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IN ASIA AND PACIFIC COUNTRIES  
(GCP/RAS/171/JPN)**

**Proceedings of the  
Technical Consultation on the  
Establishment of Data Exchange System for  
Food and Agricultural Statistics in  
Asia and Pacific Region**

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Volume I  
Report of the Consultation

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## **I. Background and Rationale**

1. The *Technical Consultation on the Establishment of Data Exchange System for Food and Agricultural Statistics in Asia and the Pacific Region* was held on 20-22 March 2001 at the FAO Regional Office in Bangkok. It was attended by 12 experts from ten countries (Cambodia, India, Indonesia, Lao PDR, Myanmar, Nepal, the Philippines, Sri Lanka, Thailand and Vietnam), representatives from the Ministry of Agriculture, Forestry and Fisheries (Japan), FAO headquarters and FAO Regional Office.
2. The rationale for the Technical Consultation was the view of the regional project, *Improvement of Agricultural Statistics in Asia and Pacific Countries* (GCP/RAS/171/JPN), that APCAS member countries still need to be assisted in the improvement of their statistical analysis and information dissemination; hence its plan to formulate a Master Plan for the establishment of national and regional data exchange systems, including provision of a capability to transfer data to and from countries in the Region, on the one hand, and FAO, on the other, in electronic format, using common concepts, standard and classification systems.
3. Endorsement of this plan by participating member countries would be a basis for the preparation of a project document for a follow-up phase, which would allow the establishment and installation of a unified and integrated exchange system for food and agriculture statistics in a number of countries. The Government of Japan expressed interest to continue providing financial and technical support to achieve this objective.
4. The primary objective of the technical consultation was to solicit ideas and suggestions from experts from participating member countries for consideration in the design of a Master Plan for the envisaged national and regional exchange system(s) for food and agriculture statistics, and subsequently, the formulation of a project document for the follow-up phase of the current project.

## **II. Opening Ceremony**

5. The participants were welcomed to the Technical Consultation by the FAO Assistant Director General and Regional Representative for Asia and the Pacific, Dr. R.B. Singh, who noted that its theme was in line with FAO's mandate in the use of information as a fundamental part of its activities. He informed that Article(No.?)of Constitution of FAO states that FAO shall "collect, analyze, interpret and disseminate information relating to nutrition, food and agriculture."
6. He said that the coming of the electronic age had changed the universal development landscape, with "the world . . . compressed into desktops and laptops," enabling quick access to a wide range of information. Advances in information technology had made information exchange easy, and governments with universal access to information were able to take preventive action to reduce the likelihood of emergency in areas of food insecurity and vulnerability.

7. He continued that the benefits from advances in information technology were not available to all countries, with the result that developed economies were benefiting more from this technology, at the expense of underdeveloped and developing countries. He cited statistics on the access to the Internet of those from OECD countries being way above that of those outside the OECD area.
8. These problems notwithstanding, the ADG-RR said that he welcomed the initiative of the member countries of APCAS in requesting Japan to support a follow-up project that would set up a system of information exchange in the food and agriculture sector among APCAS member countries. The region, he said, would set the pace in providing “statistics with a human face” and would also serve as a medium for bridging the digital divide.
9. He expressed the appreciation of FAO for the keen interest of, and continuing support from, the Japanese government to ensure the success of the project, for which the funding for the follow-up phase had already been assured.
10. He enjoined the participants to have a fruitful Consultation, and wished them a pleasant week in Thailand.

### **III. Election of Officers**

11. Mr. Narayanan Eagambaram of the Ministry of Agriculture, India was elected as chair, and Mr. Muhammad Tassim Billah, Center for Agricultural Data and Information, Indonesia, as vice chair. Ms Minda Mangabat of the Bureau of Agricultural Statistics, Philippines was elected as Rapporteur.

### **IV. Report on the Project Progress and Activities**

12. The Agricultural Statistics Expert reported on the progress and future activities of the project Improvement of Agricultural Statistics in Asia and the Pacific countries (GCP/RAS/171/JPN/FAO), covering the period May 1998 to date. The project was covering sixteen developing member countries of APCAS: Bangladesh, Bhutan, Cambodia, China, Fiji, India, Indonesia, Iran, Lao PDR, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam. Developed member countries of the Commission were likewise being encouraged to participate in the activities of the project as experts and/or observers, especially with respect to regional-level undertakings.
13. Its activities included the compilation of a compendium of abstracts of the national system of food and agricultural statistics from the participating countries and other APCAS member countries. General information on the systems of the food and agriculture statistics in the region was gathered. The preliminary results of the questionnaire survey were published in the *Proceedings of the First Meeting of Focal*

*Points and the Seminar on Remote Sensing for Agricultural Statistics.* On the basis of the collected data, the project identified ten countries for the in-depth review and implementation of the National Seminar on System of Food and Agricultural Statistics

14. Its accomplishments during the first half of the project life included country studies, such as in-depth reviews and organization of National Seminars on System of Food and Agricultural Statistics; the Focal Points Meeting in June 1999 which discussed the current situation of agricultural statistics in the region and the future activities of the project. For a better understanding of the FAO database system, an overview of the WAICENT was also presented; this was held back-to-back with the Seminar on Remote Sensing which focused on the application of remote sensing techniques in agricultural statistics.
15. In-depth reviews including national seminars on system of food and agricultural statistics were implemented in Bangladesh, Bhutan, Cambodia, China, Lao PDR, Myanmar, Nepal and Viet Nam. The main recommendations and issues that arose were the following: the need to carefully review existing statistical programmes and clearly define the responsibilities of various agencies involved in producing data on food and agriculture. In the light of the financial constraints and lack of adequate human resources, countries' limited national resources should be optimally utilized to avoid duplication of activities and eliminate dissemination of conflicting statistics. A framework should be prepared for the development of an integrated national agricultural statistical programme.
16. Many countries in transition such as Cambodia, Lao PDR and Vietnam have been relying on administrative reporting system as the major source of information. While such system was proven functional under a centrally planned economy, issues of accuracy and reliability were now being raised. As these countries had now decided to adopt a more open market-oriented economic structure, increased demand for more accurate and timely information was to be expected. It was thus recommended that the donor community should provide increased technical assistance in these countries to strengthen national capability using acceptable statistical methods for collection, processing, storage, analysis and dissemination of food and agriculture statistics.
17. Project activities also included regional and sub-regional workshops on specific areas to assist selected countries satisfy these specific needs. These were held in collaboration with the regular programme of FAO and other relevant international organizations.
  - The *Workshop on Agricultural Surveys based on Multiple Frame Sampling Methods*, held in collaboration with the FAO and the Statistical Institute in Asia and Pacific (SIAP) from 22-28 November 2000, in Bangkok. It was attended by 39 participants from the Asia and Pacific countries (Bangladesh, Cambodia, China, DPR Korea, Fiji, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Republic of Korea, Sri Lanka, Thailand and Viet Nam). The workshop discussed the design, organization and implementation procedures of agricultural surveys based on Multiple Frame Probability Sampling Methods to correspond to the

need for the introduction of sample survey method with high accuracy and cost effectiveness.

- *The Sub-Regional Workshop on Moving Towards an Agricultural Statistics System for the Market Economy*, in collaboration with FAO, held on 15-20 January 2001 in Bangkok, Thailand. Participants included 23 representatives from six Asian countries currently in transition from a centrally planned to a market economy (Cambodia, China, Lao PDR, Mongolia, Myanmar and Viet Nam).

18. Other activities planned for the year 2001 include, aside from this Technical Consultation, the organization of regional and sub-regional workshops (including a Regional Workshop on Fishery Statistics) in cooperation with Fishery Information, Data and Statistics Unit (FIDI), FAO/HQ, FAO/RAP, and other organizations involved in fisheries sector statistics; and the formulation of a Master Plan for Data Exchange System.
19. A second meeting of National Focal Points would introduce the Master Plan of the Regional Data Exchange System and Project Document for the follow-up phase project, for which project the Government of Japan indicated that it would provide funding. Other related matters concerning the current/follow-up phase project would also be discussed.

## **V. Regional exchange system for food and agricultural statistics**

20. The representative from Japan's Ministry of Agriculture, Forestry and Fisheries stated that the follow-up project would have two immediate objectives: first, the evaluation of agricultural statistics in each member country and implementation of seminars and regional workshops to find solutions to common problems; and second, the formulation of a master plan for regional exchange system on agricultural statistics, which would be based on the country studies. Funding had been obtained for the second phase of the project covering three years, and the shift would be made by the last quarter of the year. Activities for the follow-up project would include the planning for a mutual data exchange system, to be established according to the master plan/project document, the formulation of which would be based on discussions at this Consultation.

21. The donor would be expecting that the follow-up project would result in:
  - (a) adoption of common concepts and common specifications;
  - (b) standardization of statistical information, aimed at unifying the process of the preparation and improvement of statistics, identifying country-specific statistics-related problems/issues and making clear the direction of future technical cooperation;
  - (c) establishment of a regional database, under which the country databases would be set up at RAP which might include national and sub-national data submitted in a common format;
  - (d) systematic storage of statistical data and making their use possible for mapping, graphical presentations and analysis;
  - (e) promotion of data dissemination on web-sites (homepage) aside from hard copies (print publications); and
  - (f) formulation of guidelines.
22. The regional exchange system for food and agricultural statistics would support common concerns for improvement of statistics in the region; help improve agricultural policy and measurement of agricultural development in member countries; have features for ease in data handling and flexibility based on a uniform format (national, regional); promote wider data utilization and dissemination to the users through the Internet (Homepage); enable the evaluation of data quality and foster new cooperation; and serve as a catalyst for a more rational data management.
23. National database would follow a standard format for data management and storage. This would include countries with existing electronic-based databases as well as the new participants in the project. The statistical tables and of survey results could be in the national language with selected sections in English. The description of surveys and survey standards should be in English.
24. The regional database would be installed in the FAO Regional Office, and would require the accumulation of official statistics reported in a unified format from participating countries. It would be in English, and would serve as a data source or reference for various FAO activities which might include the publication of selected indicators, FIVIMS, and so on.
25. The regional homepage on Food and Agriculture Statistics would have links with the national homepages. It would also take into account its integration into, or complementation with, the FAOSTAT system in the future. An outline of the expected responsibilities of participating countries and the project management during the follow-up phase was also presented.

## Expert Presentations

### a. CAMBODIA

#### *Country-level expectations from the regional exchange system for food and agricultural statistics*

26. Cambodia reported that the level of development of Internet services in the country was encouraging. Basic requirements to set up homepages were now readily available. The government expressed its interest to set up a homepage particularly for natural resources and environment data. It recognized the benefits of data sharing among various national and international agencies.
27. However, the regional exchange of information would have to take into account national developments in agricultural data exchange and dissemination and should recognize that the needs of national users would have precedence over international requirements.
28. It highlighted that the need to satisfy the data requirements of the national users, maintaining the quality of the data, upgrading the skills of those maintaining the homepage and those involved in information technology, and the need for legislation to protect intellectual property rights as well as the decisions made on the type of data to include were among the important issues associated with establishing and maintaining a homepage.
29. The country presentation stated that it would be premature at this point to discuss the support and assistance required by Cambodia for a regional exchange system, given that it has yet to initiate the groundwork for Internet publication of official agricultural data. Moreover, the country would also need to address the issue of transition from the first phase of development (fulfilling the national requirements) to the second phase (that of providing regional and international). At present the most important concern of the government is the improvement in the reliability of existing data.

### b. INDIA

#### *Adapting the processes of data collection, analysis and dissemination of food and agricultural statistics to fast changing pace of information technology development*

30. The representative from India stated that the government is set to make full use of Information Technology in the development of agriculture. The Ministry of Agriculture had already established a homepage for dissemination of information. The publication, "Agricultural Statistics at a Glance," and data on prices and wages have been put up on the homepage; these were being updated periodically. Other government departments had also set up their respective homepages.

31. The Ministry of Agriculture was now in the process of setting up AGRISNET that would connect all the district agricultural departments to enable information exchange. The officers and sections of the Ministry had been equipped with PCs and Internet access round the clock. However, this facility has yet to be established at the State headquarters.
32. The basic source of agricultural data is the village. The proposed AGRISNET would be extended at least up to the blocks. Computer servers must be installed in the 4000 blocks and connected to the all India network.
33. Databases with a common structure would be developed at the block level and data entry software developed in local languages to enable the village officers to enter the data periodically.
34. On-line data entry and analysis would only be feasible when the complete set of data relating to each village would be available at the time of retrieval. Since it would take time to capture complete data relating to a year, missing data would have to be estimated at each level of the administrative hierarchy. For the purpose of disseminating information to the public the estimates were being frozen until the next revision is done, per the time schedule.
35. The country would need to share statistical information with other countries, and the modalities for data dissemination and data standards could be worked out by countries concerned.

### **c. INDONESIA**

#### ***Linking the national statistical homepage with the regional exchange system for food and agricultural statistics from the perspective of a centralized statistical system***

36. The national statistical system in Indonesia is centralized. Under this system, BPS (*Badan Pusat Statistik*) - Statistics Indonesia is the main agency to compile statistics on a wide variety of topics, such as agriculture, social, economics and culture, to meet the needs of the government and general public.
37. BPS-Statistics Indonesia initially launched its homepage at the end of 1997. At the time of its launching, updating data was coordinated directly by Bureau of SIS (Statistical Information System). The procedure of updating data was recently changed. Each sub-directorate were now being allowed to update their data sets at any time it new set of data became available.
38. The homepage of BPS-Statistics Indonesia was also providing statistical links with other agencies. These would include other members of the statistical community (for example, Indonesia Statistical Association and Statistical Community Forum) and government agencies (Department of Industry and Trade, Department of Education and

Culture, National Family Planning Coordinating Board and National Development Planning Board). It also had links to international organizations providing statistical information such as FAO, UNDP, WHO, IMF, ILO and Statistics Offices from Asia and Oceania, America, Europe and Africa. No exchange system for agricultural statistics between BPS-Statistics Indonesia and other agencies have so far been established. Nonetheless, this collaboration could be effected as long as there is an agreement among the agencies about “one standard exchange format” to allow for compatibility of the systems.

39. The BPS-Statistics Indonesia homepage data were being confined to the national and provincial levels, and none at district level. A researcher who would require detailed data would have to refer to BPS printed publications. Obviously, the current status of BPS homepage would require further improvement. Each sub-directorate would need more space to enable the inclusion of more detailed tables including specific information needs of data consumers. Quick access to BPS homepage was also requiring improvement.

**Complementing the electronic dissemination of food and agricultural statistics with special reference to the development of agricultural statistics database**

40. By the end of 1996, the Center for Agricultural Data and Information (CADI) had launched a website for the Ministry of Agriculture (MOA). It contained a wide range of agricultural information, covering food crops, livestock, estate crops, horticulture, regulations and agribusiness. The MOA website was providing easy access to the agricultural and agribusiness information, and was facilitating fast and simple data communication between the operational units within the Ministry.
41. The Agricultural Statistics Database was first published in the Internet in 1997. This was developed under the cooperation of the Agricultural Statistics Technology Improvement and Training Project.
42. The importance of the CADI staff developing its own website was discussed. For this reason, CADI was providing training and skills upgrading to strengthen the staff capability to make adjustments in the website. Systems development could be left to the third parties.
43. Among the problems and challenges which were being anticipated by MOA in relation with the implementation of electronic dissemination of agricultural data and information for the next two years included: (1) decentralization which might affect data flows due to structural changes in government institutions; (2) slowdown in the development of internet infrastructure due to the economic crisis; (3) difficulty of maintaining two homepages in different languages; (4) importance of the understanding of the international needs and requirements; (5) need to continuously update the data for IT users; and (6) need for reunification of data formats.

#### **d. MYANMAR**

##### **Country-level expectations from the regional exchange system for food and agricultural statistics**

44. The representative from Myanmar stated that his country's expectations on the regional data exchange system were, first, the establishment of a computerized database for agriculture and related statistics; linkages with and data sharing with relevant ministries; cooperation and coordination among the departments concerned, particularly in view of the confusion and inconsistencies in information provided from varying sources.
45. Facilities and technologies should be updated and strengthened for the purpose of conforming to the data types or formats required by the data exchange system.
46. There was also a need to share the information across the world by Internet, and set up international and national training courses on methodologies for data processing, data communication and internetworking, possibly with donor assistance.

#### **e. NEPAL**

##### **Country-level expectations from the regional exchange system for food and agricultural statistics**

47. In Nepal which adopted a decentralized statistical system, data collection and publication of statistics were being done by the Central Board of Statistics and other government branches and departments. The lack of co-ordination, standardization and a national statistical plan had contributed to existing duplication of work and lack of uniformity of methodologies.
48. In an effort to cater to the demands of the users, the Bureau was planning to publish the population census output tables both in print and in electronic media. The same dissemination modalities was being planned for the agricultural census data of 2002.
49. While some improvements were achieved in the timeliness of data release due to the use of powerful microcomputers in data processing, there still existed limitations, such as the inadequacy of physical facilities required to manage the filled-in census and survey questionnaires (such as the population and agricultural censuses). The Consultation was informed that government was now studying to involve the private sector in data entry and the Bureau to cover the final data processing. This would ensure, to some extent, timely data dissemination.
50. A regional exchange system for food and agricultural statistics under the FAO Regional Project, *Improvement of Agricultural Statistics in Asia and the Pacific Countries (GCP/RAS/171/JPN)* was commendable as it would help strengthen the data dissemination system of underdeveloped countries like Nepal. Common software and

database management standards should be formulated to facilitate data exchange among the member countries.

51. CBS-Nepal would require assistance in hardware and software technical know-how to implement the data exchange system. The system could be continued by the Bureau at a later time when its manpower would have become acquainted and conversant with the system
52. CBS-Nepal expressed its interest in the development of an Internet system for data dissemination. The government's IT policy in this regard included the creation of a fund at the national level through mobilization of financial resources of the government, donors and private sector to support IT research and development and related activities. It also included the establishment of an Information "Superhighway" and "North-South Information Highway." In this regard, the CBS-Nepal as a focal point to the FAO Regional Project, *Improvement of Agricultural Statistics in Asia and the Pacific Countries (GCP/RAS/171/JPN)*, could share with and gain from the IT experiences of developed countries of the region

#### **f. PHILLIPPINES**

##### **Utilizing the electronic information highway as a channel for exchanging food and agriculture statistics in Asia and Pacific countries: some statistical considerations**

53. The Philippine Department of Agriculture (DA) had been mandated to establish a National Information Network that would link the Department down to the regional, provincial and municipal levels as well as provide farmers, fishers, research institutions access to agriculture and fisheries information.
53. To date, the Department had operationalized the National Information Network. The basic communication backbone had been established, providing interconnection of the local area networks to the different agencies and bureaus. For the year 2001, Intranet data base application system had been planned focusing on five priority databases.
54. In the course of the implementation, major problems had been encountered, such as funding constraints, availability of database from respective DA agencies/offices, manpower limitations, and the need to sustain operations as well as network enhancement.
55. The Bureau of Agricultural Statistics (BAS) has the mandate for collecting, compiling and releasing official statistics on food and agriculture, except for the Census of Agriculture which remained to be the responsibility of the National Statistics Office. Pursuant to its mandate, BAS was conducting regular and special surveys It was also undertaking continuous statistical research and development with the end in view of providing more timely and reliable data. Most of the agricultural data were being

released and disseminated at the provincial level. Household data however were not normally released but could be made available upon request.

56. The BAS electronic-based data systems was still in the process of development thus, most of the data were still being maintained and disseminated by its technical divisions. To keep up with advances in information technology, the BAS had started to digitize most of the data and had already developed non-conventional paperless modes of data dissemination through the Internet. The BAS web-page contains sub-national level data for the last seven years and time series before these periods.

#### **Technical and resource issues in establishing a farmer-focused national agricultural information network**

57. The Information Technology, Networking and Management Division (ITNMD) is responsible for maintaining the BAS database and web. When fully operational, the database and web would become dynamic and would allow easy access and retrieval. In consideration of the available resources of the BAS, national demand would take precedence over international demands. The data requirements of the DA, farmers and fisherfolk would have the highest priority.

#### **g. SRI LANKA**

##### **Enhancing user-friendliness of statistics homepages through graphs, charts, GIS maps and other visual approaches to statistical analysis**

58. The representative from Sri Lanka presented a report on enhancing the user-friendliness of statistics homepages through graphs, charts, GIS and other visual approaches for information dissemination and decision-making.
59. Among the points raised in response to the presentation was the issue of the user type – the representative from FAO HQ pointed out that the countries/presenters of data usually ignore the large organizations such as USDA, FAO and others, which would have need for the complete files rather than summations of data represented in charts which could be misleading. Summaries of data were deemed insufficient for the type of analysis done by the large organizations.
60. It was however pointed out that provision of detailed information could be difficult, and some countries were even charging costs for data. It was suggested that a public-use file be established, but there should be a pre-determination of the types of data to be included in the said file.
61. It was also stressed that the member governments have a responsibility to make available complete data files for the FAO's use in programming. However, the participating countries should take note of the requirements of other users who require

information in various forms other than that available in homepages. In addition, data exchange should include those which would allow further manipulation.

## **h. THAILAND**

### **On the feasibility of establishing a GIS-based regional exchange system for food and agricultural statistics**

62. Geographic Information System (GIS) is a system that utilizes a computer as the main tool for management of complicated and huge spatial data. GIS would deal with data capture, exchange, analysis and displaying of all the results on maps that could be used for different applications depending on purposes and needs. GIS could provide integrated technology that could combine different kinds of related information together.
63. GIS is presently accepted as a system with many benefits. It covers not only geographic survey, but also natural resource investigation, environmental monitoring, land consolidation, land use, urban planning and so on. In particular, when integrated with remote sensing, GIS would be more powerful in enhancing the capacity for use in different kinds of applications. Thus, GIS had been attracting many government and private organizations all over the world. The trend indicates a rapid increase in GIS users in the near future.
64. However, many GIS applications in different agencies had so far remain for internal use only. The complexity and updating of GIS-oriented data, due to lack of consistency, appeared to be the most threatening issue leading to work duplication, delay, time and money waste. These problems were happening because of the absence of a clear GIS related standard and harmonized data exchange systems.
65. FAO realized the importance of, and need for, using GIS technology and data exchange in this region. Two fundamental technologies could be considered in applying GIS technology to the regional exchange system for food and agricultural statistics: vector encoding, and raster encoding. In the case of Thailand, the economic crops planted area suitability in the main 25 watershed areas were being derived from the overlay of 312 soil series and a 39-year average rainfall and irrigated boundary data for four levels of suitability, namely, highly suitable, moderately suitable, marginally suitable and unsuitable. Data quality on macro level (global or regional) was verified in term of completeness, timeliness and lineage. Data quality on micro level (national or sub-national) was verified in terms of position accuracy, attribute accuracy, logical consistency, topological test and resolution.

## **i. VIET NAM**

### **Country-level expectations from the regional exchange system for food and agricultural statistics**

66. The government of Vietnam as early as 1995 had approved the plan to implement IT development nationwide by the year 2000. However, the level of application of information technology in all aspects of management remained low. Only about one percent of the population was noted to be using the Internet in 2000, and the Internet service had not yet been introduced in most government institutions in view of manpower and funding constraints.
67. The General Statistics Office (GSO), the government institution that has the mandate for processing and disseminating data, was given instructions by the Government to strengthen statistics activities towards the development of IT. It was also being required to establish databases and computer networks throughout the nation, to ensure the efficient and effective transfer and utilization of data.
68. External assistance had been provided the GSO in terms of personal computers, but these were still deemed insufficient to support the requirements of the nationwide expansion of IT. There is need for further assistance in the form of hardware and upgrading of the capabilities of the GSO staff.

## **VII. The Regional Data Exchange System for Food and Agricultural Statistics**

69. The Agricultural Statistics Expert noted that there were differences in the levels of the development in the agricultural statistics of countries in the Region. While several advanced countries had already introduced the electronic database system and were disseminating the statistics through Internet web pages less developed countries still continue to disseminate their statistics only through print publications, resulting in the failure to reach the data users on time due to the limitation in number of copies and less developed communication tools.
70. FAO has developed several information systems, such as the World Agriculture Information Centre (WAICENT) including FAOSTAT, GIEWS, and FIVIMS. Those systems were contributing to world food security greatly in terms of information supply to support formulation of policies and planning. However, FAO's information systems, specifically FAOSTAT, while comprehensive in scope, have a global perspective. Developing countries in the region expressed the desire to construct an information technology system in their countries. There was a felt need for a regional database system reflecting the regional characteristics of agriculture. Hence, the follow-up phase project would aim to construct the Data Exchange System for Food and Agricultural Statistics in Asia and Pacific Region. There was also recognition of the benefits for all countries to set up country-level homepages that would serve as a vehicle for

disseminating national statistical figures using acceptable standards applicable to all participating countries that would allow data users to obtain more detailed statistical data.

71. However, it was observed that there existed much diversity in terms of IT systems among the countries in this region. While some countries had already developed database systems and web pages; others were still in the primitive stage. The proposed project hoped to develop and verify the usefulness and efficiency of the system in some selected countries as a first stage and then formulate approaches for subsequent adaptation in other countries. The process would involve the formulation of standard and procedures for the data exchange; the development of the country system and regional system; the installation of the country system in the target countries (which would include a consensus on the focal point organization and related organizations; hardware and software, input of time series data and selection of a Internet service provider and contract); installation of the regional system; and capacity building through regional seminars and in-country training. The process would also include approaching other countries to adopt the system developed by the project, and consideration of the sustainability after completion of the follow-up phase project
72. The system would consist of Internet Web Pages and database system at country and regional levels. At the country level, the agricultural statistical data would be stored in an independent database rather than the build-in type of database in a Web Page. The Key Indicators Mapping System (KIMS), which was developed by the WAICENT as a contribution of the FAO to FIVIMS in FAO/HQ, could be the possible basis of the country specific component of the regional data exchange system. The analysis would be made according to the demand from the data users using the country data base system.
73. After the installation of the system, the countries should continuously update the statistical data and information. The prototype of the country system could be developed by the countries within the scope of the procedures formulated by the project, which could be expected to support the initial costs in introducing the country system (hardware, software, time series data inputs) as well as the cost for the Internet provider during the project period, specifically for the rental of the Web Pages space.
74. At the regional level, the project intends to collect statistical data not only from countries where the country-level data exchange system would be installed, but also from other countries with electronic-based database system and statistical web pages. Country-level data would be consolidated into the regional database. The data file from the countries could then be transferred by e-mail or postal mail using external data storage device (FD, ZIP, CD-RW, etc.).
75. The project would feedback regional statistical data, consisting of aggregates of the country statistical data, to the member countries by e-mail or postal mail using external data storage devices.

76. There could be two ways of supplying statistics through the web page, one could be through a build-in database such as the FAOSTAT, and the other could be to post the statistical tables, charts and GIS maps on the web pages. The planned system could also help ESSB in its task of collecting country data as a basis for FAOSTAT, and GIEWS and FIVIMS in updating their basic data.
77. All countries should ideally carry the statistical figures in the web pages using a standard format. Under this situation, data users could obtain detailed country statistical data from the Internet web pages of the member countries.

## VIII. Synthesis of the Technical Consultation

- For most countries, there are available statistics ready for dissemination but these are in varying formats, and in some countries, in varying languages. There is immediate **need for an inventory of existing data**, including the formats in which they are available.
  - From there, we can determine the *standard format to be adopted for purposes of the proposed regional exchange of data on food and agriculture*.
  - There is a need to *determine the levels of data disaggregation* requirements.
  - The *issue of language translation should be resolved*. The view was that the countries should be responsible for their own databases, including the translation into English and the assurance of reliable data.
- As much as possible, the data must **address the needs and requirements of the participating countries**, taking into consideration the fact that national needs have priority over all others.
  - There is a need for the countries to *make the data readily accessible and retrievable*, including the specification of the filename.
  - In the peer-to-peer data exchange, the mode of data exchange would not necessarily be dependent on a centralized database.
  - The data should have *provision for easy manipulations* to suit the needs of the individual countries.
  - The *assurance of quality and timeliness of data* are an important consideration in regional data exchange and these are the responsibilities of the individual countries.
- In most of the countries, databases are still at the developmental stage and require technical assistance in hardware, software and IT personnel training. Concern was expressed on the **need of participating countries for funding assistance during the initial stage for the procurement of hardware, software and training**. It was also pointed out that the follow-up programme **could avail of technical assistance** (in the form of expertise) from a partnership programme between FAO and participating countries.-, in the following areas:
  - *Technical problems in accessing the web*, which must be solved at the country level.

- *Maintenance of the database systems of each country*, for which there must be timely updating. The fast turnover in government IT staff in many countries was noted as a constraint to good data maintenance. However, the countries must ensure continuing training of a pool of IT staff to provide the necessary maintenance.
- The government structure in a number of many countries, may not allow the sustainability of the regional exchange of information; in this instance, there may be **need for enabling acts to ensure continuity of the policy on data exchange** in the region
- The existence of more than one focal data point in some countries **calls for clarification in regional data exchange**.
- The issue of decentralization of databases versus data centralized location should be discussed and resolved.
- The issue on the **readiness of the transition economies to develop their national databases within a short time** was raised. It was noted that it took several years for the development of databases in the countries with a higher level of data capability. However, software has been developed that will enable a faster pace in database establishment. In consonance with this point, there may be a need for countries with the database capabilities to extend assistance in order to build up the capabilities of the transition economies. At the same time, countries which already have established databases could work towards the exchange of data.
- The country should make the **determination of the data type to include in the national database for sharing** with other countries. However, there should be a mandatory set core of information for purposes of the regional exchange.

## IX. Closing of the Technical Consultation

78. The Agricultural Statistics Expert of the project expressed his appreciation for the cooperation of the experts and their participation in the Technical Consultation. The next step would be the formulation of the project document and its submission to the FAO HQ. He expressed his hopes that the participants would continue to play an active role in the follow-up programme.
79. He thanked his colleagues at the FAO regional office, the representative from Japan, and the representatives for FAO HQ for their important inputs to the Technical Consultation.
80. The Consultation was declared closed at 12 noon on 22 March 2001.

## **OPENING STATEMENT**

**R.B. Singh**  
**Assistant Director General and**  
**Regional Representative for Asia and the Pacific**

On my own behalf and that of the Food and Agriculture Organization of the United Nations, I am pleased to welcome you all to this *Technical Consultation on the Establishment of Data Exchange System for Food and Agriculture Statistics in Asia and the Pacific Region*.

The organization of this Technical Consultation is in keeping with the mandates of FAO. Information is indispensable to good decision-making. The framers of the FAO Constitution had seen the importance of information as a fundamental part of its activities. This is explicitly enshrined in Article One of the Constitution which states: "The Organization shall collect, analyze, interpret and disseminate information relating to nutrition, food and agriculture."

Ladies and Gentlemen:

The coming of the electronic age has changed universal development landscape. The world has figuratively been compressed into our desktops and laptops. The advances in information and communication technology (ICT) have allowed us to know almost instantaneously, by clicking the right keys of our PCs, practically anything and everything that is happening anywhere in the world. Through the facilities available via the Internet, exchange of information has never been that easy. Video conferencing has now become an accepted mode of conducting high-level policy meetings resulting in immeasurable savings in terms of time and money.

In the field of food and agriculture, these innovations, no doubt, are providing valuable support to meeting the challenges ahead of us in this new millennium: i.e., achieving our universal goal of eradicating poverty and hunger through sustainable development and food security. Information that is properly applied can save lives and improve livelihoods. For example, Governments with universal access to information would be able, way ahead of the occurrence of the event, to predict areas of food insecurity and vulnerability and thus take preventive action to reduce the likelihood of an emergency.

However, information can only empower when the user has access to it. Thus, I find the theme of this Technical Consultation a timely and important subject not only for FAO but more so, for all the countries in the Asia and Pacific rim where the problem of food insecurity, as evidenced by the incidence of hunger, is of such a pervasive and alarming proportion. The recently released State of Food Insecurity shows that of the close to 800 million undernourished population in the developing countries today, two thirds, or over 500 million could be found in our Region.

I find this state of food insecurity in the region quite ironic. Consider this: 90 percent of the world's rice output come from our vast agricultural resources. In addition, the region is also the source of 60 percent and 63 percent, respectively, of total world vegetable and fish production. Obviously, we have the required supply of carbohydrates, protein and minerals to allow our people to enjoy proper and balanced diets on the family dining tables.

We should recall that the 1996 World Food Summit set a goal of reducing the number of undernourished to 400 million by 2015. However, a recent evaluation revealed that the rate of decline in the number of hungry people - slightly fewer than eight million per year during the 1990s - is woefully inadequate and thus would set back achievement of the WFS goal by another 15 years.

Inadequacies in accessing and properly using information could have no doubt, contributed to the failures of national policy makers to properly and adequately address the problem and prevented its becoming a universal concern today.

Fortunately in our lifetime, the ICT revolution has made information on agriculture available worldwide and on-demand. When FAO launched FAOSTAT in the 1980s under a mainframe environment, approximately about 1,000 users per year were registered. In contrast, the new Internet version available through WAICENT currently has about 60,000 user sessions per month. A distinct feature of the new system of information exchange which is not feasible in the conventional print or audio-visual media is that the Internet allows every user to potentially be both a sender and receiver of information. It offers new opportunities for two-way, interactive and horizontal communication. It is now adopted as an effective medium for the articulation of development needs and perceptions.

The Internet has now become a vast and growing global network people use to converse, debate, meet, teach, learn, buy, sell and share virtually every type of information imaginable. As a base for business to business (B2B) e-commerce transaction, Internet as a medium was estimated to have generated US\$145 billion in 1999, and this is estimated to skyrocket to US\$7.3 trillion by 2004.

Unfortunately, the benefits from the system are not equally shared by all. We are now experiencing a phenomenon dubbed as the "digital divide." Developed economies benefit more from this technology, regrettably at the expense of underdeveloped and developing countries. The Internet provides the most-cost-effective technology today that should enable rural communities to receive outside information and knowledge that could spur development. However, on account largely of poor information and communication infrastructure facilities, Internet access is likely to be available only to a small proportion of the people in the poorest communities for the immediate future, leaving them further behind. These problems notwithstanding, FAO welcomes the initiative made by member countries of the Asia and Pacific Commission on Agricultural Statistics (APCAS) to request a donor country like Japan to support a project that will set up a system of information exchange in the food and agriculture sector among APCAS member countries. Through this envisaged APCAS information exchange system, our region will set the pace in providing statistics not only with a human face but a heart and brain as well. This can also serve as a medium for

bridging this digital divide. The interactive system that is anticipated to be a salient feature of the information exchange will allow member countries to learn from each other's experiences, understand their problems and shortcomings and offer support and assistance to improve national statistical systems for the mutual benefits of the region as a whole.

I am pleased to note that this Technical Consultation has lined up interesting topics that will guide us in formulating the follow-up phase of this important regional project. I enjoin you to actively participate in the discussions. The information exchange we envisaged to set up is not meant to benefit FAO alone. Rather, it should primarily serve the interests of member countries. Its contents, structure and other features should conform to your collective expectations. Considering the diverse statistical systems and organizations practiced and adapted among member countries, the task ahead will not be smooth. I am however optimistic that through our concerted efforts, member countries will be able to have an electronic-based forum, where not only statistics will be shared, but as well, provide a venue for letting others know and share innovative methods for data collection, processing, analysis and dissemination; exchange news and other interesting events about food and agriculture situation and prospects; and provide a real-time barometer to monitor successes (and failures) of our global and national food security and poverty alleviation programmes.

Once fully developed, this system could also perhaps serve as a core platform which agricultural stakeholders in our region could use for an internet-based B2B. If we succeed in fulfilling this vision, we would have enormously contributed in setting up an operational level playing field for global agribusiness.

In the medium term, I also look forward to seeing this exchange for mutual sharing of statistical knowledge and information, serve as an instrument for national statistical services in the region to enable them to harmonize the concepts, terms and techniques used in food and agriculture statistical information. This is an important consideration in enhancing a better understanding of food and agricultural conditions and developments in each country relative to the regional and global scenario. I also look forward to seeing this information exchange likewise serving as a medium for articulation of both regional and country-specific issues that may be impeding fast development of food and agriculture statistics and information systems. These discussions and debates could pave the way for a more aggressive implementation of our partnership programmes and the opening of various development assistance windows from the donor community.

Ladies and Gentlemen:

It is indeed heartwarming to note that the Government of Japan has shown keen interest in seeing the success of this project. I was reliably informed that although we have yet to submit a formal proposal for the follow up phase, funding has already been secured. So much so that while the current regional project is still set to close in April 2002, the follow up project, if we succeed in drawing up an acceptable project document, could commence as early as the fourth quarter this year. Allow me therefore to take this opportunity to personally extend to our friend here from Japan's Ministry of Agriculture, Forestry and Fisheries, Mr. Motokichi Aoyama, FAO's gratitude for the continued generosity and interest of the Government of Japan to support this activity.

Finally, through your active cooperation and support, I am certain we will have a very fruitful Technical Consultation.

Again welcome and have a pleasant week in this amazing Thailand.

## **Timetable and Schedule of Activities**

### **Tuesday, 20 March 2001**

- 08.30 - 09.00 Registration
- 09.00 - 09.30 Opening Session
- 10.00 - 10.30 Introduction of the participants; organization of the Consultation; Election of Officers
- 10.30 - 11.00 Session 1  
Review of Progress and accomplishments of the regional project GCP/RAS/171/JPN
- 11.00 - 12.00 Session 2  
Regional Exchange System for Food and Agricultural Statistics - Perspective from Japan (MAFF, Japan)
- 13.30 - 14.15 Session 3  
Linking the national statistical homepage with the regional exchange system for food and agricultural statistics from the perspective of a centralized statistical system (BPS - Statistics Indonesia)
- 14.15 - 15.00 Session 4  
Ministry of Agriculture's role in complementing the electronic dissemination of food and agricultural statistics under a centralized statistical system (CADI, MAF, Indonesia)
- 15.30 - 16.15 Session 5  
Maintaining a global database for food and agriculture statistics: FAO's FAOSTAT/WAICENT (FAO ESSB)

### **Wednesday, 21 March 2001**

- 08.30 - 09.15 Session 6  
Enhancing user-friendliness of statistics homepages through graphs, charts, GIS maps and other visual approaches to statistical analysis (DCS, Sri Lanka)
- 09.15 - 10.00 Session 7  
Country-level expectations from the regional exchange system for food and agricultural statistics (Cambodia, Lao PDR, Myanmar, Nepal, Vietnam)
- 10.30 - 12.00 Session 7 (continuation)

- 13.30 - 14.15      Session 8  
Utilizing the electronic information highway as a channel for exchanging food and agriculture statistics in Asia and Pacific countries: some statistical considerations (BAS, DA, Philippines)
- 14.15 - 15.00      Session 9  
Adapting the processes of data collection, analysis and dissemination of food and agricultural statistics to fast changing pace of information technology development (MA, India)
- 15.30 - 16.15      Session 10  
On the feasibility of establishing a GIS-based regional exchange system for food and agricultural statistics (OAE, Thailand)

**Thursday, 22 March 2001**

- 08.30 - 09.15      Session 11  
Technical and resource issues in establishing a farmer-focused national agricultural information network (ITCAF, Philippines)
- 09.15 - 10.00      Session 12  
Major issues in establishing a sustainable regional exchange system for food and agricultural statistics in Asia and Pacific (FAO, RAP)
- 10.30 - 12.00      Session 13  
An overview of the regional exchange system for food and agricultural statistics (GCP/RAS/171/JPN)
- 13.30 - 14.30      Session 14  
Outline of activities for follow-up regional project
- 14.30 - 15.30      Adoption of the report of the Consultation  
Closing session

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