CONSULTATIVE SEMINAR

“FORMULATION OF THE INFORMATION STRATEGY FOR
THE AGRICULTURE SECTOR OF UKRAINE”

Organized by
the Food and Agriculture Organization of the United Nations,
the Ministry of Agricultural Policy, Ukraine
and
the National Agricultural University, Ukraine

30 May to 2 June 2006
Kyiv, Ukraine
# TABLE OF CONTENTS

**EXECUTIVE SUMMARY** .................................................................................................................. 3  
**ACKNOWLEDGEMENTS** .................................................................................................................. 4  
**ABBREVIATIONS AND ACRONYMS** ............................................................................................. 5  
**1. INTRODUCTION AND BACKGROUND** ..................................................................................... 5  
**2. SEMINAR PARTICIPANTS** .............................................................................................................. 6  
**3. PRESENTATIONS** ............................................................................................................................. 6  
3.1 Opening of the Seminar and Presentations on Seminar Inputs ............................................................. 6  
3.2 Stakeholders Presentations and Discussion .......................................................................................... 7  
3.3 SWOT Analysis ................................................................................................................................. 10  
3.4 Operational Plan for Strategy Implementation .................................................................................... 12  
3.5 Recommendations on Strategy Improvement .................................................................................... 12  
3.6 Key Elements of the Follow-up Project ............................................................................................. 12  
**ANNEX 1** ........................................................................................................................................... 14  
**ANNEX 2** ........................................................................................................................................... 17  
**ANNEX 3** ........................................................................................................................................... 20  
**ANNEX 4** ........................................................................................................................................... 24  
**ANNEX 5** ........................................................................................................................................... 26  
**ANNEX 6** ........................................................................................................................................... 27  
**ANNEX 7** ........................................................................................................................................... 30  
**ANNEX 8** ........................................................................................................................................... 34  
**ANNEX 9** ........................................................................................................................................... 36  
**ANNEX 10** ......................................................................................................................................... 37  
**ANNEX 11** ......................................................................................................................................... 39  
**ANNEX 12** ......................................................................................................................................... 40  
**ANNEX 13** ......................................................................................................................................... 44  
**ANNEX 14** ......................................................................................................................................... 45  
**ANNEX 16** ......................................................................................................................................... 48  
**ANNEX 17** ......................................................................................................................................... 49  
**ANNEX 18** ......................................................................................................................................... 50  
**ANNEX 19** ......................................................................................................................................... 51  
**ANNEX 20** ......................................................................................................................................... 52  
**ANNEX 21** ......................................................................................................................................... 53  
**ANNEX 22** ......................................................................................................................................... 55
EXECUTIVE SUMMARY

A consultative seminar on “Formulation of the Information Strategy for the Agriculture Sector of Ukraine” was jointly organized by the Food and Agriculture Organization of the United Nations (FAO), the Ministry of Agrarian Policy of Ukraine (MAPU) and the National Agricultural University of Ukraine (NAUU) from 30 May to 2 June 2006 in Kyiv, Ukraine. The seminar was conducted within the framework of the Technical Cooperation Project “Strategy formulation and capacity building in support of an agricultural information system” that is supported by FAO.

The purpose of the seminar was to bring together major stakeholders of the Ukrainian agricultural sector, including state authorities and institutions, and non-governmental and private organizations for an information exchange, and an assessment of information and communication (IC) needs of participant organizations. The seminar focused on the formulation of the strategy and the elaboration of a work plan for its implementation, as well as for the identification of key elements for a follow-up project. A needs assessment study with recommendations in English and Ukrainian, and a draft information strategy were prepared as input documents for the seminar.

Altogether 56 participants from local organizations, including agriculture-related research, educational, non-governmental and private organizations, and media took part in the seminar. Representatives of FAO, the co-facilitator, and the chairmen that were elected from the participating organizations moderated the seminar. Eight major stakeholders provided presentations on their IC needs and technologies/management.

Ms Karin Nichterlein, Research and Technology Officer (FAO REUS), Mr Riccardo del Castello, Communication Officer (FAO SDRE), Mr Michal Demes, Information Management Specialist (FAO SEUR) and Mr Oleksandr Artiushyn, seminar co-facilitator, conducted the analysis of IC strengths, weaknesses, opportunities and threats (SWOT) of represented organizations, consolidated its results and facilitated relevant activities at the consultative seminar.

The analysis identified that participating organizations have some information strengths related to the availability of qualified specialists, certain information resources and databases, information technologies and communicational systems. Identified IC weaknesses include, but not limited to insufficient resources and logistics, inadequate information marketing, etc.

Identified threats for IC systems of the major stakeholders include lack of rural development characterized by computer illiteracy of agricultural producers, underdevelopment of IT in rural areas and lack of information on the rural sector; institutional risks and market factors. On the other hand, there are opportunities for the improvement of IT that are related to IT development, improvement of cooperation, provision of relevant information to users and some other factors.

One important issue that was identified in the IC assessment during the workshop was the lack sufficient data from rural stakeholders. These people or organizations are the direct link to agricultural producers and are in turn the intermediaries between the information producers and information consumers, in both directions. Ultimately they can assure that the IC system is servicing those who are in most need for up-to-date and relevant information. The workshop noted this and recommended appropriate follow-up in the future development of the IC system.

The Information Strategy for the Agriculture Sector of Ukraine was discussed, its weak points were identified and recommendations and proposals for its amendment were formulated. The work plan for the information strategy implementation was elaborated and key elements of the follow-up project were identified.
ACKNOWLEDGEMENTS

The contribution of FAO staff and consultants to the organization and successful holding of the consultative seminar is greatly appreciated. The excellent organizational support provided by the National Agricultural University of Ukraine is also greatly appreciated.
ABBREVIATIONS AND ACRONYMS

AFLU Association of Farmers and Landowners of Ukraine  
CATU Crimean Agro-Technological University  
CSAL Central Scientific Agricultural Library of UAAS  
DAC Department of Agrarian Consulting of NAUU  
DPG Department of Plant Growing of NAUU  
FAO Food and Agriculture Organization of the United Nations  
GIC NASU Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine  
IAE Institute of Agrarian Economy of UAAS  
ICM Informational and communicational management  
ICT Informational and communicational technologies  
IPG Institute of Plant Growing of UAAS  
JP Journal "Propozytsiaya"  
LES Lviv Extension Service  
MAPU Ministry of Agrarian Policy of Ukraine  
NAASU National Association of Advisory Services of Ukraine  
NAKIS National Agricultural Information and Knowledge System  
NAUU National Agricultural University of Ukraine  
SESRU State Enterprise State Registers of Ukraine  
SSCU State Statistics Committee of Ukraine  
UAAS Ukrainian Academy of Agrarian Sciences  
UAC Ukrainian Agrarian Confederation  
UGA Ukrainian Grain Association  
UKRINTEI Ukrainian Institute of Scientific, Technical and Economic Information  
UNDP United Nations Development Program  
USRIU "Ukragropromproduktyvnist"

1. INTRODUCTION AND BACKGROUND

The Food and Agriculture Organization of the United Nations, in collaboration with the National Agricultural University, Ukraine and the Ministry of Agricultural Policy, Ukraine, jointly organized the consultative seminar on "Formulation of the Information Strategy for the Agriculture Sector of Ukraine". The seminar was held from 30 May to 2 June 2006 in Kyiv, Ukraine. The seminar was conducted within the framework of the Technical Cooperation Project “Strategy formulation and capacity building in support of an agricultural information system”, which commenced in June 2005 and has a completion date of November 2006. The project is aimed at assisting the Ministry of Agricultural Policy, Ukraine in establishing a relevant and effective information system in support of agricultural development and food security policies via identifying and developing the necessary institutional arrangements and procedures, and building capacities to improve access to, and the management of, information by the major stakeholders in the agricultural sector of Ukraine.

A needs assessment study with recommendations in English and Ukrainian and the draft information strategy for the agricultural sector in English and Ukrainian were the inputs for the seminar. The needs assessment study previously conducted lacked input on the informational needs of the end-users of agriculture-related information and on the availability of informational resources owned by major stakeholders that may be employed when the informational strategy is implemented, as well as information on ICT strategies developed by stakeholders. The draft
strategy was developed with the participation of some major stakeholders, but there was a need to improve it on the basis of a SWOT analysis of informational and communicational systems of major stakeholders and to get a common agreement of the major stakeholders to it.

The seminar was also needed in order to bring together the major stakeholders of the Ukrainian agricultural sector, including state authorities and institutions, and non-governmental and private organizations for information exchange and in order to secure their expertise. The objectives were to promote the awareness of participatory approaches in problem identification and planning; to formulate, discuss and improve together with the key stakeholders the draft informational strategy for the agricultural sector of Ukraine and the operational plan for its implementation; to conduct an analysis of the strengths, weaknesses, opportunities and threats of the informational and communicational systems of the major stakeholders and to identify the key elements for the follow-up project.

2. SEMINAR PARTICIPANTS

The consultative seminar was attended by 56 representatives from various organizations, including those involved in agricultural research and education, plus non-governmental and private organizations, and the media (see Annex 1 – List of Seminar Participants). The seminar activities were facilitated by Ms Karin Nichterlein, Research and Technology Officer, FAO, and Mr Riccardo Del Castello, Communication Officer, FAO, and co-facilitated by Michal Demes, Information Management Specialist, FAO, and Mr Oleksandr Artiushyn. FAO staff and the chairmen elected from the participating organizations (Mr Melnychuk, Mr Shvydenko, Ms Moiseyeva, Mr Tymchuk, Mr Kropyvko and Ms Kalna-Dubiniuk) moderated the seminar. Seminar inputs were provided by the consultants Mr Arman Manukyan and Ms Tatiana Deribon. 8 major stakeholders gave presentations on their informational and communicational needs and technologies/management.

3. PRESENTATIONS

3.1 Opening of the Seminar and Presentations on Seminar Inputs

Day 1, 30 May 2006

In line with the Agenda of the Consultative Seminar (see Annex 2 – Agenda of the Consultative Seminar), the seminar was opened by Mr Dmytro O. Melnychuk, National Project Coordinator and Rector of NAUU, who welcomed the participants and made a presentation on the activities in the sphere of ICT/ICM that are currently conducted at NAUU and that could be integrated into the National Agricultural Information and Knowledge System (NAKIS), the creation of which was envisaged within the draft informational strategy. A draft budget for the creation and implementation of NAKIS was also presented (see Annex 3).

In his opening address, Mr Ivan Demchak, First Deputy Minister of Agricultural Policy, Ukraine, drew the participants’ attention to the current status and perspectives for the development of informational support for the agricultural sector of Ukraine. He mentioned that there were a number of internal and external factors that necessitated the formulation of the strategy for the development of an information system (see Annex 4).

The First Vice-President of the Ukrainian Academy of Agrarian Sciences (UAAS) and President of the Association of IT Experts in the Agrarian Sector, Mr Victor Sytnyk welcomed the participants and informed the meeting about the scientific approaches that are currently used for the development of informational support and the work that has already been undertaken in this
direction by the institutes that are components of the Academy, namely at the Institute of Agrarian Economy (IAE). It was mentioned that the current policies on the development of information support should be improved.

Ms Karin Nichterlein in her opening address welcomed the participants on behalf of the Food and Agriculture Organization of the United Nations. It was mentioned that Ukraine had a tremendous potential for generating and disseminating relevant information to the agricultural sector, however linkages among the various stakeholders had to be strengthened and synergies established in order to achieve a greater impact on agricultural development (see Annex 5).

Mr Andriy Spodin, Head of the Information Office, Ministry of Agrarian Policy, Ukraine, and Mr Mykhaylo Shvydenko, Head, Department of Information Systems in Management, National Agricultural University, Ukraine, made a joint presentation on the Technical Cooperation Project UKR 3005 “Strategy formulation and capacity building in support of an agricultural information system”, within the framework of which the consultative seminar was conducted. They informed the meeting about the results that had already been achieved and also presented information on the composition and activities of the Steering Committee and the working group for informational strategy formulation, etc. It was concluded that the project was timely and crucial, national experts were very interested in it, and its realization had been conducted in accordance with the plans, and it had resulted in the expected outcomes (see Annex 6).

The seminar agenda was then presented and the rapporteurs were selected. Mr Volodymyr Kharvenko was selected as seminar rapporteur.

Ms Tatiana Deribon, national consultant in information and communication, presented the needs assessment study, highlighting its methodology, findings and recommendations (see Annex 7).

Mr Maykhailo Shvydenko and Mr Arman Manukyan, information management specialists, made presentations on the draft informational strategy for the agriculture sector of Ukraine. Mr Shvydenko reported on the objectives, principles, expected results and the mechanisms of its implementation (see Annex 8). Mr Manukyan drew the attention of the consultative seminar participants to some recommendations made by FAO staff on the informational strategy development (see Annex 9).

3.2 Stakeholders Presentations and Discussion

Mr Shvydenko was selected to chair the afternoon session of the seminar.

O.M. Prokopenko, Head, Department of Agricultural and Environmental Statistics, State Statistics Committee, Ukraine

Mr Oleg Prokopenko reported on the activities of, and ICT/ICM at the State Statistics Committee, Ukraine (SSCU). He mentioned that state statistical data was collected at local, oblast and national levels. 27 major agricultural indices were calculated, including 18 that were calculated annually, 2 that were calculated quarterly and 7 that were calculated monthly (including the production of agricultural products, prices, sold volumes, etc).

Mr Prokopenko also stated that it was important not only to collect the information, but also to deliver this information to users in the amounts that are needed, and it should be taken into consideration that different groups of information users (state authorities, NGOs, international organizations and private companies) need different information.

It was mentioned that there was an urgent need for a study on the informational needs of the end users of agricultural information (including the content and format of the information).
Mr Prokopenko noted the fact that agricultural producers were not equipped with modern informational technologies and this limits their access to information. The most efficient way to deliver information should be found.

The State Statistics Committee of Ukraine generates different publications, statistic data collections, brochures, and has an Internet site (http://www.ukrstat.gov.ua).

V.I. Lapa, Head of the Analytic Department, Ukrainian Agrarian Confederation

Mr Volodymyr Lapa informed the participants about the structure of the Ukrainian Agrarian Confederation (UAC). The UAC was established in December 2002 and unites about 30 agriculture-focused associations, organizations and private companies, including the Association of Farmers and Landowners of Ukraine (AFLU), the Ukrainian Grain Association (UGA), the Union of Milk Producers of Ukraine, etc. Regional representative offices are being opened in all oblasts of Ukraine.

Mr Lapa mentioned that not only the amount, but also the quality of agricultural information should be considered, as most of the information currently generated and stored is of low quality.

He also mentioned that access to some information that may be of interest to different groups of stakeholders is presently limited (e.g. analytical materials that are prepared by state authorities) and suggested making provisions for free access to such information. Mr Lapa also stated that the informational resources and experience of other donor projects, as well as that of private informational companies should be used.

O.M. Shpychak, Director, Scientific and Research Institute for Economy, Business Institute of NAUU

Mr Oleksandr Shpychak suggested conducting an inventory of currently available informational resources.

A lack of financing was mentioned as a major problem. It was stated that some donor-funded initiatives turned out to be unsustainable. Thus, mechanisms to provide these initiatives with financial sustainability should be elaborated. The market principle “to identify need, and to satisfy it” could also be used.

Mr Shpychak advised that there was a lack of economic information, in other words, the information on prime cost and price structures of agricultural products.

I.P. Khodakivskyy, Director, State Enterprise "State Registers of Ukraine"

Mr Igor Khodakivskyy reported on the structure and activities of the State Enterprise "State Registers of Ukraine" (SESRU) which he directs. It was stated that this state enterprise produces and distributes all the documents necessary for the storage of agricultural products, and for the registration and storage procedures for grain silos (see Annex 10).

Mr. Khodakivskyy informed that an electronic system to verify the issuance of storage documents would begin functioning on 1 July 2006 in order to make grain and oilseed markets more transparent. The private sector and state authorities would then have easily accessible information through an Internet site (www.dru.com.ua) on the amounts and quality of stored agricultural products.

V. Vitvitski, Director, Ukrainian Scientific and Research Institute "Ukragropromproduktyvnist", Ministry of Agrarian Policy, Ukraine

Mr Volodymyr Vitvitski stated that information and informational needs should be classified.
According to Mr Vitvitski, information could be divided into three groups: initial information (that from scientific institutions), derivative information (that from private companies) and regulation/management information. In addition, the establishment of relevant information sub-systems was also recommended.

The need to create or improve organizational-motivational mechanisms was mentioned as a prerequisite for the development of an information system.

I.Y. Pankiv, Director, Lviv Extension Service

Mr Ivan Pankiv reported that the Lviv Extension Service (LES) has 8 local representative offices and employs 15 advisors and 37 experts-advisors. The budget of the Lviv Extension Service is estimated at UAH 120 000. (see Annex 11).

Mr Pankiv said that most farmers were not satisfied with the current state of informational support for the agricultural sector in Ukraine.

According to Mr Pankiv, information is generated by the state authorities, educational and research organizations, NGOs, specialized associations and the private sector, but there are no effective mechanisms of interaction between them and it is complicated to deliver information, for example, from research institutes to farmer. He suggested that support could be provided for extension services.

Mr Pankiv mentioned that efficient linkages among major stakeholders should be built.

V.M. Tymchuk, Deputy Director, Institute of Plant Growing, UAAS

Mr Tymchuk mentioned the issue of analytic processing of agriculture-related information. He mentioned that it was essential to conduct constant and systematic monitoring of information. He also referred to the necessity to develop marketing-information strategy.

Yuriy Bakun, Executive Director, National Association of Advisory Services, Ukraine

Mr Bakun reported on the activities of the advisory (extension) services in the Ukraine. He stated that currently extension services are provided on a commercial basis. He also mentioned that the absence of a state programme on extension development was a problem. (see Annex 12)

Discussions

S.C. Klishchenko, Department of Plant Growing, NAUU

Suggested adding to the strategy a methodology which would permit prompt notification of the most problematic issues of agricultural production.

Tatiana Kalna-Dubiniuk, Head of the Department of Agrarian Consulting, NAUU

Suggested developing virtual extension services based on modern informational technologies. She also suggested using the "star" approach (uniting MAPU, UAAS, educational institutes, associations and the private sector) with extension inside the star:
Some seminar participants criticized the idea and pointed out that some groups of stakeholders were not included in the star and extension should not be considered as the only consolidator.

Mr V. Derlemenko, Deputy Director of the Central Scientific Agricultural Library, UAAS
He remarked that agricultural libraries have a considerable amount of information (for example the book fund) and that this information should be used and he suggested making a provision for this in the strategy. He was notified that information on libraries had already been included in the strategy.

Mr Andriy Spodin remarked that the informational strategy for the agricultural sector of Ukraine should not be transformed from a result to a process. He also mentioned that the stakeholders should be divided into two groups: generators and users of information. He also stated that there should be a definition of which information would be accessible free of charge.

Day 2, 31 May, 2006

Mr V.M. Tymchuk, Deputy Director, Institute of Plant Growing, UAAS, was selected to chair the first half of seminar day 2. A review of the results of the 1st seminar day was presented by the Rapporteur Volodymyr Kharchenko, who briefly reminded seminar participants about the focus of the presentations and discussions.

Seminar participants were introduced to each other in a friendly atmosphere generated by the FAO officers. Participants were divided into two groups. Following a short information exchange, a participant from one group introduced a participant from the other group, and vice versa, which created an excellent collaborative environment for the subsequent seminar activities.

Ms Karin Nichterlein, FAO (REUS), introduced participatory approaches through a presentation entitled "Challenges and Trends in Technology Development in Agriculture", which focused on the key challenges generated by changes in technology demand, tools and processes, as well as the roles of the public and private sectors; institutional responses and decentralization issues. The presentation also demonstrated what participatory approaches emphasize and how they can be applied (see Annex 13).

Mr Riccardo Del Castello Communication Officer, FAO (SDRE) continued the introduction of participatory approaches through a presentation entitled "Communication for Development" which focused on definitions of participation and communication, models of communication for development, participatory methods, etc (see Annex 14).

3.3 SWOT Analysis

Ms Karin Nichterlein presented the methodology for SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), as a flexible tool in strategic planning to stimulate new ideas and to enhance interaction between participants. The participants were divided into two groups for the group work on identifying SWOT issues. A description of the SWOT methodology was distributed to all participants.

SWOT Analysis - internal analysis of strengths and weaknesses (SW)
Ms Karin Nichterlein emphasized the need to analyse the internal situation of organizations and institutions by identifying strengths and weaknesses in order to develop strategies for their improvement. Participants were requested to reflect on the question: What could their organization do well or badly to contribute to the development of an informational system for the agricultural sector of Ukraine via communication and information management. The strengths of one organization could cover the weaknesses of another, and collaboration between the various organizations could help to make better use of their potential strengths. If gaps remain and are
identified, they could be addressed by the information strategy, and specific programmes and projects could be implemented to remedy the situation.

In order to identify their strengths, organizations should answer the questions: What are our strong points? What are our strengths? In order to identify weaknesses, it is important to apply a realistic and self-critical approach. Participants should evaluate their organizations from an external point of view, considering the claims of clients: are other organizations better and what could be improved?

FAO staff and the co-facilitator expedited the following teamwork and plenary sessions.

**Teamwork – Identification and categorization of Strengths with the support of the FAO facilitators and co-facilitator**
All participants received two coloured cards for strengths and wrote down what they considered to be the strengths of ICTs in their organization (one idea per card). With the assistance of the facilitators and co-facilitator, the team members categorized the cards.

**Plenary Session – Presentation of teamwork results and their consolidation (Strengths)**
The results of the teamwork were presented in a plenary session, and a consolidated list of strengths was prepared with the support of the facilitators and co-facilitator (see Annex 15).

**Teamwork – Identification and categorization of Weaknesses with the support of the FAO facilitators and co-facilitator**
All participants received two coloured cards for weaknesses and wrote down what they considered to be the weaknesses of ICTs in their organization (one idea per card). With the assistance of the facilitators and co-facilitator, the team members categorized the cards (see Annex 16).

For the afternoon session, Ms Marina Moiseyeva, Editor of the Journal "Propozytsiaya", was selected to chair the seminar.

**Plenary Session – Presentation of teamwork results and their consolidation (Weaknesses)**
The results of the teamwork were presented in a plenary session, and a consolidated list of weaknesses was prepared with the support of the facilitators and co-facilitator.

Mr Riccardo Del Castello emphasized the need to analyse the external environment of the organizations and institutions by identifying opportunities and threats.

**Teamwork – Identification and Categorization of Opportunities**
Participants received two coloured cards for opportunities and wrote down what they believed were the opportunities for ICTs in their organization (one idea per card). Together with the team facilitator and co-facilitator, the cards were categorized.

**Plenary Session – Presentation of teamwork results and their consolidation (Opportunities)**
The results of the teamwork were presented in a plenary session, and a consolidated list of opportunities was prepared with the support of the facilitators and co-facilitator (see Annex 17).

**Teamwork – Identification and Categorization of Threats**
As described above for the Weaknesses, participants received two coloured cards for threats and wrote down what they thought were the threats for ICTs in their organization (one idea per card). Together with the team facilitator and co-facilitator, the cards were categorized.
Plenary Session – Presentation of teamwork results and their consolidation (Threats)
The results of the teamwork were presented in a plenary session, and a consolidated list of threats was prepared with the support of the facilitators and co-facilitator (see Annex 18).

**Day 3, 1 June 2006**

Mr M.F. Kropyvko, Head of Department, Institute of Agrarian Economy, UAAS, was selected to chair the seminar.

Mr Oleksandr Artiushyn, co-facilitator, made a brief presentation on the results of Seminar Day 2, emphasizing the results of the SWOT analysis that had been conducted. The SWOT analysis continued with the following activities.

**Plenary Meeting – Priority setting by categories**
The workshop participants considered the consolidated and prioritized results of the SWOT analysis (see Annex 19) and discussed the priorities for improvement of the information and communication system in the agricultural sector through voting.

The SWOT analysis results were extensively discussed and compared with the draft strategy, with the support of the facilitators and co-facilitator.

Ms Kalna-Dubiniuk was selected to chair the afternoon session of the seminar.

**3.4 Operational Plan for Strategy Implementation**

With the support of Mr A. Manukyan, Mr M.Z. Shvydenko, Ms T. Deribon, FAO staff and the co-facilitator, key elements of the operating plan for the strategy implementation were discussed and an initial draft of the work plan was formulated. Mr Shvydenko presented the draft work plan to the plenary (see Annex 20).

**3.5 Recommendations on Strategy Improvement**

Participants were given 15 minutes to re-read the draft informational strategy. Subsequently, the draft strategy was read and analysed by seminar participants, chapter-by-chapter, with the support of Mr A. Manukyan, Mr M.Z. Shvydenko, FAO staff and the co-facilitator.

Seminar participants were requested to provide their comments and recommendations on the draft strategy. On the basis of these activities, a list of recommendations from seminar participants regarding the improvement of the informational strategy was formulated (see Annex 21).

In line with the seminar agenda, the project formulation team was selected from representatives of the major stakeholders.

Mr M.Z. Shvydenko and Ms Karin Nichterlein closed the session, thanking seminar participants and organizers for their fruitful work during the course of the seminar.

**Day 4, 2 June 2006**

**3.6 Key Elements of the Follow-up Project**

The project formulation team, consisting of representatives from the major stakeholders, met to discuss, through a brainstorming session, the key elements to be addressed by the follow-up project.
On the basis of this discussion, a jointly agreed seminar information note, including seminar recommendations on actions for strategy implementation and a proposed follow-up course of action on ICT/ICM development in the agricultural sector of Ukraine, was formulated and presented to the officials. The document also stated that the seminar agreed that the implementation of the strategy is essential for the development of the agricultural sector of Ukraine and requested the Government of Ukraine to support its implementation (see Annex 22).
### ANNEX 1

**LIST OF SEMINAR PARTICIPANTS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position, organization and contacts</th>
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<tbody>
<tr>
<td>1. Dmytro O. Melnychuk</td>
<td>Rector, National Agricultural University of Ukraine (NAUU), National Project Coordinator</td>
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<tr>
<td>2. Ivan M. Demchak</td>
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<td>3. Acad. Victor P. Sytnyk</td>
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<td>Information Management Specialist SEUR, FAO</td>
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<td>7. Arman Manukyan</td>
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AGENDA
OF THE CONSULTATIVE SEMINAR
“Formulation of Information Strategy for the Agriculture Sector of Ukraine”
May 30-June 2, 2006

Venue: Ukraine, Kyiv, 15 Heroiv Oborony Str., National Agricultural University of Ukraine

Preparation day, May 29, 2006

10.00-17.00 Meeting of National Project Coordinator, national consultants, and FAO HQ representatives to discuss organization of workshop, working groups with lunch break

Seminar day 1, May 30, 2006

09.30-10.30 Registration of seminar participants
10.30-11.00 Opening session
D.O. Melnychuk, National Project Coordinator, Rector of NAUU
I.M. Demchak, the First Deputy Minister of Agrarian Policy of Ukraine
Acad. V.P. Sytnyk, the First Vice-President of UAAS, President of Association of IT Experts in Agrarian Sector
K. Nichterlein, Research and Technology Officer, FAO

Presentation of the project “Strategy formulation and capacity building in support of an agricultural information system” (TCP/UKR/3001) by
A.I. Spodin, Head of the Information Office, MAPU, and
M.Z. Shvydenko, Head, the Department of Information Systems in Management, National Agricultural University of Ukraine

11.00-11.15 Coffee break

11.15 – 13.15 Plenary session
Chairperson: Shvydenko M.Z.
Presentation of agenda and selection of rapporteurs
Presentation of the needs assessment study: methodology of preparation, major findings and recommendations by T.V. Deribon, National consultant in information and communication
Presentation of the draft informational strategy for agricultural sector of Ukraine: methodology of preparation, main points, and implementation of strategy by
M.Z. Shvydenko, Head, the Department of Information Systems in Management, National Agricultural University of Ukraine and A. Manukyan, Information management specialist

14.00-15.00 Lunch

15.00-16.10 Presentations of representatives of major organizations based on outline:
– O.M. Prokopenko, Head, Department of Agricultural and Environmental Statistics, State Statistics Committee
– V.I. Lapa, Head of Analytic Department, Ukrainian Agrarian Confederation
– O.M. Shpychak, Director, Scientific and Research Institute of Economy, Business Institute of NAUU
− I.P. Hodakivskiy, Director, State Enterprise "State Registers of Ukraine" Vitvitskiy V.V., Director, Ukrainian Scientific and Research Institute "Ukragropromproduktyvnist", Ministry of Agrarian Policy of Ukraine
− I.Y. Pankiv, Director, Lviv Extension Service
− V.M. Tymchuk, Deputy Director, Institute of Plant Growing of UAAS
− Yu.O. Bakun, Executive Director, National Association of Advisory Services of Ukraine

16.10-16.20 Coffee break
16.20-17.00 Discussion of presentations
17.00 Closure of day 1

Seminar day 2. May 31, 2006

Chairperson: V.M. Tymchuk, Deputy Director, Institute of Plant Growing of UAAS

09.30-10.00 – Review and discussion of the results of the 1st seminar day by the rapporteurs
10.00-11.00 Introduction into participatory approaches by FAO staff
   K. Nichterlein, Research and Technology Officer, FAO (REUS),
   R. Del Castello, Communication Officer, FAO (SDRE)
11.00-11.10 Introduction into SWOT analysis by FAO staff and co-facilitator
   Splitting in working groups
11.10-12.00 Internal Analyses – introduction by K. Nichterlein
   Teamwork - Identification and clustering of the Strengths
   FAO staff and co-facilitator(s)

12.00-12.15 Coffee break

12.15-13.15 Plenary session
   Presentation of group work and its consolidation (for the Strength)
   Group representatives, FAO staff and co-facilitator(s)
   Teamwork - Identification and clustering of the Weaknesses
   FAO staff and co-facilitator(s)

13.15-14.15 Lunch

Chairperson: Marina Moiseyeva, Editor, Journal "Propozytsiaya"

14.15-15.40 Plenary: Presentation of group work and its consolidation (for the Weaknesses)
   External Analyses – introduction by R. Del Castello
   Group work - Identification and clustering of the Opportunities
   FAO staff and co-facilitator(s)

15.40-16.00 Coffee break

16.00-17.30 Plenary: Presentation of group work and its consolidation (for the Opportunities)
   Group representatives, FAO staff and co-facilitator(s)
   Teamwork - Identification and clustering of the Threats
   FAO staff and co-facilitator(s)
   Plenary: Presentation of group work and its consolidation (for the Threats)
   FAO staff and co-facilitator(s)

17.30 Closure of seminar day 2
Seminar day 3. June 1, 2006.

Chairperson: M.F. Kropyvko, Head of Department, Institute of Agrarian Economy of UAAS

09.30-10.00 Review and discussion of the results of the 2nd seminar day by co-facilitator
10.00-11.30 Plenary: Consolidation and discussions of SWOT analysis results, identifying and ranking of major issues to be improved in ICT/ICM in the agricultural sector of Ukraine (by voting)
   K. Nichterlein, R. Del Castello, M. Demes and co-facilitator

11.30-11.45 Coffee break

11.45-13.15 Continuation of the consolidation/discussions. Comparing of the results of SWOT analysis with draft strategy
   K. Nichterlein, R. Del Castello, M. Demes and co-facilitator

13.15-14.15 Lunch

Chairperson: Ms. Kalna-Dubiniuk, Head of the Department of Agricultural Consulting of NAUU

14.15-14.45 Development of a draft work plan
   With support of A. Manukyan, M.Z. Shvydenko, T. Deribon, FAO staff and co-facilitator

14.45-15.00 Coffee break

15.00-15.15 Teamwork: Reading the draft information strategy by seminar participants.
15.15-16.30 Plenary: Discussion of the strategy (chapter by chapter), formulation of seminar recommendations on strategy improvement.
16.30-16.50 Presentation and agreement on the work plan to the plenary
   Selection of project formulation team from representatives of major stakeholders
16.50-17.00 Summarizing of consultative seminar results and closing remarks
   M.Z. Shvydenko, Head, the Department of Information Systems in Management, National Agricultural University of Ukraine
   Representatives of FAO
17.00 Closure of seminar day 3

June 2, 2006

10.00-17.00 Formulation of key elements to be addressed by the follow-up project
   A.I. Spodin, Head of the Informational Office, Ministry of Agrarian Policy of Ukraine
   M.Z. Shvydenko, Head, the Department of Information Systems in Management, National Agricultural University of Ukraine
   T.V. Deribon, National consultant in information and communication and members of formulation team selected by seminar participants on June 1, 2006
   K. Nichterlein, Research and Technology Officer, REUS, FAO
   R. Del Castello, Communication Officer, SDRE, FAO
   M. Demes, Information Management Officer, SEUR, FAO
   A. Manukyan, Information management specialist
   O. Artiushyn, co-facilitator
ANNEX 3

OPENING ADDRESS

Prof. D.O. Melnychuk
National Project Coordinator, Rector of National Agricultural University of Ukraine

World experience shows that introduction of modern information technologies is absolutely needed condition of scientific and technical progress of society. It’s hard to speak about successful agricultural development of Ukraine without modern informational supply. It should be mentioned that existing state of informational supply of agricultural sector doesn’t correspond to modern needs of economics subjects, state establishments, science, education and rural population in spite of the fact that implementation of informational technologies is done permanently.

That’s why the task of elaboration of single strategy of informational supply of agro-industrial production and rural population of Ukraine appears, which will allow on qualitively new approaches to provide the breakthrough to the world standards. This strategy should be based on the National system of agricultural data and knowledge.

National system of agricultural data and knowledge (1-st slide) aims formation of informational and technological basis of informational support of tasks of political, social and economic development of agricultural field and whole country at all and it should be based on the combination of approaches of information centralization and distribution, self-development, self-payback and self-financing, and also state support. National system of agricultural data and knowledge is formed on the basis of new computer, informational, geoinformational and telecommunicational technologies considering integration into world information space.

Ukraine has pre-conditions for formation of National system of agricultural data and knowledge. These are the presence of directed by Ministry of Agricultural Policy vertical of information flows, which comprises all the levels including districts, presence of wide network of educational and research establishments of UAAS, which comprises all the agro-industrial zones of Ukraine and produces highly effective scientific projects to implement and traditionally high level of new informational technologies implementation in higher educational establishments.

One of the first places in implementation of new information technologies into educational and scientific activities is occupied by National Agricultural University. Received results – powerful agricultural data bases, computer system of exact husbandry, geoinformational systems and technologies, unique Internet-portal “Agricultural Sector of Ukraine” (www.agroua.net), information and analytic systems, modern systems of distance learning etc. – are quite great impact into development of agro-industrial system of Ukraine and they show the need of strengthening of coordinating role of NAUU in realization of the strategy of agro-industrial production and Ukrainian rural population informational supply.

The last action of the University on the way of implementing of modern informational technologies, which allows integrating into world information network, was the organization of joint department of informational technologies, formed together with DePaul University (Chicago, USA), and also Joint European Project according to the TEMPUS program “Distance Learning in Agricultural sphere (D-Agro)”.

In agricultural sector of Ukraine the developed information flows are functioning, but because of different reasons, including as the result of departmental barriers they are used non-effectively. Without coordination of works the doubling takes place in the formation of some information products. Also a lot of users can’t receive the needed information in time. It is also needed to strengthen information and analytical support to acceptance of strategically important decisions in agricultural policy.
That’s why the structure of informational state AIC supply is proposed, which would correspond to modern standards and demands.

One of such demands is integration into world informational space, and with this aim the mechanism of effective exchange with information resources of FAO and other international organizations.

Positing from accumulated information agricultural potential; staff potential and present experience NAUU can play a leading role in the consolidation of the efforts for effective development of agro-industrial production informational supply.

For realization of development strategy of informational supply of agro-industrial production and Ukrainian rural population it is needed to have accordant support of Ukrainian government and FAO UN. The best way would be to initiate in short terms the elaboration of State System of Agricultural Data and Knowledge. NAUU scientists and specialists have created unique informational agricultural databases, which with their importance may become the basis of National System of Agricultural Data and Knowledge.

Tentative cost of the works is shown on the slide #5.

In general it should be mentioned that this project with FAO is very timely and actual for Ukraine, and its implementation will be the impulse for profound reforming of informational supply of Ukrainian agricultural sphere; for acting and effective integration into world informational space.

**National System of Agricultural Data and Knowledge**

National System of Agricultural Data and Knowledge is:

Agricultural informational and analytical system for formation of conditions, means and technologies for the maintenance of stable development of rural territories and improvement of rural population life quality, stable functioning and profitability of agricultural production and broadening of market abilities of the subjects of agricultural market.

**Structure:**

National System of Agricultural Data and Knowledge is realized in the form of integrated informational environment, which unites:

- Subsystem of informational supply: centralized data and knowledge bank and subdivided data bases, which include scientific, productive and technological, economic, law and other information.
- Subsystem of informational and analytical supply of the establishments of state management and self-managing establishments.
- Subsystem of market information.
- Subsystem of consulting of goods-producers from perspective planning (business-planning) to the sale and realization of everyday operations and other consulting services.
- Subsystem of scientific researches and elaborations.
- Subsystem of staff studying and retraining.

National System of Agricultural Data and Knowledge is formed on the basis of new computer, informational, geoinformational and telecommunicational technologies taking into account integration into world informational space.

**Preconditions of Formation of National System of Agricultural Data and Knowledge**

**Ministry of Agricultural Policy:** Correctly acting vertical of information flows, which comprises all the levels including districts is realized. Appearance of informational and analytic service.

**UAAS:** Wide network of scientific and research establishments, which comprises all agree-industrial zones of Ukraine and produces highly effective scientific elaboration for implementation.
Agricultural Higher Educational Establishments: High level of informatization and specialists training in the field of informatization. Structuring and primary accumulation of field information in the electronic databases. The system of distance learning is being developing. The level of technical supply and applied use of informational technologies is quite high.

Directions of Scientific Work of University Using Informational Technologies in AIC and Prepared Elaborations, which May Be Integrated into the System of AIC Informatization.

1. Geoinformational Systems: elaboration of cartographic materials to the qualitative indexes
2. System of Exact Husbandry: together with GIS will give opportunity to receive information for the land management
3. University site: scientific electronic informational resources
4. Advisory and consulting direction:
   - Informational system “Agricultural sphere of Ukraine” from the main site [www.agroua.net](http://www.agroua.net)
   - Laboratory of Quality and Safety of AIC Products Site with the basis of educational and normative materials on veterinary sanitary for the processing enterprises
5. Educational activity:
   - Electronic bases of full-text educational books and study guides, educational and methodological complexes;
   - Electronic educational study guides and distance studying courses on the disciplines (elaborated by the department of informational systems in the management) (including optic carriers)
   - Video films preparation on studying disciplines, elaborated using technology of video flow (for translation through Internet network)
   - Distance learning site (Laboratory of Quality and Safety of AIC Products)
   - Joint department of informational technologies, formed in cooperation with DePaul University (Chicago, USA)
   - Joint European Project according to the TEMPUS program “Distance Learning in Agricultural sphere (D-Agro)”
   - Strengthening of NAUU specialists training: economic cybernetics, land ordering, automation of agricultural production
6. Technical and technological contents:
   - Elaborated technology of transporting and storage of electronic documents on the basis of Lotus Notes Domino
   - Developed infrastructure of University’s computer networks.

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<td><strong>International support of FAO (education and traineeship abroad, international expertise and consulting, technical support and help, project management)</strong></td>
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OPENING ADDRESS

I.M. DemchakFirst, Vice-Minister of Agricultural Policy

DEAR PARTICIPANTS OF THE SEMINAR!

It’s a pleasure for me to salute all the participants of seminar in this hall – FAO UN representatives, scientists from leading scientific establishments of Ukraine, staff from Ministry of Agricultural Policy of Ukraine and State Statistics Committee, advisory services and other non-governmental organizations, which are not only present on today seminar but made an active contribution into realization of FAO technical support to Ukraine project “Strategy Formulation and Increase of Service Level of National Agri-Informational System in Ukraine”.

As it is known, on the 29-th of November 2003 Ukraine became a competent member of UN Food and Agriculture Organization. It gave a new impulse to the development of collaboration of our country in the field of agriculture both with FAO and with the countries-members of this authoritative international organization. An opportunity to use operatively international experience to solve important problems of Ukrainian AIC is one of the most positive aspects of this collaboration.

Just after becoming a FAO member Ukraine made a request on start of three projects of FAO technical support to Ukraine, one of them was request on the project “Strategy Formulation and Increase of Service Level of National Agri-Informational System in Ukraine”.

The need to use international support in this direction is caused by some factors. Let’s pay attention on the most important of them.

Ministry of Agricultural Policy is the main organ in the system of executive authority in the questions of formation and provision of realization of state agricultural policy, state food safety and state management in the field of agro-industrial production. It should provide maintenance of monitoring, economic analysis of prices level and dynamics on the food markets, provide the development of infrastructure of scientific and consultative, informational, law and other services, which are provided to the agricultural goods producers and consumers, to develop market infrastructure of AIC. Ministry implants new informational technologies. Mostly they’re used in the establishments of agricultural education and in the agricultural market structures.

At present moment in the Ministry mostly informational support of apparatus everyday activities (i.e. e-mailing, web-sites, Internet, data bases, including of jural direction) is solved, and automatic management of agro-industrial production fields activity is only on the way of development. Complex action program of agri-industrial production informatization is also not elaborated in the context of international, first of all European integration. The excess of agricultural goods-producers to agricultural information also should be improved. Departmental statistics of agricultural production, made by State Statistics Committee of Ukraine and the Ministry of Agricultural Policy of Ukraine should become one of the main state sources of agricultural information, and it needs profound reforming mainly in the part of its collecting corner-cutting, processing automation, formation of accordant data bases and opportunity to compare them with the similar FAO data bases, aiming organization of prognostic operations.

Integration of Ukrainian agricultural economy sector into European and world economic space needs a transition to international standards in informational field, interconnections organization with international, foreign and domestic market, scientific, informational centers and their collaboration effectiveness increase, i.e. wide representation of horizontal and vertical links.

Agricultural goods-producers should clearly orient in the juridical field, prognostic indexes concerning conditions of production and realization, prices geography, production and resources to determine strategy of economies development and new technologies introduction, tactically properly build production, realization and financial relations.
Organs of state management should have full economic and financial information, data of price, credit policy, planning and realization of state and regional programs of agriculture and rural areas development for adoption of accordant managing decisions.

Also it is needed to take into account, that the states of post-industrial, informational development get a lot of advantages from wide use of new information technologies. These technologies provide opportunities for increase of managing work productivity, goods and services sale; realize chip means of operative communication. They are widely used in informational systems of small and large enterprises, state organs and international organizations and provided their integration into global process of informational renovation. This fact makes us accelerate solving of informatization questions, telecommunication and virtual space use for the provision of competitors advantages.

In such a way both internal and external factors need crash reforming of the system of Ukrainian agricultural sector informational supply, because existing state of agricultural sector informational supply doesn’t correspond to modern demands of economic subjects, state organs, science, education and rural population.

Realizing that the need to improve national agro-informational system of Ukraine is one of the key problems of our country, FAO UN, which has huge experience in mentioned issues didn’t stay off and started the project of FAO technical support to Ukraine, adopted by FAO Director-General Jacques Diouf and the Ministry of Agricultural Policy of Ukraine last year and on the 29-th of August 2005 its realization officially started.

I would like to mention that the work on the project started far earlier. NAUU together with FAO with the support of the Ministry of Agricultural Policy of Ukraine on the 3-7-th of February 2004 organized International Seminar AGRIS/IMARK for Central and Eastern Europe concerning development of informational systems and data bases management for training of appropriate specialists and the negotiations were held concerning project formulation. At the same time Ukraine welcomed formulating mission devoted to this project.

For the period of its realization by FAO international experts and Ukrainian specialists made great work. First of all for the project realization the Steering Committee was organized and academician Melnychuk D.O. was appointed as a National Project Coordinator, and National Agricultural University of Ukraine – as a main executive organization.

The working group was also formed comprising 22 persons, including specialists of the Ministry of Agricultural Policy of Ukraine, State Committee of Statistics, UAAS, NAUU, agricultural associations and other organizations.

Mentioned working group together with the Institute of Agricultural Development in the countries of Central and Eastern Europe (Halle, Germany) made an analysis of the state of Ukrainian AIC informational supply, and together with the FAO expert elaborated strategy project of informational supply of agro-industrial production and rural population of Ukraine, which is proposed to be discussed by the seminar participants.

Elaboration of this strategy is very timely for Ukraine, because its agricultural sector now is on the stage of crisis and needs profound reforming. That’s why informatization of agricultural sector is a needed part of agricultural reform in Ukraine.

Taking this opportunity I would like to thank the representatives of FAO European Regional Department and FAO Sub-Regional Department for the Countries of Central and Eastern Europe (Halle, Germany) and all the members of working group, which took part in the project implementation and wish all of You successful work during seminar.

Thank you for attention!
ANNEX 5

WELCOME ADDRESS

K. Nichterlein
Research and Technology Officer, Regional Office for Europe, FAO

Mr. Chairman, distinguished guests, Ladies and Gentlemen,

On behalf of the Food and Agriculture Organization of the United Nations, in Rome, we are honored to welcome you to the consultative seminar on “Formulation of the Information Strategy for the Agriculture Sector of Ukraine”. The seminar is organized within the framework of the Technical Cooperation Project UKR3005 supported by FAO. The overall objective of the project is to assist the Ministry of Agricultural Policy of Ukraine in establishing a relevant and effective information system in support of agricultural development and food security policies. This will be accomplished by appropriate institutional arrangements and procedures and will be complemented by capacity building activities to improve access and management of information by the major stakeholders of the agricultural sector in the Ukraine.

Nowadays information and communication are the vital ingredients of any development initiative. Agricultural inputs bear little fruits unless they are complemented with parallel investments in information exchange and education of rural people.

Today agricultural producers are confronted with the need to meet quality standards for their produce that are increasingly defined at the international level, since farmers products must compete in international markets and with imports in domestic markets. Therefore agricultural producers must be skilled at accessing knowledge and technologies to improve their production efficiency and enter new markets. In order to meet the challenges agriculture faces today, joint efforts are needed of all the stakeholders providing information and technologies along the production chain.

Agriculture in Ukraine has a huge potential that is not fully exploited, due to poor information on markets, technologies, financial services and legal issues according a needs assessment study of major stakeholders conducted under the project. The study revealed that Ukraine has a tremendous potential for generating and disseminating relevant information to the agricultural sector, however linkages among the various stakeholders must be strengthened and synergies be established to achieve a greater impact on agricultural development.

We are expecting that the draft strategy document, you are going to discuss during the seminar, will be enriched through your lively discussion and active participation. This document will provide the roadmap to achieve the objectives of the project and will enable the Government to effectively respond to the information needs of the rural sector.

In concluding, Mr. Chairmen, I wish to acknowledge our appreciation for the organization of this important seminar and the commitment of the university staff involved in the preparations. My colleagues and I are looking forward to the next three days working with you and the representatives of the organizations attending this seminar. I wish you all a very productive seminar.

Thank you.
ANNEX 6

PROJECT “STRATEGY FORMULATION AND CAPACITY BUILDING IN SUPPORT OF AN AGRICULTURAL INFORMATION SYSTEM” (TCP/UKR/3001)

A.I. Spodin, Head of the Information Office, Ministry of Agrarian Policy of Ukraine and M.Z. Shvydenko, Head, the Department of Information Systems in Management, National Agricultural University of Ukraine (NAUU)

FAO Technical Cooperation Project

Country: UKRAINE
Project Title: Strategy formulation and capacity building in support of an agricultural information system
Project Symbol: TCP/UKR/3005 (A)
Starting Date: June 2005
Completion Date: November 2006
Government Ministry responsible for project execution: Ministry of Agricultural Policy
FAO Contribution US$173 000

Project Objectives:

The development objective of the project is to assist the Ministry of Agricultural Policy in establishing a relevant and effective information system in support of agricultural development and food security policies.

The immediate objective is to identify and develop the necessary institutional arrangements and procedures, and build capacities, to improve access to and the management of information by the major stakeholders in agricultural development in Ukraine.

Steering Committee
Project TCP/UKR/3005 (A)
Strategy formulation and capacity building in support of an agricultural information system

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Work Group
TCP/UKR/3005(A)
„Strategy formulation and capacity building
in support of an agricultural information system”

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Project realization in terms of strategy formulation:

- The initial analysis of the current state of informational support of agro-industrial sector has been conducted.
- Work group meetings were held for the information exchange among major groups of stakeholders.
- Consultancies with FAO experts took place.
- Propositions on the informational strategy from stakeholders were collected.
- The draft information strategy for the agricultural sector was prepared.

1. Institute of Agricultural Development in Central and Eastern Europe (Germany) prepared the study in which the informational-communicational needs of major stakeholders of agricultural sector of Ukraine were assessed.

2. FAO consultants provided practical assistance for elaboration of the draft information strategy
3. Necessary equipment was purchased.
4. The adaptation of IMARK module "Management of Information Resources" is being conducted.

Conclusions
The Project is timely and urgent for Ukraine.
The Project is of high interest for ICT/ICM specialists.
The Project is executed in accordance with the plans and brings expected result.
The agricultural sector of Ukraine witnessed a rapid decline since independence and a modest improvement since the late 1990s only. One contributing factor for this rather unsatisfactory situation seems to be the fact that the traditional public sector information sources have suffered considerably as a result of the economic difficulties since then. Ukraine’s agricultural information system is still in a state of transition. In addition, new sources of information, like the Internet, have appeared, mostly on a commercial basis. However, these developments are mostly unconnected, lack a conceptual basis, and are not intended to provide the agricultural sector with the required information base in the public domain. A number of rough constraints have been identified already.

An in-depth assessment was carried out by the Institute of Agricultural Development in Central and Eastern Europe (IAMO) within the framework of the FAO project TCP/UKR/3005 “Strategy formulation and capacity building in support of an agricultural information system”.

The study aimed to accomplish the following tasks:

- Identification of existing sources of agricultural information (including informal farmers’ networks, farmers’ organisations, etc.);
- Assessment of the availability and relevance of local and locally adapted international information, including gender specific data, (in electronic format or hardcopy) necessary for the development of improved agricultural research capacity, efficiency and appropriateness in Ukraine;
- Compilation of an inventory of existing and preferred tools, channels and actors;
- Assessment of the strength, potential and limitations (constraints) of the present information and communication capacities (incl. human resources, knowledge and infrastructures and relevant communication relationships) and policies and strategies in research and research knowledge transfer (content development, training/education, feedback with society);
- Identification of potential partners for the development of solutions, including, where possible, already active and interested donors; and
- Sufficient analysis and information to facilitate the development of concrete related project proposals for strategies, policies and content development for improved information and communication management by national agriculture research institutions and their partners.

Institutional setting and network

The organizations that are regarded by respondents as major sources of information are those with a large number of members, e.g. UAFLO, AUUAE, etc. or have various key players among their membership, e.g. UAC, NACU, etc. UAFLO had been mentioned as the most important one, followed by MAPU and UAC.

Agricultural organisations in Ukraine are not working independently side-by-side, but are actively looking for various forms of cooperation among each other. The findings are summarised in the diagram below where the peak of the line indicates the recipient partner of that collaboration.

The findings clearly show that some organisations are more or less the focus of collaboration while others do not have that many links.
The diagram also underlines the dominant role of MAPU, UAFLO and UAC as key players. In addition to the organizations listed above a number of organisations had some form of cooperation with other agricultural organisations. These are listed in the table below.

**Table: Additional cooperation partners outside the sample and within the agricultural sector**

<table>
<thead>
<tr>
<th>Interviewed organisation</th>
<th>Mentioned organisations within the agricultural sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAPU</td>
<td>Universities, exhibition centre</td>
</tr>
<tr>
<td>UkrINTEI</td>
<td>Universities</td>
</tr>
<tr>
<td>UAAS</td>
<td>Branch associations</td>
</tr>
<tr>
<td>NAUU</td>
<td>Branch associations, universities</td>
</tr>
<tr>
<td>UAC</td>
<td>Klub Syru Ltd., Ukrros Ltd., Gardens of Ukraine Ltd., Union of Ukrainian Dairy Enterprises, Bachmachesky Agrosojus Ltd.</td>
</tr>
<tr>
<td>NACU</td>
<td>Bears Ltd., Shuvar Wholesale Ltd., Bortnik Agriculture Ltd., Gercules Ltd., Zasjadko Agriculture Ltd.</td>
</tr>
<tr>
<td>AUUAE</td>
<td>Union of Stock Agricultural Exchanges, National Association of Trade Houses</td>
</tr>
<tr>
<td>UAFLO</td>
<td>Fermagropostach Ltd., Expocenter-Gospodar Ltd.</td>
</tr>
<tr>
<td>NUACU</td>
<td>Universities</td>
</tr>
<tr>
<td>NACUU</td>
<td>Consumers’ Credit Association</td>
</tr>
<tr>
<td>NAAAS</td>
<td>Universities</td>
</tr>
<tr>
<td>OFU</td>
<td>Branch association (Ukrsoya)</td>
</tr>
<tr>
<td>UGA</td>
<td>Phytosanitary authority, Cargill., Nibulon.</td>
</tr>
<tr>
<td>Ukrsugar</td>
<td>Institute of Food Technologies</td>
</tr>
<tr>
<td>RYU</td>
<td>Agrarian Union</td>
</tr>
<tr>
<td>Magazine „Proposytsija“</td>
<td></td>
</tr>
<tr>
<td>Radio Station „Kolos“</td>
<td>Gardens of Ukraine Ltd.</td>
</tr>
</tbody>
</table>
The Ukrainian parliament and its institutions are partners for five organisations (MAPU, AUUAE, NACUU, NAAAS and NAUU). As organisations from the education and research sector the National Academy of Science was mentioned by NAUU and UAAS; the Moscow Centre for Scientific and Technological Information and the Institute for Cybernetics are cooperation partners for UkrINTEI. Most organisations do not cooperate with international organisations. UAC is an exception from this rule holding relations to USAID, The World Bank, the EU, the GFA, and the German Advisory Group on Economic Reform with the Government of Ukraine. USAID is also named as a partner by the radio station “Kolos”. Private enterprises play an unimportant role for most organisations.

Conclusions

The respondents confirm that ICTs are fairly well adopted in Ukraine. Modern electronic means of communication are widespread in Kiev only, but lacking in the regions and districts. Therefore, the linkages between headquarters and the regional/district offices are relatively weak and mainly rely on the use of telephones, fax and letters.

There is an urgent need for more and better-processed information within the agricultural sector. The major emphasis has been put on the following four areas:

- Market information systems: lack of statistical information, both nationally and internationally about markets, prices and market organisations,
- Financial services regarding access to credits, particularly subsidised ones,
- Planned and ongoing projects financed by international donors, and
- Laws and regulations affecting the agricultural sector.

The organisations use a whole variety of communication means for promoting and publicising their own activities and information. The use of letters, telephone and television among the general means of communication, of training courses, conferences and general assemblies among the traditional professional ones, and of electronic newsletters, e-mail and websites among the modern electronic ones is very common.

With respect to the used communications means for approaching external stakeholders, the findings show that there is no differentiation between the various target groups. The same means are applied for almost all groups.

Internal communication, i.e. exchange of information between management boards and members, is mainly concentrated on traditional means of communication, i.e. letters, telephone and personal contacts. The use of modern electronic technologies becomes more popular, but has its limits because of the lack of technical skills in handling the modern equipment and the lack of financial means to invest in new technologies. On the other side, most of these issues are identified as their major weaknesses which can be structured as follows:

- No or limited access to modern electronic technologies;
- Lack of financial resources;
- Low level of skills among staff;
- Language: Due to poor language skills of the staff.

One important factor of strength refers to the good level of communication and cooperation among the various agricultural organisations. There is a permanent exchange of information. The cooperation of the various organisations not only involves the agricultural sector but also the non-agricultural one.

When it comes to ICT, UkrINTEI has a special role to play. It is the most important Ukrainian organisation in that field and it has access to a vast stock of data files about the sector.
Recommendations

- In order to enforce the spread of information between the main stakeholders not only in the capital city, but also in the rural areas, the government is advised to be more active in building up and investing in the necessary communication infrastructure. This includes the satellite lines and other IT investments.
- Each agricultural stakeholder is responsible in financing the necessary hardware for making use of the communication infrastructure efficiently.
- The spread and provision of modern hardware only makes sense if it is combined with the adequate training of staff in the use of modern electronic technologies.
- MAPU is encouraged to play the leading role in facilitating and coordinating the information flow more strongly.
- MAPU should be encouraged to improve collaboration among stakeholders by organising seminars, workshops, and/or round tables on specific actual and required issues.
- Besides MAPU, UAFLO, UAC, NAUU and NAAAS, can follow good networking strategies within and outside the sector.
- UkrINTEI could have an important role in ICT about the agricultural sector of the country. It should be strengthened in order to become a vital partner for the various stakeholders.
- The collection and dissemination of reliable information should be charged to the users.
- Agricultural organisations should make use of the various means of communication in a more flexible manner.
- Most agricultural organisations lack integration in international networks or organisations. Therefore, active support for most organisations is needed to get access to the respective international networks.
DRAFT INFORMATIONAL STRATEGY FOR THE AGRICULTURE SECTOR OF UKRAINE

M.Z. Shvydenko, Head, Department of Information Systems in Management, NAUU

The strategic goal of the Information Strategy for Agricultural sector of Ukraine is to provide a general framework for action, as well as specific guidelines for development of such an agricultural information environment that meets the needs of rural population, agricultural producers and agribusiness sector, governmental and non-governmental bodies, educational and research units and all the other stakeholders involved or related to agricultural sector of Ukraine in order to achieve Sustainable Agricultural Development according to UN declarations and the integration of agricultural sector of Ukraine into the global economy.

The basis for achieving this goal is creation and development of National Agricultural Knowledge and Information System (NAKIS) with appropriate conditions, resources and technologies for supporting sustainable rural development, increase in quality of life of rural population, sustainable development of agricultural production and empowerment of the players of agricultural market of Ukraine.

Principles

- Combining of centralized (databases, common tools, etc.) and decentralized (development of information flows at oblast and region levels) approaches to creation of agricultural information system;
- Dominancy of the newest communication technologies when constructing information systems;
- Standardization and consolidation of information systems at all levels, taking into account regional and sectoral differences;
- Well-functioning information flows both at bottom-up and top-down directions;
- Compliance with international agricultural information standards, methodologies and tools;
- Development of markets for agriculture-related information and ones under intellectual property rights;
- development and implementation of the mechanisms of the integration into international information environment;
- Use of system and program approaches.

Expected Results

In socio-political aspect:
- Create necessary conditions for rural population to have access to such data and information as legal issues, state and trends of development of the area, activities of local authorities, local conditions (education, health, environmental protection, etc.), as well as to the knowledge on newest developments in agricultural science and production.
- Promote the platform for possible cooperation between local, regional and centralized management bodies and for overcoming bureaucratic communication barriers.
- Ensure well-functioning structures for monitoring of the environment around of both single agricultural units, and whole rural areas in general (early warning systems for ecological, epidemiological and radiation hazards).

In economic aspect:
- Meet the demand of agricultural producers and rural population in legal, economical, technological and social information.
- Improve management and increase efficiency of decisions via possibilities of modeling and prognoses.

**In scientific-technical aspect:**
- Support the acceleration of scientific development in agricultural production.
- Possibilities for optimizing production via implementation of newest information technologies.
- Integration into the global information environment.

**National Agricultural Knowledge and Information System**
National Agricultural Knowledge and Information System (NAKIS) is aimed at the creation the basis for information support for political, social and economical development in agricultural sector and rural areas, as well as in the agriculture-related sectors in general and should be based on the principles of data centralization (databases), decentralization of information flows, self-sufficiency and state support.

National Agricultural Knowledge and Information System is formed on the basis of modern informational, geo-informational and telecommunication technologies and takes into account the integration into international information environment.

National Agricultural Knowledge and Information System will provide informational-analytic support for sustainable development of rural areas and improvement of living conditions for rural population, sustainable functioning and profitability of agricultural production and expanding of market opportunities for all stakeholders of agricultural sector.

**Mechanisms of Implementation**
1. Discussion and official agreement on the strategy
2. Preparation of the Government Resolution
3. Elaboration of the State program on the development of informational support for agricultural sector of Ukraine
4. Creation of National Agricultural Knowledge and Information System
5. Implementation of Projects
ANNEX 9

COMMENTS ON THE INFORMATION STRATEGY

A. Manukyan

General
- Feedback mechanisms should be elaborated.
- More detailed information on mechanisms of strategy implementation should be provided.
- Information needs of rural population should be considered.
- Information in electronic format should be mobilized.
- The list of major information providers should be prepared.

Expected Results
- Improve decision-making process based on reliable information and through modeling and prognoses.
- Support needs and market orientation of science and technology development for agricultural production through improved farmer – extension – research linkages.
- Improved access to knowledge and technologies from foreign and international knowledge providers.

Operating Principles
- Integration of modern with traditional information and communication technologies when constructing information systems;
- Although the system predominantly will be based on Internet technologies, their integration with traditional media is needed for an efficient two way communication;

Informational Needs
- Governmental bodies and local authorities;
- Scientific institutions;
- Rural population, farmers and private landowners.
Information and knowledge on general priorities and problems of agricultural sector and its various stakeholder groups, current policies and trends, international regulations and global trends etc;
- Information on national and international priorities and recent trends in agricultural research, newest technologies, on farmers problems and needs to formulate research priorities and develop needs oriented technologies, knowledge etc.;
- Information and knowledge on markets, legal issues, agricultural technologies (including crop varieties), management methods, site ecology, quality requirements of agricultural product and quality of inputs, trends in development of rural areas, traditional “informal” knowledge, financial services/credits, non-farm income activities, weather services, etc.
ANNEX 10

ACTIVITIES OF THE STATE ENTERPRISE "STATE REGISTERS OF UKRAINE"

Ihor Khodakivkyy, Director

Enterprise Establishment: Decree of the Ministry of Agrarian Policy dated April 25, 2003. № 122

Main activity directions:

1. Production of grain storage documents;
2. Registering of grain storage documents, stored grain, certificates of the conformance of grain silos (elevators) for the storage of grains and grain products;
3. Control over the fulfillment of Technical regulation on grain silo certification.

Main results of enterprise activities for the period from 2003 to 2005

Produced blanks:
- common warehouse receipts – 1 400 000
- one-sided warehouse receipts - 100 000
- two-sided warehouse receipts - 100 000

Supplied blanks:
- common warehouse receipts - 926 290 to 625 grain silos (elevators)
- two-sided warehouse receipts - 59 530 to 382 grain silos (elevators)

Draft documents that were elaborated:

1. Regulations on storage documents' circulation (approved by the Decree of the Ministry of Agrarian Policy of Ukraine dated 26.06.03 #198)
2. Procedure on state registration of storage documents and grain that is stored.
3. Requirements specification for the development of electronic Register

- Plans for enterprise activities were elaborated
- Structure and staff were managed
- Issue of enterprise location was resolved
- The necessary number of specialists was employed
- Sufficient equipment was purchased.
- Technology for documents production and supply was implemented.
- Technology for blank registration and information processing was implemented.
- Draft book-keeping forms for the use of storage documents were developed.
- Draft book-keeping forms for the informing on the stance of grain storage were developed.
- Reports from more than 160 grains silos (elevators) were processed and the information on the use of 10138 grain storage documents was entered.

Possible types of reports:

- Volumes of stored grain
- Volumes of mortgaged grain, with information on grain value and the price of storage of mortgaged grain
- Data on the use of grain storage documents.

On regional level, by types, grades, market subjects, for given periods etc.
Conclusions

Positive:
- The system of grain storage documents circulation and registration is able to work
- Transparency of grain storage
- Timely and reliable information on stored grains
- Ability to control and intervene into market if needed
- Interaction among grain market participants
- Grain owners are interested in the system

Problems:
- “human element“ in information preparation and registration
- some market participants are not interested in transparent grain storage market.

Problematic Issues

- Not all grain silos (elevators) use grain storage documents
- Low discipline of grain storage market participants
- Lack of computer-based and communicational technologies on grain silos
- Low attention to the problems of the implementation of grain storage documents in media

Information that may be provided via requests to the register

Data on issued storage documents and their owners
Data on certified grain silos (elevators)
Data on grain (mortgaged grain) that is stored
ANNEX 11

LVIV EXTENSION SERVICE

I.Y. Pankiv, Director

Lviv Oblast
Rural population: 1 040 000
Administrative units: 680
Reformed agricultural producers: 680
Farmers: 1187
Households: 320 000

Information providers:

• State organizations
• Research institutions (3)
• Educational organizations (7)
• Civil society organizations (4)
• Professional organizations (5)
• Commercial companies (17)

Place of professional advisory organizations:
• They are present on the market
• Legal basis is elaborated
• Draft State program is prepared
• System for building capacities was created

What impedes?
The ability of the society and state officials to execute laws

Ivan Pankiv
Phone: +38 067 310677

Director of Lviv Extension Service

Created in 2000
8 local representative offices
15 advisors
37 expert-advisors
Financing: In 2005, UAH 70 thousand was allocated from oblast budget and UAH 50 thousand – from local budgets.
ANNEX 12

NATIONAL ASSOCIATION OF THE AGRICULTURAL ADVISORY SERVICES OF UKRAINE

Yuriy Bakun, Executive Director

Association was found on March 11, 2003 as independent All-Ukrainian non-governmental organization that joined professional subjects of advisory activity – agricultural advisors, expert advisors and advisory services. The members of Association are 500 professional advisors, more than 1000 potential expert advisors and 30 agricultural advisory services from 24 Ukrainian oblasts and Autonomous Republic of Crimea. Association was registered on October 10, 2003 by Ministry of Justice of Ukraine.

OBJECTIVES OF ASSOCIATION:
- raising the level of knowledge and practical skills in profitable management that realize activity in rural areas and rural population in market economy conditions;
- providing subjects of agricultural activity and rural population with advisory services on economical, technological, marketing, accounting, taxation, juridical, ecological issues;
- providing authorities with advisory services on preparation and realization of social and economical development plans and civil society formation, spreading and implementation of modern technologies, scientific and technologies modern achievement;
- promotion of development of nonagricultural enterprises in rural area including rural green tourism, employment of rural population etc;
- work with rural youth, initiation and realization of youth programs;
- information and methodical support of Association members – advisors, expert advisors and coordination of their activity;
- training and qualification raising of advisors and expert advisors, educational and methodical materials on advisory issues preparation and publication;
- agricultural advisory services net development;
- participation in preparation of legislative acts on advisory activity;
- organization and coordination of international cooperation of Association members in advisory activity;
- promotion of advisory activity subjects Association members;
- representation and protection of legal rights of Association members in authorities of all level according to legislation.

THE MAIN METHODS OF ASSOCIATION MEMBERS ACTIVITY ARE:

- Education of management subjects who work in rural area and rural population;
- Investigations of social and economical problem in rural areas and elaboration of the ways of solving this problem;
- Information providing of management subjects who work in rural area and rural population.

Association organize for advisors and their clients educational seminars, round tables, conferences including international (Jaremche, 2003; Kamianec-Podilsky, 2004; Sudak, 2004; Kherson 2005, Shack, 2005), takes part in exhibitions and forums including international (Kyiv, 2003; Berlin, 2004; Tonder, Denmark, 2004; Brwinow, Poland, 2004; Baton Ruz, USA, 2004; Kyiv, Ukraine, 2004; Prague, 2005; Nitra Slovak Republic, 2005; Ryga, 2005; Kyiv, 2005; Stare Pole, Poland, 2005; Warszawa, 2005; Belgrade, 2006; Gdynia, Poland, 2006; Kyiv, 2006; Prague, 2006) etc.

WHAT WAS DONE?

1. Organization, educational and informational activity:

1.1. On March 11, 2003 National Association of Agricultural Advisory Services was found.
1.2. More than 500 advisors, 1000 potential expert advisors and 30 advisory services from 24 oblasts of Ukraine and Autonomous Republic Crimea are Association members.
1.3. Association conducted more than 80 seminars, 7 round tables, 6 scientific and training conferences 5 of them international.


2. Legislative support of advisory activity:
2.3. Cabinet of Ministers of Ukraine agreed Conception of State Target Program of Agricultural Advisory Activity for 2006-2009 by Decree No. 210-p from June 20, 2005.
2.4. Ministry of Agrarian Policy of Ukraine signed such orders:
- “On Approving of Regulation on Qualification Certificate of Agricultural Advisor and Agricultural Expert-Advisor”, No. 176 from April 26, 2005;
- “On Professional Education of Advisors and Expert-Advisors”, No. 311 from July 11, 2005;
- “On Approving of Regional Qualification Commissions, Regional Coordinators and Appellate Commission”;
2.5. Oblast Advisory Services have developed and presented to state administrations and Oblast Councils Programs of Agricultural Advisory Activity. Association sent letter to all Oblast State Administrations on this issue.
2.6. Association together with Ukrainian Academy of Agrarian Science and National Agrarian University prepared and adopted by General Meeting of Association Strategy of Development of Agricultural Advisory in Ukraine as draft of the Law of Ukraine “On the Bases of State Policy in the Field of Agricultural Advisory Activity”.

WHAT DO WE HAVE TODAY?

1. Positive aspects:

1.1. Agricultural advisory is reality in Ukraine – there are advisory services in 24 oblasts of Ukraine and in Autonomous Republic of Crimea.

1.2. Law on Agricultural Advisory Activity legalized advisory in the state.

1.3. In general advisory services are non-governmental organizations, they have possibility to elaborate plans of their activity, to reach a decisions, to support profitability of commodity producers and rural population, to have influence on formation of rural communities and development of rural areas. There is positive image on state and regions level.
1.4. In general functioning of advisory services is effective, some of them work as self-repayment one. They have a system of information support.
1.5. Some advisory services received financial support from local budgets (oblast and regional) in 2004.

1.6. Advisory services have coordinator, lobbyist and promoter in the person of Association.

2. PROBLEMS:

2.1. There are not enough agricultural advisors in Ukraine. Advisory services are not inaccessible for majority of rural population.

2.2. Advisory services have not enough materials, technical resources and professional staff that is why they can provide advisory services only for 5 percent of rural population.

2.3. Government and Ministry of Agrarian Policy of Ukraine did not accepted legislative acts on execution of the Law “On Agricultural Advisory Activity”.

2.4. Verkhovna Rada of Ukraine did not foresee funds in State Budget of Ukraine 2006 for professional training of advisors.

2.5. The lack of state financial support for advisory activity means flowing-out of professional advisors to commercial companies.

2.6. There is no system of agricultural advisory activity in the state with participants of science, education and advisory.

2.7. Desultory creation by different governmental institutions (research institutes, agrarian universities, institutions of agriculture management etc.) of advisory services without proper vocational training of advisors and expert advisors threaten to discredit advisory as social and economical essential phenomenon.

WHAT WE HAVE TO DO ?

1. **Urgently:**


1.2. Implement on national and regional level system of planning and monitoring of advisory activity.

1.3. Provide with bases (university) training of agricultural advisors and professional rising of their qualification.

2. **Tomorrow:**

2.1. To provide implementation of the Law of Ukraine “On Agricultural Advisory Activity”.

2.2. To form effective system of agricultural advisory activity with participation of science, education and advisory.

2.3. To spread advisory activity on 90 percent of rural population and provide with 75 percent of social directed advisory services for the funds from state and local budgets.
2.4. To make conditions for advancement of Association members on international market of agricultural advisory services.

THANK YOU FOR ATTENTION!
Across the globe, research systems for technology development in agriculture face broadly similar challenges. Key challenges include changes in technology demand, modifications in tools and processes for technology generation and dissemination (biotechnologies, information and communication technologies), reassessment of the respective roles of the public and private sectors and a growing trend towards involving farmers and farmers’ organizations in the process of technology generation. Technologies for agriculture are needed a) to produce food and renewable resources using an environmentally sound, integrated approach, b) to allow producers better local and global market access through improved food safety, and c) to add value to primary products by supporting agro-industrial development. This increased relevance of technology development calls for institutions to be able to respond to this transformation. Institutional innovations in the fields of governance and direction, financing, and management and implementation can increase the relevance of technology development for the welfare of society. In this respect, increasing importance is being given to the involvement of producers and rural organizations in knowledge generation. Increased participation of stakeholders requires new skills to facilitate a systematic dialogue between them, the incorporation of participatory approaches and efficient communication methods and tools.

Further information regarding participatory research projects in agriculture and natural resource management can be found in an annotated bibliography compiled by FAO at: [http://www.fao.org/sd/dim_kn4/kn4_051201_en.htm](http://www.fao.org/sd/dim_kn4/kn4_051201_en.htm)

References

The term “Participation” could be interpreted in various ways. Some could be limited to a presence in a specific activity with various degrees of involvement such as:
• Attend an event, a function
• Take part in an activity (sports, meetings…)
• Take part in planning an activity or a programme.
• Take part in decision making

Participation, seen as a deeper personal involvement entails:
- Interaction
- Social relationships
- Commitment
- Networking
- Getting involved

In development, participation is commonly understood as: “… a process through which stakeholders influence and share control over development initiatives, the decisions and resources which affect them. (World Bank)

Communication can also be interpreted in various ways such as: The exchange of thoughts, messages, or information
- A connection allowing access to various people or places
- A medium or channel
- Digital transmission of signals

In development it is more focused on: Advocacy
- Dialogue
- ICTs for development
- Stakeholder engagement
- Involvement and participation
- Development Communication

Communication for Development

Early models of communication were based on information flow from one sender to a receiver. Development theorists of these early days saw development as a communication problem (Daniel Lerner, 1958, Wilbur Schramm, 1964)

In his work titled “Diffusion of innovations”, Everett Rogers (1962, 1983) identified 5 stages of behavior adoption:
- Awareness
- Knowledge and interest
- Decision
- Trial
- Adoption/rejection

Communication for Development encompasses a number of participatory theories which take into account, and recognize as important, the following factors:
• Cultural diversity
• Social, economic, cultural context
• Local Knowledge
• Human centered (not media centered)
• Participation vs. Persuasion

An FAO Expert Consultation held in 1991 defined Communication for Development as “The planned use of communication strategies, activities and media to enable people and institutions to share knowledge and information and reach a consensus towards development action”

Facilitating participation through communication can be achieved by considering the following steps:
1. relationships and local setting
2. identification of problems, solutions and actions
3. identification of needs, objectives, activities
4. identification of communication tools, content, materials
5. building partnerships
6. produce implementation plans
7. monitor, evaluate and document outcomes
8. share and use results

The main challenges in applying participatory methods are:

- High initial investment
- Need to adapt to social and cultural environments
- Development of communication skills
- Qualitative/quantitative monitoring and evaluation
- Promotion and acceptance of participatory approaches
## Annex 15

### Consolidated List of Strengths

<table>
<thead>
<tr>
<th>Human Resources (20)</th>
<th>Informational Resources and Databases (18)</th>
<th>Informational Management and Technologies (Hardware and Software) (10)</th>
<th>Communication Systems (15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Education and training system for IT experts (NAUU)</td>
<td>2. Scientific and technical information and databases (NAUU, CATU, UKRINTEI, UNDP, GIS NASU)</td>
<td>2. Implementation of information systems (GIS NASU)</td>
<td>2. Extension services (virtual and from abroad) (NAUU, NAASU)</td>
</tr>
<tr>
<td></td>
<td>3. Databases on modern agricultural technologies (NAUU)</td>
<td></td>
<td>3. Regional representative offices (CATU, NAUU)</td>
</tr>
<tr>
<td></td>
<td>4. Experience of the use of international food safety information</td>
<td></td>
<td>4. Distance learning in NAUU (agricultural consulting)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>5. Powerful scientific and research infrastructure (UAAS)</td>
</tr>
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<td></td>
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<td></td>
<td>6. Development of education</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7. Network for information distribution (USRIU)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>8. A large number of journal readers (JP)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>9. System for collecting and processing of information (SSCU)</td>
</tr>
<tr>
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<td></td>
<td>10. Branch structure (NAUU)</td>
</tr>
</tbody>
</table>
## ANNEX 16

### CONSOLIDATED LIST OF WEAKNESSES

<table>
<thead>
<tr>
<th>Resources and Logistics (23)</th>
<th>Communication (12)</th>
<th>Marketing &amp; Management (16)</th>
<th>Human resources (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Outdated or missing equipment (GIS NASU, USRIU)</td>
<td>1. Insufficient infrastructure for dissemination of information among end-users (IAE)</td>
<td>1. Incomparability of information (NAUU)</td>
<td>1. Employee turnover (NAUU)</td>
</tr>
<tr>
<td>2. Limited financial resources</td>
<td>2. Inaccessible Internet resources due to high costs (NAUU)</td>
<td>2. Lack of data for certain analyses (NAUU)</td>
<td>2. Bad knowledge of IT</td>
</tr>
<tr>
<td>3. Lack of state program for extension support</td>
<td>3. Inter institutional barriers (GIC NASU)</td>
<td>3. Outdated Data bases</td>
<td>3. Lack of qualified programmers (NAUU)</td>
</tr>
<tr>
<td>6. Lack of licensed software (GIS NASU)</td>
<td>6. Insufficiently developed international scientific relations (IAE)</td>
<td>6. Insufficient PR (UFRINTEI)</td>
<td></td>
</tr>
<tr>
<td>7. Insufficient state support (UKRINTEI)</td>
<td></td>
<td>7. Lack of data bases on market information</td>
<td></td>
</tr>
</tbody>
</table>
### ANNEX 17

### CONSOLIDATED LIST OF OPPORTUNITIES

<table>
<thead>
<tr>
<th>Human resources development (17)</th>
<th>IT development and use (19)</th>
<th>Providing relevant information to users (19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Better use of human resources (CATU)</td>
<td>1. New IT technologies for information dissemination to the end-users such as mobile phones, digital TV, Internet (NAUU, UNDP)</td>
<td>1. Meeting needs of agricultural producers through provision of relevant and understandable information (NAASU)</td>
</tr>
<tr>
<td>2. Use of distance learning (NAUU)</td>
<td>2. Development of well arranged market for information services (USRIU)</td>
<td>2. Improved linkages among education, research and extension (NAASU)</td>
</tr>
<tr>
<td>3. Development of MSc. programs for agricultural extension and advisory services</td>
<td>3. Web-server (GIC NASU)</td>
<td>3. Providing consulting services based on scientific knowledge (IAE)</td>
</tr>
<tr>
<td>4. Education for IT managers in agricultural sector (NAUU)</td>
<td>4. Usage of computer-based instruments for analysis (NAUU)</td>
<td>4. Development of communication technologies (CATU, NAUU)</td>
</tr>
<tr>
<td></td>
<td>5. Development of modeling and forecast systems for effective decision making</td>
<td>5. Modern computer equipment for advisory services.</td>
</tr>
<tr>
<td></td>
<td>6. Information processing techniques (UKRINTEI)</td>
<td>6. Providing objective information (UNDP)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organizational, financial and legal issues (15)</th>
<th>Improvement of cooperation (13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clear definition of terms of references (GIC NASU)</td>
<td>1. Harmonizing national agricultural information in accordance with international requirements (UKRINTEI)</td>
</tr>
<tr>
<td>2. Improved dissemination of information</td>
<td>2. Access to international agro-information (UKRINTEI)</td>
</tr>
<tr>
<td>3. Intellectual property rights' protection (USRIU)</td>
<td>3. Improved International cooperation</td>
</tr>
<tr>
<td>4. Pool for multiuse software products (GIC NASU)</td>
<td>4. Improved cooperation among institutions (CATU)</td>
</tr>
<tr>
<td>5. Reducing duplication of information flows (NAUU)</td>
<td></td>
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<tr>
<td>6. Better coordination of work (NAUU)</td>
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</tr>
<tr>
<td>7. IT sector development in agriculture national priority and supported by state (consulting department of NAUU, UKRINTEI)</td>
<td></td>
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<tr>
<td>8. Development of mechanism for scientific support for regions (UAAS)</td>
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</tbody>
</table>
### CONSOLIDATED LIST OF THREATS

<table>
<thead>
<tr>
<th>Lack of rural development (30)</th>
<th>Institutional risks (32)</th>
<th>Market factors (23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Computer illiteracy of agricultural producers in rural sector (CATU, NAUU)</td>
<td>1. Lack of understanding of the importance of agricultural extension and advisory services for improvement of agriculture</td>
<td>1. Dependence on external funding for system development and lack of sustainable financing (NAUU)</td>
</tr>
<tr>
<td>2. Underdevelopment of IT in rural area (CATU)</td>
<td>2. Lack of support to agricultural extension and advisory services</td>
<td>2. Market changes that may lead to the shortage of funds for successful project completion (USRIU)</td>
</tr>
<tr>
<td>3. Main end-users (agricultural producers, rural population) not ready to pay for information services (IAE)</td>
<td>3. Insufficient state policy in support of agriculture, e.g. budget provision, unfavorable taxation, lack of programs (JP, UKRINTEI, GIC NASU, UAAS, NAASU, CATU)</td>
<td>3. Competition (JR)</td>
</tr>
<tr>
<td>4. Lack of reliable information on rural sector</td>
<td>4. High staff rotation of people responsible for development of information strategy (GIC NASU)</td>
<td>4. Insufficient analytical processing of information that impedes scientific progress (UKRINTEI)</td>
</tr>
<tr>
<td></td>
<td>5. Political risks (JP)</td>
<td>5. Insufficient integration into international information environment (UKRINTEI)</td>
</tr>
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<td>6. Institutional barriers (NAUU)</td>
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<td></td>
<td>7. Information kept closed, not shared</td>
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<td></td>
<td>8. Bureaucracy</td>
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</tbody>
</table>
## RESULTS OF PRIORITY SETTING THROUGH VOTING

<table>
<thead>
<tr>
<th>SWOT analysis categories</th>
<th>VOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td></td>
</tr>
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<td>20</td>
</tr>
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<td>18</td>
</tr>
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<td>15</td>
</tr>
<tr>
<td>Informational management and technologies</td>
<td>10</td>
</tr>
<tr>
<td><strong>Weaknesses</strong></td>
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<td>12</td>
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<td><strong>Opportunities</strong></td>
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</tr>
<tr>
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<td>19</td>
</tr>
<tr>
<td>Providing relevant information to users</td>
<td>19</td>
</tr>
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<td><strong>Threats</strong></td>
<td></td>
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<tr>
<td>Market factors</td>
<td>23</td>
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</table>
ANNEX 20

DRAFT OPERATING WORK PLAN FOR STRATEGY IMPLEMENTATION

The following course of action should be conducted for the implementation of the informational strategy for agricultural sector of Ukraine:

1. Incorporate expedient recommendations of seminar participants and other major stakeholders into the draft strategy;
2. Submit the draft strategy for approval to the Collegium of the Ministry of Agrarian Policy of Ukraine;
3. Form the Committee for strategy implementation;
4. Develop the concept of the information state program for agricultural sector of Ukraine based on the strategy;
5. Prepare all accompanying documents that are necessary in accordance with the legislation of Ukraine;
6. Submit the concept of the program to the authorized state bodies for approval;
7. Ratify the concept of the state program with governmental decision;
8. Prepare and fulfill projects in the framework of the concept of the program;
9. Monitor and report on the implementation of the strategy and the program.
ANNEX 21

RECOMMENDATIONS OF THE SEMINAR PARTICIPANTS ON STRATEGY IMPROVEMENT

1. The strategy should satisfy needs of all agriculture-related stakeholders, including e.g. processors of agricultural products, suppliers of agricultural machines, and rural population;
2. People's needs in information on food quality and safety should be considered;
3. The needs of agricultural sector and rural population should be in priority;
4. The access to agriculture information should be in line with the requirements of national legislation;
5. The strategy should stimulate the generation of the agricultural information that is of good quality and satisfies informational needs of its users;
6. Budget financing of strategy implementation should be sustainable;
7. Media should be added into the list of groups of stakeholders;
8. Results of SWOT analysis should be incorporated into the strategy;
9. Motivation of informational providers to cooperate should be considered;
10. The strategy should be flexible and allow future amendments;
11. Both current and potential informational needs may be considered;
12. Facilities of interactive TV should be added (point 4.1 of the strategy);
13. Information chain should be revised (point 4.1 of the strategy);
14. Extension services should be added (point 4.3 of the strategy);
15. Point 4.3 may be revised;
16. The law of Ukraine on “On Agricultural Advisory Activities” should be added (point 4.7 of the strategy);
17. Dates and numbers of all mentioned laws should be added (point 4.7 of the strategy);
18. It should be mentioned that the Committee for implementation of the strategy should report to appropriate governmental bodies;
19. Capacity building for agricultural advisors and the development of distance learning may be considered;
20. The influence of private consulting companies, analytic centers and other information companies should be taken into consideration;
21. Commodity exchanges should be added to the list of stakeholders;
22. Point "Mechanisms of implementation" should be renamed;
23. Capacity building for specialists in ICM for agriculture should be considered;
24. It should be mentioned that AGROVOC should be translated into Ukrainian to serve a basis for development of national agricultural ontology;
25. Some terms in the strategy may need defining;
26. Information in electronic (digital) form should be mobilized;
27. Information adapters and mediators should be defined to implement strategy;
28. It should be defined which informational sources are open or closed;
29. Deficit of highly-qualified ICT specialists and some resources should be taken into consideration;

30. Data and equipment deterioration should be considered;

31. Different approaches towards information generation in science, education and private sector may be taken into consideration;

32. It should be considered that there is a need to formalize, systemize and adapt information for the end-users of information;

33. The development of the platform for commercial distribution of information should be considered.
ANNEX 22

INFORMATION NOTE ON THE CONSULTATIVE SEMINAR

A consultative seminar was held at NAUU from 30 May to 1 June 2006 to discuss and agree on an information and communication strategy for the agricultural sector of Ukraine. The seminar was attended by 56 experts representing policy makers, scientific and educational institutions, advisory services, agribusiness and media. During the three day meeting the participants analyzed, through participatory approaches, ways in which each organization could contribute to the information/communication system, identified potential areas of opportunities and major threats.

The meeting unanimously agreed that the implementation of the strategy is essential for the development of the agricultural sector of the country and requests that the Government fully supports its implementation.

As follow-up to the seminar the participants formulated the following recommendations for action:

- Establishment of a Committee to oversee the implementation of the strategy. The committee would be composed of representatives of stakeholders groups identified during the seminar.
- MAPU is requested to present the draft strategy document to a wider stakeholder group including public and private entities with a view to collect their comments and recommendations.
- MAPU is also requested to submit the document for endorsement by the appropriate government bodies.

Based on the workshop’s outcomes the organizers propose the following course of action:

- Capacity development in information need assessment of selected organizations, particularly the ones with decentralized structures that have a direct focus on rural people.
- Undertake information and communication needs assessment studies to have a clearer understanding of needs, capacities and gaps of agricultural producers and rural people.
- Identify potential organizations and institutions that can act as intermediaries between information providers and users and vice-versa.
- Mapping information needs according to user groups, providers and intermediary organizations.