



Report of the Regional Cooperative Experts Meeting  
on Computerization to Promote Agricultural Cooperative  
Enterprise Development

**Chiang Mai, Thailand, 19-23 April 2004**



**Food and Agriculture Organization of the United Nations  
Regional Office for Asia and the Pacific (FAORAP)  
Bangkok**

**Network for the Development of Agricultural Cooperatives in Asia and  
the Pacific (NEDAC)  
Bangkok**

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Computerization to Promote Agricultural Cooperative Enterprise  
Development  
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**Introduction**

The regional cooperative experts meeting on computerization to promote agricultural cooperative enterprise development (ACED) was organized by the FAO Regional Office for Asia and the Pacific jointly with the Network for the Development of Agricultural Cooperatives in Asia and the Pacific (NEDAC). Sixteen participants from Bangladesh, China, India, Malaysia, Nepal, Philippines, Sri Lanka and Thailand including representatives of FAO and NEDAC attended the meeting in Chiang Mai, Thailand from 19 to 23 April 2004. (See Annex 1 for list of participants.) The meeting was a follow-up to the technical seminar on Information Technology (IT) and Computerization of Agriculture Cooperatives held during the October/November 2003 NEDAC General Assembly in Kathmandu, Nepal.

**Objectives of the meeting**

- a) To share experiences, information and views on the development of national programmes for computerization to promote ACED; to review national policies, legislation and capacity-building for computerization in support of ACED.
- b) To assess steps by government and/or the cooperative movement to promote small and medium enterprise (SME) development and business planning by agricultural cooperatives; to highlight key problems faced and lessons learned.
- c) To identify training needs for better management and business planning through computerization of agricultural cooperatives in order to improve their competitiveness in local and regional markets.
- d) To formulate strategies/policy recommendations and develop national/regional action plans for computerization of agricultural cooperatives; to identify necessary legal, policy and institutional reforms.
- e) To formulate a standard questionnaire for data collection with special reference to ACED and marketing/trade issues; to facilitate information exchange among cooperatives at all levels; to promote cooperative-private sector alliances.
- f) To formulate recommendations for FAO-NEDAC to promote ACED and alliance-building. To recommend technical and funding support from FAO and other interested agencies for capacity-building of agricultural cooperatives.

**Summary of proceedings**

*Welcome statement*

Wim Polman, Rural Development Officer, FAO Regional Office for Asia and the Pacific welcomed the participants. Computerization of agricultural cooperatives is a precondition for strengthening their business capacities and becoming strong rural enterprises, and is a high priority for FAO and NEDAC. The participation from the region shows the importance given to the adoption of modern information systems for

ACED in order to ensure food and rural livelihood security. He posed the following questions: “how does computerization for ACED work towards this goal, what are the main obstacles and what are the things we need to study further?”

The meeting was important for sharing documentation on the state of development towards computerization of agricultural cooperatives in the region. FAO will use such information to assist its partner agencies in member countries in the development of support programmes for computerization in agricultural cooperatives.

Mr Polman further stated that the intra-regional trade forum APEC (Asia-Pacific Economic Cooperation) was the first multilateral trade grouping to focus on rural small and medium enterprises, including agricultural cooperatives.

### Opening remarks

In his opening remarks, NEDAC Chairperson Dinesh Rai referred to the 2003 NEDAC meeting in Kathmandu on development of a regional data collection method. He highlighted the main problems faced by agricultural cooperatives in developing countries within the region:

- Weak management, poor training and motivation
- Lack of participation by members
- Lack of savings, capital formation and business diversification
- Lack of professionalism and indifferent decision-making
- Lack of appropriate policies and legislation in support of agriculture cooperative development
- Limited information of market trends and price movements

Mr Rai pointed out that the purpose of computerization for ACED was not to obtain one-time data or information, but to provide a framework for live, interactive collection and dissemination of data such as the provision of market and price information. NEDAC members must work together to improve data collection and exchange in support of ACED.

The NEDAC Chairperson informed the participants about the Cooperative Ministers' Conference organized by the International Cooperative Alliance (ICA) in New Delhi in February 2004 where he reported on major NEDAC activities. Mr Rai mentioned a NEDAC proposal for a joint ICA-FAO-NEDAC collaborative Action Plan in selected countries of the region. This was appreciated by all participants in the ICA meeting. The joint programme would include the design of training curricula/materials as well as training in selected institutes in the region. Both ICA and NEDAC members would gain by sharing views on recent trends in cooperative development, policy and legislative changes, and linkages/networking between cooperatives. Mr Rai invited FAO to provide leadership and assistance in coordinating and formulating a joint action plan for ICA-FAO-NEDAC.

Mr Rai expressed his thanks and appreciation for the three experts on computerization in cooperatives – Stephen DeMeulenaere working on innovative economic projects in Indonesia, Thanit Chanprateep working on IT in the development of cooperatives in Thailand and K.L. Nalwaya for his excellent resource paper and development of a joint format for data compilation. He thanked the NEDAC Secretariat for its hard work in bringing all participants together to the meeting and wished all of them an enjoyable stay in Chiang Mai.

## Summary of country papers

### Bangladesh

The Rural Development and Cooperative Division (RDCD) of the Ministry of Local Government, Regional Development and Cooperatives coordinates rural development activities/programmes of cooperatives through the Bangladesh Rural Development Board, the Bangladesh Academy of Rural Development, the Rural Development Academy and the Department of Cooperatives. The RDCD also coordinates rural development activities of other ministers and provides various policy guidelines to the government.

The Government is implementing a rural cooperative programme with a new approach of “one-village-one-cooperative society”. A project has been initiated to computerize the manual data processing system of the cooperative department which is the sole source of cooperative sector data in the country. Nearly 2 000 cooperators are to be trained under this project.

As a priority, the author of the paper recommended that computer and internet facilities should be introduced first at the basic *upazilla* level which is the prime source of information. IT training programmes are needed for both employees and management of agricultural cooperatives. Another suggestion was to initiate an IT networking programme for successful agro-business cooperatives. All cooperative training institutes should be provided with computer facilities to provide IT training to cooperators and cooperative officials.

#### *Strengths and weaknesses in computerization of agricultural cooperatives in Bangladesh*

| <i>Strengths</i>   | <i>Weaknesses</i>  |
|--|--|
| <ul style="list-style-type: none"> <li>• Planning to train 2 000 cooperators per year</li> <li>• Planning to deliver computer hardware to <i>upazila</i>-level cooperatives</li> <li>• Large irrigation cooperative societies and milk producers' cooperatives to be provided IT training</li> <li>• Planning to modernize manual data collection and processing</li> <li>• Facilities to train 7 000 people annually</li> <li>• Programme to deliver IT training/equipment to agricultural cooperatives</li> <li>• “One village-one cooperative” government policy</li> </ul> | <ul style="list-style-type: none"> <li>• Planned programmes still to be designed, funded and implemented</li> <li>• Cooperative Training Institute lacks computer laboratory</li> <li>• Low literacy level in the country</li> </ul> |

### China

Since 1989, there has been continuous growth in the number of Farmer Special Cooperatives (FSCs) with the development of agricultural specialization and marketing. There are 150 000 FSCs in the country. Although most are still in the primary and intermediate development stages, more and more FSCs are reaching advanced stages of development.

Starting in 1990, community cooperatives in some developed provinces began to use computers for statistical and asset administration, as well as contract

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management, among other business activities. Computerization of community cooperatives began in all provincial administrations from 1998. Two-thirds of the provinces have made plans for computerization. For example, in the Guangdong province, 11.9 percent of the villages have been computerized and four counties have set up computer networks between the county and towns; 59 towns have established computer networks between towns and villages; and 176 villages have computer networks between villages and groups.

### *Strengths and weaknesses in computerization of agricultural cooperatives in China*

| <i>Strengths</i>  | <i>Weaknesses</i>   |
|---|---|
| <ul style="list-style-type: none"><li>• A large number of cooperatives, with about 33 percent roughly categorized as agricultural cooperatives</li><li>• Computers being used since 1990s mainly for data processing, statistics collection and accounting</li><li>• Government active in introducing IT to rural areas</li></ul> | <ul style="list-style-type: none"><li>• No cooperative law in China</li><li>• Most cooperatives are not full-fledged, but function at primary and intermediate stages</li><li>• No internal savings and good distribution system</li><li>• Cooperation among cooperatives not well realized</li></ul> |

## India

Starting in the early 1970s, emphasis was given to education and training for cooperative enterprise development. A network of education/training institutes under the umbrella of the National Cooperative Union of India (NCUI) offers a wide range of cooperative development programmes such as computer training for cooperative personnel up to the Master's level. Some Institutes of Cooperative Management are also engaged in software and network development. Computerization of agricultural cooperatives began 10 years ago; in Kerala State, 100 primary agricultural cooperatives have been computerized and simplified their work.

Under cooperative legislation and policy introduced in 2002, cooperatives are to be supported as autonomous, self-reliant and democratically managed institutions. The Government has set up a task force to formulate an action programme to improve professionalism, human resources development, management and the use of IT in cooperatives.

Despite computerization, the continued growth in the size and business volume of cooperatives has resulted in a significant backlog in data collection. The latest information available is for 1997-1998. The planning and monitoring of the programmes continues with the age-old manual system developed by the government which is complex, time consuming, less accurate and no longer serving policy-makers and planners. In addition, there is excessive government control, many non-viable cooperatives, a lack of transfer of technology, as well as a lack of effective manpower planning and development at the cooperative level.

With a view to developing a national resource centre of cooperative information, the National Cooperative Development Board (NCDB) of NCUI is streamlining the data collection, compilation and communication system. NCUI has simplified the data collection formats. NCDB has produced a series of ten *Indian cooperative movement – A profile*, which provide data and an analytical study of credit and non-credit cooperatives to assist policy-makers and planners. NCUI also

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offers computer training/consultancy on databank development to member organizations.

A standard software has been designed for all cooperative societies in the country to monitor activities from the lowest to the highest level, take stock of daily rural credit delivery, ensure utilization of funds and improve recovery positions. This will also promote transparency and establish institutional credibility among members.

*Strengths and weaknesses in computerization of agricultural cooperatives in India*

| <i>Strengths</i>  | <i>Weaknesses</i>   |
|---|---|
| <ul style="list-style-type: none"> <li>• IT is one of the Indian Government's four main policy objectives for development of cooperatives</li> <li>• Computerization began 10 years ago</li> <li>• IT training for cooperatives is well-established, with Master's-level accreditation</li> <li>• In Kerala, 200 primary agricultural cooperatives have been computerized</li> <li>• Data collection formats have been streamlined and simplified</li> <li>• IT being introduced in a phase manner starting with viable cooperatives</li> <li>• Primary focus on data collection to move later towards market information and networking</li> <li>• ICT connectivity</li> <li>• Wired Village Project with sugar cooperatives in Maharashtra State</li> </ul> | <ul style="list-style-type: none"> <li>• Regional imbalances in the development of cooperatives/lack of planning</li> <li>• Poor market information system</li> <li>• Poor technology transfer</li> <li>• Lack of national and regional network</li> <li>• Data collection system still manual</li> <li>• Excessive government control</li> <li>• Monitoring a formality</li> <li>• Fifty percent of grassroots cooperative personnel untrained</li> <li>• Many societies do not have a full-time manager</li> <li>• Business criteria 15 years outdated</li> <li>• Government spends too much time on data collection and not enough time on expertise and policy development</li> </ul> |

**Malaysia**

The Ministry of Agriculture (MOA) has embarked on a number of strategies to prepare farmers to face the challenges of market liberalization and globalization. One of these is to use the latest technologies in the management of farms to increase output and productivity.

Farmers' institutions must use IT-based technology to improve the quality and range of services to their members who need the latest price and market information about commodities and crops they plan to grow and sell. Farmers' Organizations (FOs) must be able to help farmers sell their produce and make other market transactions. Farmers need timely reports on their financial status with the FOs as well as the financial position of the FOs.

The obstacles to computerization for data collection, analysis and exchange include inadequate IT expertise and personnel to guide/advise agricultural cooperative staff at all levels. There is also a lack of detail/reliability at all levels in data collection and analysis. The data collection format is sometimes not suited for computerization, which results in misunderstanding.

*Strengths and weaknesses in computerization of agricultural cooperatives in Malaysia*

| <i>Strengths</i>  | <i>Weaknesses</i>  |
|---|--|
| <ul style="list-style-type: none"> <li>• Statistics on agricultural cooperatives collected every four months</li> <li>• IT training provided through five training centers</li> <li>• Action plans for more training, internet village programmes, encouragement to farmers' organizations and agricultural cooperatives to take the initiative in this field</li> <li>• Malaysian government very serious about introduction of IT in the country</li> <li>• Cost of internet is very low compared to other countries</li> </ul> | <ul style="list-style-type: none"> <li>• Limited expertise in computers</li> <li>• Lack of IT staff</li> <li>• Lack of reliability in data collection; not completed on time</li> <li>• Data collected is often subjective and hard to report</li> </ul> |

**Nepal**

Agricultural cooperatives in the country must modernize data collection systems in order to adapt to the competitive business environment. The National Cooperative Development Board (NCDB) plans to install a computer networking system for cooperatives during the fiscal year 2004/05.

The constraints in collecting cooperative data/information include the fact that agricultural cooperatives have not maintained proper records as they were not trained for this. The cooperatives are unable to provide data in the prescribed format and are reluctant to furnish data regularly to the government. The provision of IT facilities will enable proper and timely collection, analysis and sharing of data/information.

During the Tenth Five Year Plan (1992-1997), modern information technology is to be used to disseminate agro-information to rural areas. The present structure of the cooperative sector is also to be reviewed to strengthen the data system. The National Cooperative Development Board has been broadcasting activities of cooperatives jointly with the Agriculture Information and Communication Center of His Majesty's Government.

*Strengths and weaknesses in computerization of agricultural cooperatives in Nepal*

| <i>Strengths</i>   | <i>Weaknesses</i>  |
|--|--|
| <ul style="list-style-type: none"> <li>• 10<sup>th</sup> 5-year plan for modern IT to disseminate agro-information to rural areas</li> <li>• Agricultural radio programme</li> <li>• Agricultural cooperatives engaged in business activities</li> </ul> | <ul style="list-style-type: none"> <li>• Non-viable cooperatives</li> <li>• Lack of management, training, market intelligence, policy and networking</li> <li>• Many localities without electric power</li> <li>• Lack of funds for hardware/software/training</li> <li>• Cooperatives reluctant to submit progress reports; data not reliable</li> <li>• Available data not accessible to cooperatives</li> </ul> |

## Philippines

Given its achievements in micro-finance, the cooperative sector in the Philippines faces the challenge of providing a more entrepreneurial environment to its members in terms of investment, production and marketing.

The Agricultural Credit and Cooperative Institute at the College of Public Affairs provides short-term training on effective governance. This includes leadership development and value-formation, policy development and decision-making, financial management, strategic management, human resource development for effective governance, application of IT for monitoring and evaluation, and cooperative entrepreneurship.

A strategic plan to use IT for ACED should ensure timely access to information for future decisions on products, research, production technology, organization and marketing. The availability of well trained local personnel should enable cooperatives to utilize modern technologies and advanced organizational schemes.

### *Strengths and weaknesses in computerization of agricultural cooperatives in the Philippines*

| <i>Strengths</i>  | <i>Weaknesses</i>  |
|---|--|
| <ul style="list-style-type: none"><li>• An IT action plan for agricultural cooperatives</li><li>• Most wealthy cooperatives already computerized</li><li>• Cooperatives have relatively strong financial base</li></ul> | <ul style="list-style-type: none"><li>• Initiatives necessarily centralized</li><li>• Government lacks funds for cooperative development</li></ul> |

## Sri Lanka

The Government plans to provide IT training to cooperative societies and other cooperative institutions. Arrangements have been made to computerize data collection on cooperatives. The Agriculture Research and Training Centre attached to the Ministry of Agriculture issues daily prices of agricultural commodities which are disseminated by the electronic media.

Lack of funds and a shortage of computer-trained personnel at the rural level are keeping the cooperative sector from making adequate use of IT. At present, government funds are not available for IT training of cooperatives for which external financial assistance and cooperatives' own funds are being used. There is no computer networking between the Cooperative Department and the Provincial Cooperative Movement.

Awareness programmes on the importance of IT are being conducted in the cooperative sector. The National Institute of Cooperative Development, Polgolla offers diploma courses in computer technology.

*Strengths and weaknesses in computerization of agricultural cooperatives in Sri Lanka*

| <i>Strengths</i>   | <i>Weaknesses</i>  |
|--|--|
| <ul style="list-style-type: none"> <li>• Computer technology used by national cooperative council in marketing federations, coconut production, rural banks and cooperative departments</li> <li>• Computers provided by central government's cooperative department to eight provincial cooperative departments</li> <li>• Plans to collect data through computer network</li> <li>• Daily prices of agricultural commodities are issued</li> <li>• Computer training offered by National Institute of Cooperative Development, Polgolla</li> </ul> | <ul style="list-style-type: none"> <li>• Lack of funds to hire computer-trained people</li> <li>• Difficult to obtain services of computer people</li> <li>• Need for external financial resources</li> <li>• Lack of software and hardware</li> </ul> |

**Thailand**

The Government's Cooperative Promotion Department (CPD) and Cooperative Auditing Department provide auditing/business management software to cooperatives. The CPD also offers training courses for its staff and personnel of cooperative businesses.

The CPD is responsible for data collection on cooperatives and the Department's internet site provides information to cooperatives. The Department is planning a computer network among cooperatives and the CPD.

Cooperatives do not make sufficient use of IT because of lack of equipment and skilled personnel. The collection/analysis of data and exchange of this information are also hampered by lack of appropriate software and funds.

*Strengths and weaknesses in computerization of agricultural cooperatives in Thailand*

| <i>Strengths</i>  | <i>Weaknesses</i>   |
|---|---|
| <ul style="list-style-type: none"> <li>• Target of 1 000 out of a total of 4 000 agricultural cooperatives in the country to be computerized</li> <li>• Variety of software programmes, both private and public implemented</li> <li>• Six different software programmes implemented for agricultural cooperatives</li> <li>• CPD website provides information to cooperatives</li> <li>• Plan to network cooperatives and CPD</li> <li>• Computer systems used for data collection for 15 years</li> <li>• 10 training centers in country</li> </ul> | <ul style="list-style-type: none"> <li>• Lack of software/hardware</li> <li>• Lack of skilled personnel</li> <li>• Lack of funds</li> </ul> |

## **Summary of technical papers**

### *Management information systems in cooperatives and its application to network development*

K.L.Nalwaya, Executive Director, National Cooperative Union of India

The establishment of the World Trade Organization (WTO) has brought increased competition at home and abroad, and cooperatives must revitalize themselves to face the challenge. This requires cooperatives to build databases, develop a sound cooperative information network and strengthen the policy decision-making process.

It has rightly been said that “information like knowledge has to flow”, and “knowledge gained, but not shared, is of no use”. This sends a clear message to cooperatives either to adopt the IT approach to remain in the mainstream, or operate outside the global network.

The latest management approach for institutions is to be equipped with modern systems and to use IT applications to strengthen their management information system (MIS). The Management Information Systems in organizations are designed to provide specific information for decision-making at various levels. The information system has to be related to the decision-making system in the organization. The design and selection of an appropriate MIS depends on the process of decision-making and the nature of decisions it supports.

The output of MIS is information that serves managerial functions. If a system provides information to persons who are not managers it will not be considered as part of an MIS. For example, an organization often processes lots of data which it is legally required to furnish to various government regulatory agencies. While such a system may have interfaces with MIS, it will not be part of it.

The National Cooperative Union of India (NCUI) as an apex organization of the Indian cooperative movement is establishing its Wide Area Network linking all training institutions (Institutes of Cooperative Managements) of NCCT to NCUI. NCUI interacts regularly with the data banks at the ICMs and is also exchanging data related to the Indian cooperative movement from different states over an internet network, so called ‘Electronic Mail’. NCUI is establishing TCP/IP connectivity for web browsing and file transfer of the cooperative data available all over the world. NCUI website: [www.ncui.net](http://www.ncui.net)

### *Computerization for the agricultural cooperatives in Thailand*

Thanit Chanprateep, Cooperative Technician, Cooperative Promotion Department, Government of Thailand

The computer software available for agricultural cooperatives in Thailand includes *MicroBanker*, which is used by about 20 cooperatives; *Rangsit Software*, used by about 30 cooperatives; *POS for Cooperatives*, used by about 30 cooperatives; *COOP50*, used by about 40 cooperatives; *Rayong Software*, used by about 200 cooperatives and *Accounting for Cooperatives*, used by about 500 cooperatives. About 60 to 70 percent of cooperatives have computers but only about ten percent use programmes specific to cooperative operations.

The problem with the software relates to standardization of the data and process, the cost of developing and maintenance, and the training needed in the language in which the software is programmed.

All sub-district “Transfer and Agricultural Technology Centers” are planned to be computerized in 2004. All agricultural cooperatives in the sub-district have their own computer and internet connections. Internet costs are already very reasonable and high-speed internet will be available in the near future.

## **Issues discussed**

### *Policy*

- There is inadequate commitment to IT in support of ACED. Cooperative legislation should be progressive. Positive example: India has a concrete set of policies and programmes in place.

### *Resources*

- A lot of IT resources are available, but are mainly used for accounting. There is no applicable software to assist cooperatives on business development planning, improved market information, quality control and related enterprise development activities.
- The cooperative movement is supported by governments, but governments can use the movement as a tool. Governments should only provide assistance and not become involved in cooperative operations.
- Some members requested multilateral institutions to assist in modernization and implementation of IT for ACED, for example in the area of software development.

### *Human resource development (HRD)*

- Cooperatives must play a role in strengthening HRD.
- All support should be extended for capacity building including modernization, infrastructure development and IT applications.
- Database on agricultural cooperative development is incomplete making it difficult to identify and tailor training needs as well as software development to specific types of cooperative enterprises.

### *Resource infrastructure development*

- A fund is needed to support modernization of agricultural cooperatives. Many countries have noted a lack of resources for modernization and introduction of IT for ACED. An internal mechanism such as a National Resource Fund is needed to cover these costs.
- There is a possibility of multilateral donor funding for the introduction of IT for ACED through rural SME funding opportunities. The Asia Pacific Economic Forum (APEC) Secretariat developed a project proposal for e-commerce through rural SMEs.

### *Infrastructure issues*

- Many rural areas in Asia do not have access to electricity, telephone connections and computer hardware/software.
- There is a need to design solutions that match local infrastructure, such as mobile IT teams.
- There is a need to design agreements on a multi-sectoral approach for infrastructure development in partnership with private enterprise.

### *Lack of uniformity in IT application*

- There is inadequate cooperation, networking and standardization of formats. Computer usage is mainly confined to word processing and financial management; computers are rarely used for business planning and development.

## **Observations**

- More discussion is needed on software development for cooperative business promotion. For example, manuals have been developed for cooperative management, but now manuals and software are needed for the business side of agricultural cooperatives.
- Improvement is needed in systems and procedures as well as cutting down on red tape.
- We have to evolve on our own, and “stand on our own two feet”. There is a need for stronger participation by the private sector which has shown great interest.
- Collaboration is needed on software development to share the costs and to expand regional trade networks. Fair trade with agricultural cooperatives is leading the way.
- Exploring the implementation of IT in cooperatives to support hardware/software, training, technical support, etc.
- Hardware/software durability is important to reduce long-term costs.
- There is a need to identify a national IT office or officer to receive queries and advise networks.
- An IT focal point is needed to provide policy advice to members and promote operational uniformity.
- Strategic criteria for the introduction of IT for ACED need to be developed to be used in promotion, benchmarking, software development, etc.
- There is a need for the introduction of computers in rural schools which could be used by agricultural cooperatives for enterprise development purposes.

## **Conclusions and recommendations**

The following suggestions and recommendations were made:

### *Society level*

- Ensure infrastructural facilities are in place.
- Set up an effective database and local data collection system.
- Implementation of IT applications along with e-learning, e-commerce, human resource development and the introduction of software to strengthen cooperative business activities.

### *National level*

- A clear policy is needed for setting up a database with a standardized format and data collection process.
- The data format should include business development planning and ACED.
- Identify a national nodal officer or organization to study the system of computerization for ACED and coordinate data collection.
- Identify and assess IT capacities within the agriculture cooperative sector for computerization and technical assistance requirements.
- Assess training needs and determine types of internal/external support needed.
- Develop standard software for database formats and business development planning to ensure uniformity in national networking in support of primary agricultural cooperatives/rural SMEs.
- Ensure continuity of data flow and analysis on primary agricultural cooperatives and rural SMEs at the central level to be provided on a regular basis to planners and decision-makers.
- Prepare action programmes for computerization of all agricultural cooperatives within five years and preferably to reach ten percent within the first year.

## *Computerization to promote agricultural cooperative enterprise development*

- A national human resource development programme on business development planning is required to be strengthened with a training module.
- Ensure that data is provided to FAO-NEDAC by at least 30 June each year.

### *FAO-NEDAC*

- Possibilities may be explored to obtain support from other international agencies to strengthen human resource development programmes.
- A joint data collection format developed and discussed at the 2003 Kathmandu meeting has been adopted.
- It is proposed that FAO-NEDAC engage a technical consultant to support the task of data collection and to prepare an analytical report which compiles data gathered from national nodal points. The report may be titled *Data Bank* or *Yearly Snapshot* or *Overview on Agricultural Cooperatives in FAO-NEDAC Countries*.
- A standard software has to be developed for the integration of data at the national level.
- Efforts should be made to organize a cooperative ministers' meeting on ACED.

### *NEDAC collaboration with FAO*

- Promotion of IT at the primary agricultural cooperative level and for regional data collection based on the FAO-NEDAC format; development of related software. FAO should provide technical and financial support through projects and regular programmes.
- A joint FAO-NEDAC brief on the subject should be prepared for government members.
- FAO was requested to provide necessary technical and financial support for implementation of the action plan adopted by the meeting.

### *Visit to successful agricultural cooperative enterprise/CPD regional office, Chiangmai*

The participants visited the Sarapee Agricultural Co-operative Ltd. located in Sarapee district of Chiang Mai, which is exporting fresh and dried fruits to China and other Asian countries. They also visited the Regional Office of the Cooperative Promotion Department at Chiang Mai and were briefed on general cooperative developments in the region.

### *Concluding remarks*

In his concluding remarks Mr Polman noted that the meeting was a major event as it marked the first time NEDAC members came together as a group to decide on a joint format for computerization of cooperatives as a collaborative project. He thanked the resource persons for their contributions which had made a fruitful outcome possible.

Mr Rai closed the meeting by noting that the agreement on the data format was just a start. The group had not yet compiled standardized and sufficiently detailed information about IT in agricultural cooperatives. To transmit information from the lowest level in cooperatives in the rural areas to the national level requires a lot of work, and he hoped that computerization would be a success. He mentioned that all NEDAC members need to identify a nodal agency at the national level.

Observing that cooperatives have to compete with other government departments for shrinking budgets, he urged the cooperative sector to make its voice heard. It was agreed that the NEDAC Chairperson would write to the members and heads of cooperative departments, encouraging them to ensure continuing support for agricultural cooperatives.

Regional Cooperative Experts Meeting on Computerization to Promote Agricultural  
Cooperative Enterprise Development,  
Chiang Mai, Thailand, 19 to 23 April 2004

List of participants

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Regional Cooperative Experts Meeting on Computerization to Promote Agricultural  
Cooperative Enterprise Development,  
Chiang Mai, Thailand, 19 to 23 April 2004

Programme and agenda

**19 April**

Arrival of participants

**20 April**

- 09.00 – 09.30 Hrs: Registration
- 09.30 – 10.30 Hrs: Welcome and introduction of participants – Wim Polman, Rural Development Officer, FAO Regional Office for Asia and the Pacific
- Opening remarks by chairperson – Dinesh Rai, Managing Director, National Cooperative Development Corporation (NCDC), India
- Briefing on the objectives, Procedure and expected outcome of the meeting – W.I. Khan, Programme Adviser, NEDAC
- 10.30 – 11.00 Hrs: Tea/Coffee break
- 11.00 – 12.30 Hrs: Presentation and discussion on country papers
- |            |  |
|------------|--|
| Bangladesh | Md. Mostafizur Rahman/Md. Shahidullah  |
| China      | Chen Xueqi                             |
| India      | Dinesh Rai/Satish Chander/K.L. Nalwaya |
| Malaysia   | Nadzli Che Long                        |
- 12.30 – 14.00 Hrs: Lunch
- 14.40 – 15.30 Hrs: Presentation and discussion on country papers – (cont'd)
- |             |                                     |
|-------------|-------------------------------------|
| Nepal       | Pampha Devi Rai/S.R. Shakya         |
| Philippines | Virginia A. Teodosio                |
| Sri Lanka   | G.S.L. Fonseka                      |
| Thailand    | Wit Pratuckchai/Wichien Tanthamaroj |
- 15.30 – 16.00 Hrs: Tea/Coffee break
- 16.00 – 17.00 Hrs: Synthesis/discussions of major issues (identified from the country papers) and specific areas for collaboration with FAO-NEDAC or other interested partners, Stephen DeMeulenaere/K.L. Nalwaya/Thanit C.

*Computerization to promote agricultural cooperative enterprise development*

**21 April**

- 09.00 – 10.30 Hrs: Presentation and discussion on the resource paper on computerization of agriculture cooperatives
- Introduction of the data-format developed in the FAO-NEDAC meeting at Kathmandu Nepal in 2003 – K.L. Nalwaya
- 10.30 – 11.00 Hrs: Tea/Coffee break
- 11.00 – 12.30 Hrs: Presentation and discussion of the data format, data collection/compilation, etc. developed/adopted or as practiced in Thailand –Thanit Chanprateep
- 12.30 – 14.00 Hrs: Lunch
- 14.00 – 17.00 Hrs: Visit to CPD – Regional Office and Cooperative Project on *Longgan* processing/marketing

**22 April**

- 09.00 – 10.30 Hrs: Discussion and preparation of strategic action plan by two groups – (Each group to prepare action plan separately)
- 10.30 – 11.00 Hrs: Tea/Coffee break
- 11.00 – 12.30 Hrs: Plenary session – presentation and discussion of action plans by each group
- 12.30 – 14.00 Hrs: Lunch
- 14.00 – 15.30 Hrs: Drafting of recommendations/action plan – Stephen DeMeulenaere/K. L. Nalwaya/Thanit Chanprateep
- 15.30 – 16.00 Hrs: Tea/Coffee break
- 16.00 – 17.00 Hrs: Discussion and adoption of action plan
- Closing remarks – Dinesh Rai/Virginia Teodosio/Wim Polman

**23 April**

Participants depart

Action plans prepared by working groups

*Group 1: Bangladesh, China, India, Malaysia, Thailand, FAO and NEDAC*

Society level

- ❖ Ensure infrastructural facilities are in place.
- ❖ Introduce business development planning.
- ❖ Set up effective database.
- ❖ Introduce I-applications, e-learning, e-commerce, human resource development and software to strengthen agricultural cooperative business activities.

National level

- ❖ Clear policy for setting up database.
- ❖ Prepare guidelines for setting up ACED database.
- ❖ Standardize format for uniformity in data collection.
- ❖ Identify nodal officer to study system of computerization along with hardware and software related to ACED.
- ❖ Identify and assess IT capacities within agriculture cooperative sector for computerization and technical assistance requirements.
- ❖ Identify if capacities available in the country or if external support needed.
- ❖ Develop standard software for a database format for support to business development planning by primary agricultural cooperatives and rural SMEs.
- ❖ Ensure consolidation, flow of data collected and analysis on primary agricultural cooperatives, SMEs and others at the central level to be provided on regular basis to planners and decision-makers.
- ❖ Prepare action programme for computerization of all agricultural cooperatives within five years and preferably to reach 10 percent within the first year.
- ❖ National human resource development programme on business development planning to be strengthened with a training module.
- ❖ Identify country nodal agency responsible for supplying information regularly.
- ❖ Ensure data is provided to FAO-NEDAC by at least 30 June each year.

FAO-NEDAC level

- ❖ Explore possibilities to obtain support from international agencies on strengthening human resource development programmes.
- ❖ A joint data collection format developed and adopted at the 2003 Kathmandu meeting.
- ❖ FAO-NEDAC should engage a technical consultant to prepare an analytical report compiling data gathered from nodal points.
- ❖ A standard software has to be developed for integration of the data at country level for using the FAO-NEDAC format.

NEDAC collaboration with FAO

Promotion of IT at primary agricultural cooperative level, in the improvement of regional data collection based on the FAO-NEDAC format and related software development. FAO to provide financial and technical support through projects and regular programmes.

*Group 2: Nepal, Philippines, Sri Lanka, Thailand, FAO and NEDAC*

*Major problems identified*

- For Nepal: Inaccessibility of data; inadequate human resources and budget; lack of political commitment; cultural barriers.
  - For Sri Lanka: Inaccessibility of data; inadequate human resources and budget; lack of political commitment; cultural barriers.
  - For Thailand: Lack of expertise.
  - For the Philippines: Inaccessibility of data; inadequate budget; lack of political commitment; cultural barriers.
1. FAO-NEDAC member countries to provide data on the role and function of agricultural cooperatives.
  2. Improve data on agricultural cooperatives.
  3. Training of trainers on computerization for ACED.
  4. FAO-NEDAC to be consulted on e-learning and IT effort to promote ACED at regional level.
  5. Connect with advanced agricultural cooperatives to draw lessons from them. Organize exchange visits for FAO-NEDAC members.
  6. Building strategic alliances through an Asian Rural Coalition to provide IT advice in rural areas.
  7. FAO-NEDAC should coordinate among their members and relevant external agencies.
  8. Training material for specific IT applications for business planning for different categories of agricultural cooperatives. Emphasis on cooperative principles in the development of training materials and in the process of business development.

Summary of national strengths and weaknesses in computerization of agricultural cooperatives

| <i>Country</i> | <i>Strengths</i>   | <i>Weaknesses</i>   |
|----------------|--|---|
| BANGLADESH     | <ul style="list-style-type: none"> <li>• Plan to train 2 000 cooperators per year</li> <li>• Plan to deliver computer hardware to <i>upzila</i>-level cooperatives</li> <li>• Large irrigation and milk producers' cooperatives to receive IT training</li> <li>• Plan to modernize manual system of data collection and processing</li> <li>• Space to train 7 000 people annually</li> <li>• Recent programme to deliver IT training and equipment to agricultural cooperatives</li> <li>• Government policy focused on "one village one cooperative"</li> </ul>   | <ul style="list-style-type: none"> <li>• Planned programmes yet to be designed, funded and implemented</li> <li>• Cooperative Training Institute lacks computer laboratory</li> <li>• Low level of literacy in the country</li> </ul>   |
| CHINA          | <ul style="list-style-type: none"> <li>• Large number of cooperatives, with about 33 percent roughly categorized as agricultural cooperatives</li> <li>• Computers used since 1990s, mainly for data processing, statistics collection and accounting</li> <li>• Government actively introducing IT in rural areas</li> <li>•</li> </ul>   | <ul style="list-style-type: none"> <li>• No cooperative law</li> <li>• Most cooperatives at primary or intermediate stage</li> <li>• Lack of internal savings and good distribution system</li> <li>• Poor cooperation among cooperatives</li> </ul>  |
| INDIA          | <ul style="list-style-type: none"> <li>• IT one of the government's four main cooperative development policy objectives</li> <li>• Computerization began 10 years ago</li> <li>• IT training for cooperatives well established with Master's level accreditation</li> <li>• In Kerala State, 200 primary agricultural cooperatives computerized</li> <li>• Data collection formats streamlined and simplified</li> <li>• IT being introduced in phased manner, starting with viable cooperatives</li> <li>• Primary focus on data collection, later to move towards market information and networking</li> <li>• ICT connectivity</li> <li>• Wired Village Project with sugar cooperatives in Maharashtra State</li> </ul> | <ul style="list-style-type: none"> <li>• Regional imbalances in cooperative development/lack of planning</li> <li>• poor market information system</li> <li>• poor technology transfer</li> <li>• lack of national and regional networks</li> <li>• Outdated data collection system</li> <li>• Excessive government control</li> <li>• Monitoring a formality</li> <li>• Half of grassroots cooperative personnel untrained</li> <li>• Many societies lack a full-time manager</li> <li>• Business criteria 15 years out-of-date</li> <li>• Government spends too much time on data collection, not enough on expertise and policy development</li> </ul> |

*Computerization to promote agricultural cooperative enterprise development*

|                                |  |   |
|--------------------------------|--|---|
| <p>(Contd)</p> <p>MALAYSIA</p> | <ul style="list-style-type: none"> <li>• Statistics on agricultural cooperatives collected every four months</li> <li>• IT training provided through five training centres</li> <li>• Action plans for more training, internet village programmes, encouragement to farmers' organizations and agricultural cooperatives to take IT initiative</li> <li>• Government serious about introduction of IT</li> <li>• Internet cost very low</li> </ul>   | <ul style="list-style-type: none"> <li>• Limited IT expertise</li> <li>• Lack of IT staff</li> <li>• Data collection not timely</li> <li>• Data collected often subjective and therefore hard to report</li> </ul>  |
| <p>NEPAL</p>                   | <ul style="list-style-type: none"> <li>• 10<sup>th</sup> Five Year Plan for adoption of IT to disseminate agricultural information to local level</li> <li>• Agriculture radio programme for rural areas</li> <li>• Agricultural cooperatives engaged in business activities</li> </ul>  | <ul style="list-style-type: none"> <li>• Growth of non-genuine and non-viable cooperatives</li> <li>• Inadequate management, training, market intelligence, marketing, policy and networking</li> <li>• Many localities without electricity</li> <li>• Lack of funds for hardware/software and training</li> <li>• Cooperatives reluctant to submit progress reports regularly, available data not reliable</li> <li>• Data inaccessible to cooperatives</li> </ul> |
| <p>PHILIPPINES</p>             | <ul style="list-style-type: none"> <li>• There is an action plan for IT and computerization of agricultural cooperatives</li> <li>• Most wealthy cooperatives are computerized</li> <li>• Cooperatives have a relatively strong financial base</li> </ul>  | <ul style="list-style-type: none"> <li>• Initiatives not necessarily centralized</li> <li>• Government lacks funding for cooperative development</li> </ul>   |
| <p>SRI LANKA</p>               | <ul style="list-style-type: none"> <li>• Computer technology used by national cooperative council in marketing federations, coconut production, rural banks, and cooperative departments</li> <li>• Central government cooperative department provided computers to eight provincial cooperative departments</li> <li>• Plans being implemented to collect data through a computer network</li> <li>• Daily prices of agricultural commodities issued through weekly bulletins, daily newspapers and electronic media</li> <li>• Computer training offered at the National Institute of Cooperative Development at Polgolla</li> </ul> | <ul style="list-style-type: none"> <li>• Hiring of computer-trained people is expensive</li> <li>• Difficult to obtain services of computer-trained people</li> <li>• Need for external financial resources</li> <li>• Lack of software and hardware</li> </ul>   |

*Computerization to promote agricultural cooperative enterprise development*

|          |  |  |
|----------|--|--|
| THAILAND | <ul style="list-style-type: none"><li>• About 1 000 out of 4 000 agricultural cooperatives targeted for computerization</li><li>• Variety of software programmes implemented, some private, some public</li><li>• Cooperative Promotion Department (CPD) website provides information to cooperatives; plans to create network between cooperatives and CPD</li><li>• Computer systems for data collection first used 15 years ago</li><li>• Six different software programmes implemented for agricultural cooperatives</li><li>• Ten training centres throughout country</li></ul> | <ul style="list-style-type: none"><li>• Inadequate software and hardware</li><li>• Lack of skilled personnel</li><li>• Lack of funds</li></ul> |
|----------|--|--|

Documents circulated at meeting

*Country background papers*

*Bangladesh country paper*, submitted by Mustafuzur Rahman, Joint Secretary, Rural Development & Cooperatives Division, Ministry of Local Government, Rural Development and Cooperatives.

*China country paper*, submitted by Chen Xue Qi, Department of Rural Cooperative Economy, Ministry of Agriculture, People's Republic of China.

*India country paper*, submitted by K.L. Nalwaya, Executive Director, National Cooperative Union of India.

*Malaysia country paper*, submitted by Nadzli Che Long, Senior Assistant Director, Supervision and Enforcement Division, Farmers' Organization Authority (FOA), Government of Malaysia.

*Nepal country paper*, submitted by Pampha Devi Rai, Member Secretary, National Cooperative Development Board.

*Nepal country paper*, submitted by Surya Ratna Shakya, General Manager, National Cooperative Federation of Nepal.

*Philippines country paper*, submitted by Virginia A. Teodosio, Administrator, Cooperative Development Authority, Government of the Philippines.

*Sri Lanka country paper*, submitted by G.S.L. Fonseka, Commissioner of Cooperative Development and Registrar of Cooperative Societies, Department of Cooperative Development, Government of Sri Lanka.

*Thailand country paper*, submitted by Wichien Tanthamaroj, Statistic Administrative Office, Cooperative Promotion Department (CPD), Government of Thailand.

*Technical papers*

*Management information system in cooperatives and its application in network development*, K.L. Nalwaya, Executive Director, National Cooperative Union of India.

*Questionnaire for a database on agricultural cooperatives of Asian region*, K.L. Nalwaya, Executive Director, National Cooperative Union of India.

*Computerization for the agricultural cooperatives in Thailand*, Thanit Chanprateep, Cooperative Technician, Cooperative Promotion Department (CPD), Government of Thailand.

*Report on regional meeting on agricultural cooperative enterprise development (ACED)/business planning and exchange visit to selected cooperatives*, FAO Regional Office for Asia and the Pacific and NEDAC.

*E-commerce strategies for rural SMEs in APEC*. Asia Pacific Economic Cooperation.

*Publications*

*Handbook on small enterprises for hill tribe people in Thailand.* Credit Union League of Thailand, Ltd, Micro Economic Development Project, FAO Regional Office for Asia and the Pacific. 2003.

*Promoting rural women's cooperative businesses in Thailand: a training kit.* Smita Premchander, V. Prameela, Wim Polman. RAP Publication 2004/01, FAO Regional Office for Asia and the Pacific. 2004.

Questionnaire for database of agricultural cooperatives in Asia

K.L. Nalwaya, Executive Director, National Cooperative Union of India

*A Country profile*

1. National database: Please give the relevant data for your country

|  |             |      |
|--|-------------|------|
| a) Name of country                     |             |      |
|  | In millions | Year |
| b) Population                          |             |      |
| c) Households covered by coops         |             |      |
| d) Literacy rate (%)                   |             |      |
| e) Average landholding                 |             |      |
| f) Total area under agriculture        |             |      |
| g) Total area under irrigation         |             |      |
| h) Percent share of agriculture in GDP |             |      |
| i) Total area (million hec.)           |             |      |
| j) Cultivable area (%)                 |             |      |
| k) Percent villages covered by coops   |             |      |

*B Existing system of agricultural cooperatives*

2. Number, membership and operations of agricultural cooperatives:

- Please state as applicable in column (2,3,4) and reporting year.

| Particulars                  | Primary Agricultural Cooperatives | Secondary (Regional+ district) | Tertiary (State+ high) | Year |
|------------------------------|-----------------------------------|--------------------------------|------------------------|------|
| 1                            | 2                                 | 3                              | 4                      | 5    |
| a) Total number (000)        |                                   |                                |                        |      |
| b) Membership                |                                   |                                |                        |      |
| c) Male members              |                                   |                                |                        |      |
| d) Female members            |                                   |                                |                        |      |
| e) Total share capital       |                                   |                                |                        |      |
| f) Members' share of capital |                                   |                                |                        |      |
| g) Govt. participation       |                                   |                                |                        |      |
| h) Total turnover (million)  |                                   |                                |                        |      |

3. Please state the structure of agriculture cooperatives from bottom up and their functions.

4 Type of primary agricultural cooperatives operating in your country (with number, membership and operations)

| Type/area<br>Primary coops.                                   | Number<br>(actual) | Membership<br>male/female<br>(actual) | Paid up<br>capital<br>(million) | Turnover<br>(million) |
|---|--------------------|---------------------------------------|---------------------------------|-----------------------|
| a) Primary agricultural coops                                 |                    |                                       |                                 |                       |
| single purpose  |                    |                                       |                                 |                       |
| multi-purpose   |                    |                                       |                                 |                       |
| b) Processing cooperatives                                    |                    |                                       |                                 |                       |
| c) Marketing of produce                                       |                    |                                       |                                 |                       |
| d) Livestock production                                       |                    |                                       |                                 |                       |
| I. Dairy coops  |                    |                                       |                                 |                       |
| II. Other livestock (poultry,<br>etc.)                        |                    |                                       |                                 |                       |
| III. Animal, health & other<br>service coops                  |                    |                                       |                                 |                       |
| e) Fisheries  |                    |                                       |                                 |                       |
| f) Forestry/horticulture/<br>plantation (forest/tree growers) |                    |                                       |                                 |                       |
| g) Land settlement  |                    |                                       |                                 |                       |
| h) Irrigation/water users                                     |                    |                                       |                                 |                       |
| i) Crop insurance   |                    |                                       |                                 |                       |
| j) Agri. credit & banking                                     |                    |                                       |                                 |                       |
| k) Farming  |                    |                                       |                                 |                       |

5. Trading activities of agricultural cooperatives (by all level.)

Total volume of agriculture produce marketed (mention eight major commodities and their percent share in national economy):

|                              |  |
|------------------------------|--|
| I) Quantity (million tonnes) |  |
| II) Value (in millions)      |  |

b) Volume of inputs produced/distributed.

|                                 | Produced<br>(million tones) | Distributed in qty. & value<br>(million tonnes & value) |
|---------------------------------|-----------------------------|---|
| 1) Fertilizer (bio and non-bio) |                             |   |
| 2) Insecticides/pesticides      |                             |   |
| 3) Improved seeds               |                             |   |
| 4) Implements                   |                             |   |

c) Total consumer goods distributed by cooperatives  
(value in millions)

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d) Production/procurement of agriculture commodities (if possible, provide information of top eight commodities applicable to country):

| Quantity in million tonnes | Production (million) |       | Procurement (million) |       |
|----------------------------|----------------------|-------|-----------------------|-------|
|                            | Qty                  | Value | Qty                   | Value |
| I)                         |                      |       |                       |       |
| II)                        |                      |       |                       |       |
| III)                       |                      |       |                       |       |

e) Total agricultural produce processed (mention item applicable to their cooperatives; examples given below):

|                            | Production (million) |       | Capacity utilization |
|----------------------------|----------------------|-------|----------------------|
|                            | Qty                  | Value |                      |
| I) Sugar production        |                      |       |                      |
| II) Spinning/yarn prod.    |                      |       |                      |
| III) Pulses                |                      |       |                      |
| IV) Rice/paddy             |                      |       |                      |
| V) Oil produced/processed. |                      |       |                      |
| Vi) Others/fruits & veg.   |                      |       |                      |

f) Export of agriculture and allied activities by agricultural cooperatives (mention first major five to eight commodities if any):

|      | Quantity (million tonnes) | Value (million) |
|------|---------------------------|-----------------|
| I)   |                           |                 |
| II)  |                           |                 |
| III) |                           |                 |
| IV)  |                           |                 |

g) Import of agriculture and allied produce/products by agricultural cooperatives (mention at least first five major commodities if any):

|      | Quantity (million tonnes) | Value (million) |
|------|---------------------------|-----------------|
| I)   |                           |                 |
| II)  |                           |                 |
| III) |                           |                 |
| IV)  |                           |                 |

6. Agricultural credit and banking (all levels of agricultural credit cooperatives):

|   |      |
|---|------|
| I) Total credit/loans advanced  | US\$ |
| II) Credit/loans advanced for agricultural production (short & medium-term)                             |      |
| III) Credit/loans advanced for agricultural investment (for irrigation, machinery, etc, i.e. long-term) |      |
| IV) Out of column (a) loans advanced to small farmers   |      |
| V) Loans advanced for other purposes  |      |

Volume of saving & deposits by: (Value in million)

|                                    |  |
|------------------------------------|--|
| i) Primary credit/banking coops    |  |
| ii) Secondary credit/banking coops |  |
| iii) Tertiary credit/banking coops |  |

*Computerization to promote agricultural cooperative enterprise development*

*Average rate of recovery (%)*

| Years (past three yrs.) | (Primary) | (Secondary) | (Tertiary) |
|-------------------------|-----------|-------------|------------|
| i)                      |           |             |            |
| ii)                     |           |             |            |
| iii)                    |           |             |            |

*7. Economic profile of agricultural cooperatives (all levels)*

*(Contributions of cooperatives to national economy)*

a) Share of agricultural cooperatives in production/distribution of:

|                          | (Production %) | (Distribution %) |
|--------------------------|----------------|------------------|
| i) Total inputs          |                |                  |
| ii) Fertilizer           |                |                  |
| iii) Insecticides        |                |                  |
| iv) Pesticides           |                |                  |
| v) Seeds                 |                |                  |
| vi) Fruits & vegetables  |                |                  |
| vii) Credit disbursement |                |                  |

b) Share of cooperatives in agricultural produce marketed/procured (%) (mention first five major commodities)

|      | (Marketed) | (Procured) |
|------|------------|------------|
| i)   |            |            |
| ii)  |            |            |
| iii) |            |            |
| iv)  |            |            |
| v)   |            |            |
| vi)  |            |            |

c) Share of fish catch and marketing by cooperatives (%)

|                          |  |  |
|--------------------------|--|--|
| i) Fish production/catch |  |  |
| ii) Marketed             |  |  |
|                          |  |  |

*8. National level cooperatives (concerning agricultural development such as fertiliser industry, agricultural marketing, etc.)*

|  |                    |        |
|--|--------------------|--------|
| Name(s) and address with e-mail & website if any |                    |        |
| Type of business/manufacture/trade               | (value in million) | (year) |
| Share capital/equity                             |                    |        |
| Govt. participation                              |                    |        |
| Total annual turnover                            |                    |        |
| Annual profit                                    |                    |        |
| Share of export in the total business (if any)   |                    |        |
| % share in Asian countries (by item)             |                    |        |

*Business planning statistics to collect*

*Enterprise development statistics to collect*