Pacific Fishery Commission), APEC (Asia-Pacific Economic Cooperation), GFCM (General Fisheries Commission for the Mediterranean), COPESCAL (Commission for Inland Fisheries of Latin America), CIFA (Committee for Inland Fisheries of Africa), EIFAC (European Inland Fisheries Advisory Commission) and with other UN agencies and programmes that collect data and information on employment and environmental issues such as ILO (International Labour Organization), UNEP (United Nations Environment Programme). The secretariat noted that under the ISIC (International Standard Industrial Classification) revision framework coordinated by the United Nations Statistical Division it is collaborating to have from 2007 onwards aquaculture separated from fisheries as an economic activity, which is currently not the general case. Under this change, the contribution of aquaculture to the GDP could be obtained at national level.

10.5 Data quality issues

Some participants in the Working Group raised issues concerning the quality and the origin of the national aquaculture data. In particular, it was noted that FAO should request more detailed information on methodology of data collection and compilation from countries. As an example, participants were made aware of the information available on the Web site of the IMF (International Monetary Fund) with respect to metadata, <http://dsbb.imf.org/Applications/web/sddshome/#metadata>. The secretariat informed the participants that there are plans in this direction and that FIGIS could be a useful tool for dissemination of these metadata.

11 ADOPTION OF THE REPORT

The draft report was prepared with the assistance of participants, edited by the secretariat and submitted for adoption by the Working Group of Experts. The report was adopted on 28 January 2004.

Annex 1

AGENDA OF THE WORKING GROUP

1. Opening of the working group
2. Appointment of Chairperson and rapporteurs
3. Adoption of agenda
4. Identification of a core set of essential data (for global reporting) to be collected with the questionnaire
 - Content: what should be measured
 - Scope of reporting
 - Level of detail/aggregation
 - Frequency of reporting
5. Discussion of current issues with FISHSTAT AQ
 - Harmonization of terms
 - Structural data
 - Culture environments
 - Hatchery/nursery output
 - Production facilities/systems
 - Instruction sheet
6. Discussion of implications of amendments to FISHSTAT AQ
 - Relevance to national needs and priorities
 - Impact on historic national, regional and international databases
 - Impact on national data collection systems and procedures
 - Recommended actions by FAO to facilitate data collection
7. Discussion of how to acquire essential data for global reporting that cannot be collected with FISHSTAT AQ
 - What are the un-met data needs
 - Approaches
 - Mechanisms
 - Costs
8. Report preparation
9. Adoption of Report

Annex 2

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DRAFT PROTOTYPE QUESTIONNAIRE FORM

[illegible]

Annex 4

**PROPOSED REVISED FISHSTAT AQ QUESTIONNAIRE AS DRAFTED BY THE
WORKING GROUP OF EXPERTS**

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