

# Revista

# AIBDA

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**A NEW DIRECTION FOR FAO'S INFORMATION SERVICES  
THE WORLD AGRICULTURAL INFORMATION CENTRE  
(WAICENT)**

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**INTRODUCTION**

The specific components which make up the World Agricultural Information Centre at the Food and Agriculture Organization of the United Nations (FAO), are described in this paper. WAICENT comprises three principal components which are interactive and complementary: FAOSTAT, for the storage and dissemination of statistical information, FAOINFO, which covers hypermedia information, and FAOSIS which covers very specialized information systems. WAICENT has brought a new strategic information approach to the Organization vis-à-vis information production and delivery, along with two fundamental paradigm shifts -paper versus electronic distribution and distribution versus central storage. In this paper particular emphasis is given to the public information initiatives under WAICENT, the specialized information services provided by the various departments and delivered through WAICENT; the full-text document storage and retrieval system study that is part of the initiative; and the Virtual Library Project.

In response to the increasing problem of consolidating the 40 independent databases developed throughout the Organization over the years, a first prototype of WAICENT was presented to FAO's Conference of Member Countries in November 1991, and met with wide consensus. Among the principal aims behind the creation of WAICENT were:

- The need to increase the extent of information coverage handled by FAO;
- Improve and streamline in-house data-management;
- Strengthen and simplify the flow of information to and from the Member Countries;

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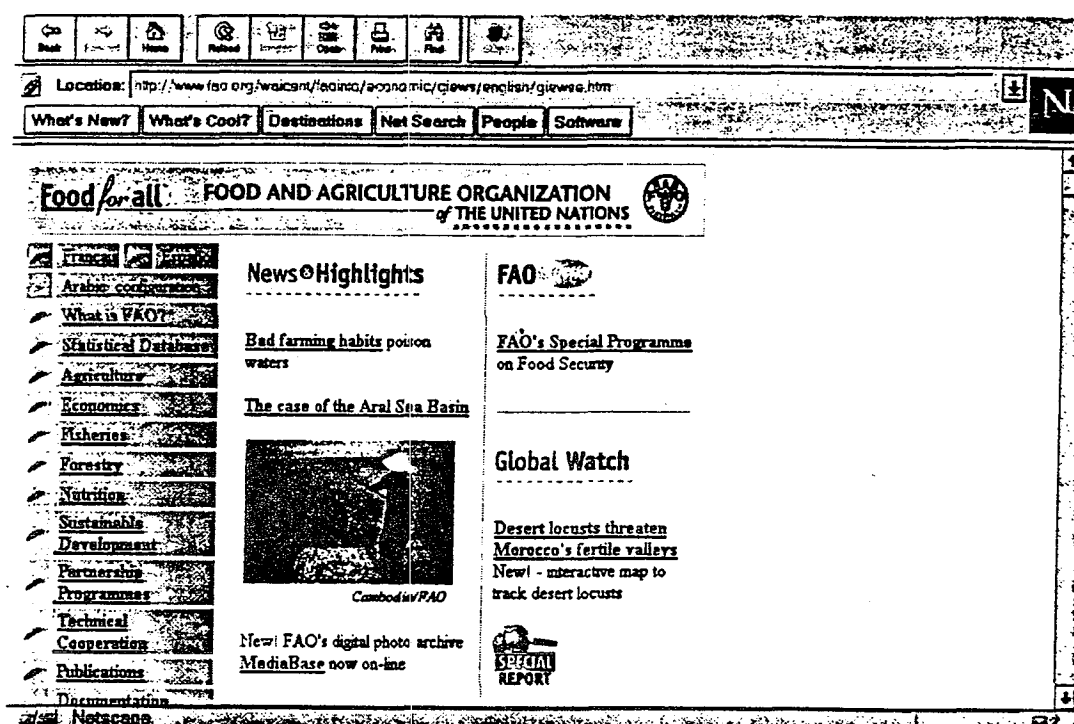
- Reduce processing costs in all phases of receiving, treating and disseminating information;
- Reach FAO's target audiences more effectively.

The practical advantages hoped for were principally three:

1. the capitalization of the intellectual output of the Organization through the maintenance of an institutional memory in electronic format;
2. availability of the information at the user's desk top computer, bringing greater efficiency and cost-effectiveness;
3. the reduction of the burden on the national offices of Member Countries in accessing FAO's information resources.

## WAICENT – THE “UMBRELLA” FOR FAO’S INFORMATION DISSEMINATION

The modus operandi of WAICENT is to foster a corporate atmosphere – to coordinate information, and, through a co-operative and well-structured approach, enhance the content, improve the quality and widen still further its outreach. This is the reason why WAICENT is termed an “umbrella”: the connotation is one of cumulating or protecting, not of controlling.



FAO's Homepage at January 1997  
(<http://www.fao.org>)

The present Homepage of WAICENT is the fruit of much discussion about user needs and the visual concept of accessible information. Developing countries in particular suffer considerable technological limitations at home: a highly colourful graphic-oriented Homepage is pleasing to the eye but in practical terms can lead to users in many countries renouncing a search on the Web because of the high time/cost ratio that elaborate graphics entail.

By simplifying the Homepage, the Organization was also encouraged to adopt a less rigid approach to the process of accessing and navigating through the different levels of information. In fact, the design of the new Homepage is the outward sign of a constantly developing, more elastic policy towards providing information on the Internet. This is because a centralized –and centralizing- system of this type can only work well if it is open-ended.

WAICENT channels information into a base where it can be classified and enhanced, and from which it can be easily and speedily extracted, stored or distributed electronically. The optic of the future is that of sharing information and of providing the user with a vast network of data which does not show rigid boundaries.

Although the system is improving constantly its accessibility and scope, it still needs to be further streamlined and to make the user's task speedy and efficient. This is what is meant to be a truly "user-friendly environment". One approach under consideration at present is that of providing the option for the different types of data base: textual, statistical, graphic, straight from the Homepage; another is to provide word/concept searches which are not chained to departmental, static sequences, but which take the user to any and every information source in FAO. Such a working policy would involve a radical change towards preparing and elaborating search mechanisms in FAO's Web pages; searches would work both "horizontally" and "vertically".

WAICENT is made up of three interactive and complementary components:

- FAOSTAT, for storage and dissemination of statistical information,
- FAOINFO, which covers hypermedia information (viz. Text, images, audio and video),
- FAOSIS, covering specialized information systems. These components display subdivisions on the screen according to individual disciplines.

### **THE FIRST COMPONENT: FAOINFO**

The departments within FAO prepare the text and any graphic images, statistics, tables and information they wish to place on the Web. The FAOINFO

Group is available for advice and consultation, and encourages the originating department to coordinate with other departments for any "linking" between documents needed to highlight more information or provide details of a related programme or initiative which is the domain of another department. This approach is proving beneficial to both the staff and FAO's external image, since the need for a modern design in Web presentations has led to increase in-house co-operation and stimulated interest in the work of other departments. Below are to examples of departmental homepages, viz. The Economic and Social Department (ES), and the Fisheries Department (FI):

Location: <http://www.fao.org/waicent/faoinfo/economic/economic.htm>

What's New? What's Cool? Destinations Net Search People Software

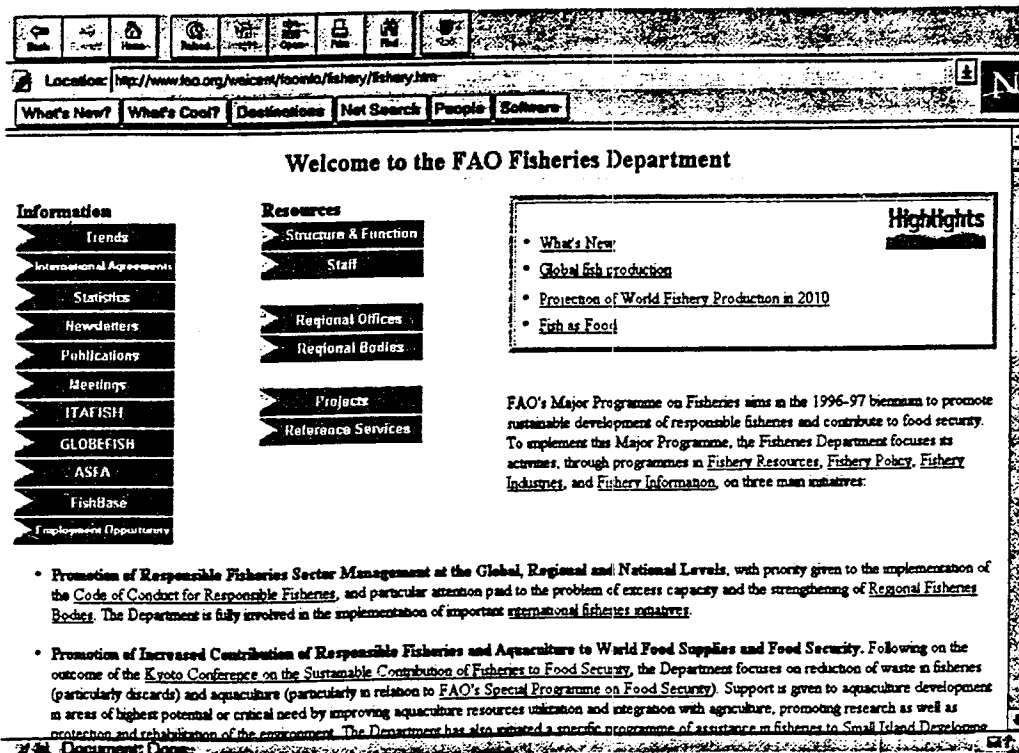
Food and Agriculture Organization of the United Nations  
**ECONOMIC AND SOCIAL DEPARTMENT (ES)**

**Highlights**

- The latest **Food Outlook** report issued by the FAO's Global Information and Early Warning System (**GIEWS**) on the occasion of the World Food Summit confirms an improved outlook for global food supplies as a result of a significant recovery in world cereal production this year. The reports warns, however that despite this overall improvement, food shortages continue to grip several Low-Income Food-Deficit Countries (LIFDCs) mostly due to the effect of civil strife, devastating floods and localized crop failures, and that cereal carryover stocks would remain below minimum safe levels and thus insufficient in the event of a major production shortfall in 1997. Responsible Division: **ESC**
- The **Commodity Market Review 1995-96**, covers market situation and outlook for over 20 individual agricultural commodities as well as forestry and fisheries products. Responsible Division: **ESC**
- **From the International Conference on Nutrition to the World Food Summit**, an analysis of FAO's on-going commitment to improving nutrition and assuring access by all to adequate amounts of good quality and safe food. Responsible Division: **ESN**
- **AVAILABLE NOW!** The Joint FAO/WHO Consultation on **Biotechnology and Food Safety** report provides up-to-date information on this important topic. Responsible Division: **ESN**
- The **Codex Alimentarius**, the code of food standards for all nations.

Document: Done

**Economic and Social Department (ES) Homepage**  
(<http://www.fao.org/waicent/faoinfo/economic.htm>)



**Fisheries Department (FI) Homepage**  
(<http://www.fao.org/waicent/faoingo/fishery/fishery.htm>)

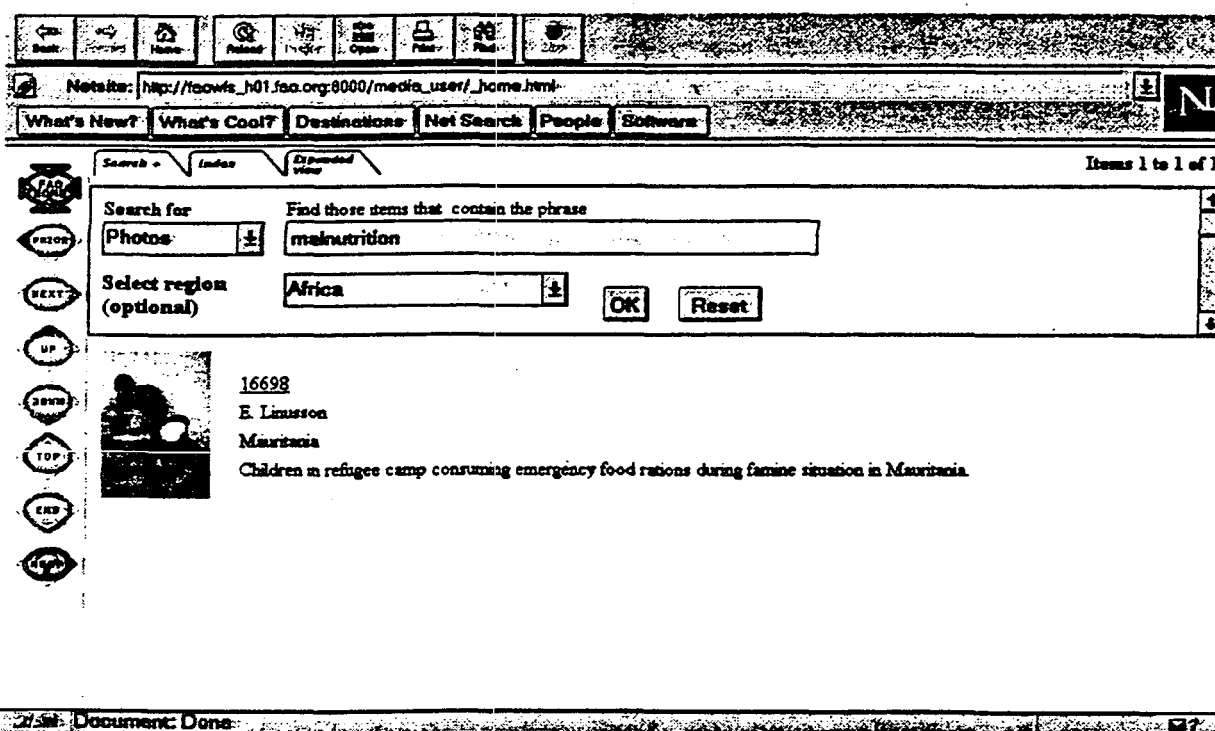
FAO runs a text retrieval system which covers a wide range of information on food and agriculture, including: monthly reports on global food production, a comprehensive collection of internationally accepted food standards, updates on the distribution of animal diseases and plant pests world-wide, and country-level nutrition, fisheries and forestry profiles. Technical and public information can now be delivered in a responsible and comprehensible way.

There are at present several on-going projects under FAOINFO: a public information text and multimedia system, the Virtual Library, FAODOC and the full-text document storage and retrieval system project.

The electronic text and multimedia system. This project has been developed in cooperation with FAO's Information Division (GII) with the objective to communicate on the Internet with the rest of the world, to transmit FAO's first "message" – its Homepage. General interest stories about FAO's work, and how experts and or individuals in developed or developing countries are participating in FAO's programs and utilizing its technical expertise –are transmitted under this system. (For further information please contact Mr. A. Marx, e-mail address: [Andrew.Marx@fao.org](mailto:Andrew.Marx@fao.org)).

The new digital photo archive, known as MediaBase, was launched on the Web in November 1996, during the World Food Summit. Users search the MediaBase

system for pictures and are provided within seconds with "thumbnail" previews of all the pictures fitting their request, together with a short caption and basic information about when and where the picture was taken. Clicking on the number that identifies a picture will bring up a larger version and more detailed textual information. Individuals, institutes, NGOs and journalists will soon be able to purchase and download pictures from a data base that will include thousands more photographs and informational graphics.



**MediaBase – FAO's digital photo archive (example of request generated)**  
(<http://www.fao.org/news/1997/media-e.htm>) – click on MediaBase

## **THE VIRTUAL LIBRARY PROJECT**

This is the name for the ongoing key task of transforming the microfiche-base archive of the David Lubin Memorial Library (one of the world's largest agricultural libraries, founded in 1909), into an electronic archive under WAICENT. In practical terms, this will mean immediate access to FAO documents and publications: to FAO's institutional memory.

The bibliographic databases AGRIS and CARIS are also part of the Virtual Library project.

AGRIS (International Information System for the Agricultural Sciences and Technology) created by FAO in 1974, facilitates information exchange and identifies world agricultural literature, from plant production and protection to agricultural administration, legislation, and extension. AGRIS collects conventional or non-conventional bibliographic references. A co-operative system in which participating countries input references to the literature produced within their boundaries, and, in return, draw on the information provided by the other participants, AGRIS' mandate is similar to the structural philosophy that inspired the establishment of WAICENT.

CARIS, the Current Agricultural Research Information System, is a global network of national agricultural research centres, regional institutions or international agencies and organizations co-operating in an international information system for the collection, organization and dissemination of data on current, ongoing research. CARIS is a management tool for research; a centralized information source which monitors and evaluates, identifies expertise, and reduces duplication by aligning national and regional programmes. The two systems adopt the same country codes, language codes, transliteration schemes, indexing system and multilingual agricultural thesaurus, AGROVOC.

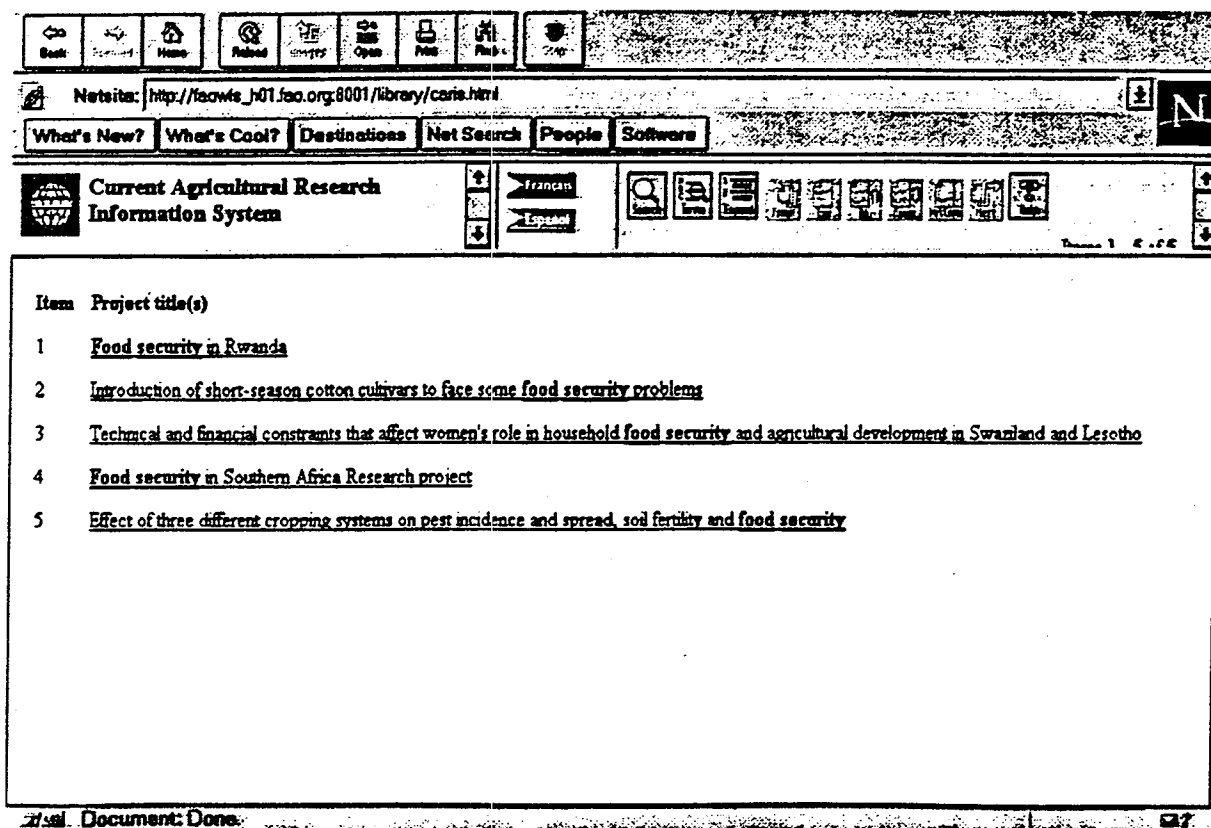
Incorporation into WAICENT will mean that the user can cross-reference on a particular discipline, obtaining data on any on-going research projects in the world, information on the current status of the project, available, relevant literature, national input records, etc. The CARIS data-base is also on the Web now:

The screenshot shows a Netscape browser window displaying the CARIS Database search interface. The address bar shows the URL: [http://faowfs\\_h01.fao.org:8001/library/caris.html](http://faowfs_h01.fao.org:8001/library/caris.html). The page title is "Current Agricultural Research Information System". The search interface includes several input fields and options:

- Search Fields:** Project title(s), AGROVOC Descriptors, Country (English), Year of information, Global Search.
- Search elements:** "food security" (with "contains: all" dropdown), "By ID Technology" (with "By ID Technology" dropdown), and empty fields for AGROVOC Descriptors, Country (English), and Global Search (with "contains: all" dropdown).
- Logic:** Radio buttons for AND, OR, and NOT.
- Buttons:** "Submit Query" and "Clear Form".

CARIS Database  
([http://faowfs\\_h01.fao.org:8001/library/caris/html](http://faowfs_h01.fao.org:8001/library/caris/html))





### **The results of the above search on CARIS database**

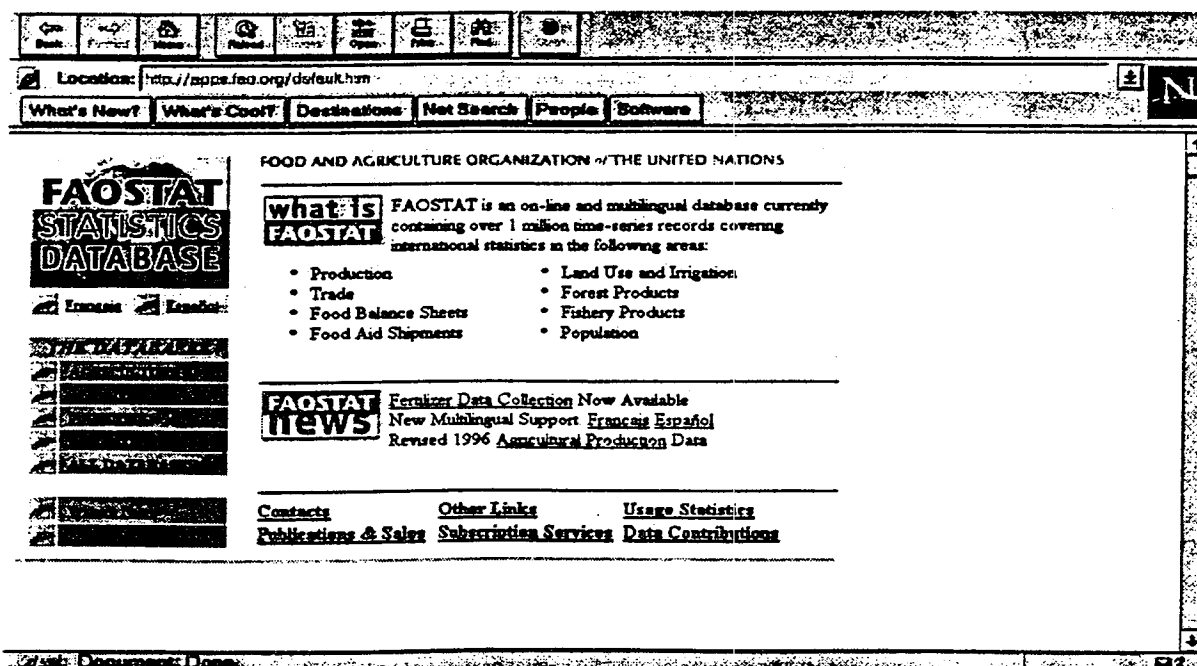
**FAODOC.** This is the acronym for the project which is computerizing FAO's institutional memory. A key component of the Virtual Library project, the long-term objective of FAODOC is to convert publications produced by FAO, through the medium of scanning and SGML coding (below), into full-text files which are downloadable via Internet.

The full-text document storage and retrieval system project. For long-term, vast project such as that of placing FAO's huge store of documents on the Internet, and establishing a fast, easy system of text retrieval, more exhaustive and comprehensive system of coding is needed. The system under study at present (SGML – Standard Generalized Mark-up Language) includes the possibility to define all document structure particulars at the outset. Criteria are chosen and applied via DTDs (Document Type Definitions), and cover, for example, charging criteria (what charging should be done and for that type of access), access restrictions (internal only or public) and simplified summaries of the technical reports. They can also identify any other information that the technical departments find necessary, such as responsibility for accuracy, duration validity, etc. The great advantage of the system is that it can be tailored to the particular needs of the organization using it. It is compatible with most popular presentation formats, such as Adobe PDF (a format that preserves the layout and design of documents regardless of the type of computer

and application on which they were created, viz. MS Word, Adobe PageMaker, QuarkX-press), text and image formats.

## THE SECOND COMPONENT: FAOSTAT

FAOSTAT contains a collection of time-series data on demography, agriculture, fisheries and forestry covering 210 countries and territories to date. Data are available on trade flows, food aid, development assistance, and the results of the World Agricultural Census on household budget and food consumption surveys. Software was developed to allow users to select and organize the statistical information into tables and charts that meet their individual requirements. FAOSTAT provided a regularly updated table of hits/database downloads for each calendar month. Below, the Homepage of FAOSTAT and recent statistics on usage.



The FAOSTAT Statistics Database (<http://apps.fao.org/default.htm>)

Figures accessing FAOSTAT's pages for November and December are as follows:

Month	Page Hits	Accesses	Records downloaded
November**	70,456	33,686	2,926,482
December	48,750	22,479	2,577,415

\*\* November was an exceptional month for FAOSTAT because of the interest in FAO's work generated by the World Food Summit, held in Rome at FAO Headquarters.

### THIRD COMPONENT: FAOSIS

FAOSIS, like FAOSTAT and FAOINFO, gathers together information under its own discipline-heading. At present, there are three information systems accessible under FAOSIS:

- The Global Information and Early Warning System on Food and Agriculture (GIEWS) provides regular bulletins on food crop production and markets at the global level, and situation reports on a regional and country-by-country basis. It answers questions like... How much food is the world producing? What is happening to food prices? Will there be drought in southern Africa this year? Which countries are the most food-insecure? Where are food interventions most needed? This system monitors food supply and demand all over the world, compiles the information and analyses the estimates it receives on trade and food, develops new approaches to early warning and reacts to man-made or natural disaster by sending food supply and demand evaluation missions to the affected countries. The Homepage is shown below. (GIEWS is developed by the Economic and Social Department (ES); for further information please contact Mr. R. Marsili, e-mail address: [Raffaello.Marsili@fao.org](mailto:Raffaello.Marsili@fao.org))

Location: <http://www.fao.org/waicent/foinfo/economic/giews/english/giewse.htm>

What's New? | What's Cook? | Destinations | Not Search | People | Software

## Global Information and Early Warning System on Food and Agriculture (GIEWS)

• Publications and reports *These reports are also available in French and in Spanish*

- Food Outlook
- Foddercrop and Sherrisart
- Food supply situation and crop prospects in sub-Saharan Africa
- Sahel weather and crop situation
- Special Reports and Alerts

• Data base on Western and Central African Countries (pilot site in French)

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS - Commodities & Trade Division  
 For further information please contact **Abdur RASHID, Chief, Global Information and Early Warning Service, FAO, Viale delle Terme di Caracalla, 00100 ROMA - ITALY.**  
 E-mail: [GIEWS1@FAO.ORG](mailto:GIEWS1@FAO.ORG); Tel: (39) 6 5225 3089 or Fax: (39) 6 5225 4495

FAO Home | Economic | Search our site

NOTE: These reports are prepared on the responsibility of the FAO Secretariat with information from official and unofficial sources. Since conditions can change rapidly and information may not always represent the current crop or food supply situation as of present date, further enquiries should be made before any action is taken. None of the reports should be regarded in any way as statements of governmental views.

The designations employed and the presentation of material on these illustrations do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Global Information and Early Warning System on Food and Agriculture (GIEWS)  
<http://www.fao.org/waicent/faoinfo/economic/giews/english/giewse.htm>

- The Domestic Animal Diversity Information System (DAD-IS) is the key communications tool for the Global Programme for the Management of Farm Animal Genetic Resources (AnGR); it provides extensive searchable databases, tools, guidelines, references and contacts. Its objectives are to involve and assist governments, NGOs, international training and research groups in the world to achieve better management of their animal genetic resources. (*DAD-IS is developed by the Agricultural Department (AG); for further information please contact Mr. K. Hammond, e-mail address: Keith.Hammond@fao.org.*)

(<http://www.fao.org/waicent/faoinfo/agricul.htm> (go to “Animal Production & Health” – “Animal Production Service”))

- The FAO Emergency Prevention System (EMPRES) for transboundary animal and plant pests and diseases. The term “transboundary” refers to major epizootic diseases that are of significant importance in economic, trade or food security importance; basically, where the control and management of the importation of animals requires inter-country co-operation for the prevention of major emergencies. The system has two components: Livestock Diseases and Desert Locust Management.
  - (a) Livestock Diseases. EMPRES highlights six particularly serious diseases: Rinderpest, Foot and Mouth, Rift Valley fever, Lumpy skin disease, Contagious bovine pleuropneumonia (CBPP), and Peste des Petits Ruminants (PPR). Principal obstacles in the fight to eradicate these diseases are: lack of adequate diagnostic systems; uncoordinated vaccination policies; and ineffective control measures. One of EMPRES’ key tasks is to develop a global early warning system for its six priority diseases.
  - (b) Desert Locust Management. The first priority of EMPRES is to establish a rational management approach to reduce and eventually prevent desert locust emergencies. A truly efficient early warning system is the foremost effective tool to combat plant pests. A viable early warning system will enhance the monitoring and the evaluation of activities, and increase preparedness and rapidity in the deployment of additional control resources during emergencies.

*(EMPRES is jointly managed by the Animal Health Service (contact person Mr. M. Rweyemamu, e-mail address: Mark.Rweyemamu@fao.org), and the Plant Protection Service (contact person Mr. A. Hafraoui, e-mail address: Abderrahmane.Hafraoui@fao.org) both of the Agriculture Department – AG).*

*/*<http://www.fao.org/waicent/faoinfo/agricul.htm> (go to “Divisions”)

## **PROMOTING AND DISSEMINATING WAICENT'S PRODUCTS**

Explaining the nature and mechanism of WAICENT on the Internet is a logistical exercise in itself. FAO needs to publicize and enhance WAICENT at one and the same time. The WAICENT Web page begins with simple introductory statements on the reason for its creation, on its structure and mechanism: before entering into the various search-levels, users can read about the extent and type of subject-matter covered, and a little of the history of its creation.

Individuals, institutions, organizations and governments all over the world may access the WAICENT centralized database through the FAO Homepage on the Internet. Each department in FAO has presented its wealth of information sources independently; conformity only lies in the search mechanism. FAO hopes that by providing exhaustive on-line information through the World Wide Web, countries which are prey to emergency situations will be alerted fully and ahead of time; there will be real-time contact with experts and immediate relief programmes.

FAO is present on the Internet, both on the World Wide Web and on the Gopher. During the World Food Summit at FAO in November 1996, 6000,000 users accessed FAO's Homepage, and there was a total of 2,000,000 "hits" in the month of November, almost a million more than in October. During and after the Summit five thousand CD-ROMs (mirrors of FAO's Internet pages and of WAICENT itself updated to October 1996) were given away and distributed to affiliated centres, FAO Representations and interested institutes; 25,000 diskettes are disseminated every year containing information collected by FAO. The Organization is promoting wide access to WAICENT through its new "Computerized Information Series" which collects WAICENT products on floppy disks or CD-ROM. The series includes a dissemination module of WAICENT on diskette with statistics collected since 1961 on population, land use, production, trade, food balances, forest products and food aid.

Lack of sufficient means obliges the majority of countries in the developing world to look to other network channels for the information generated by FAO. Most of the information available on the Internet is produced for the Gopher and e-mail distribution, although this necessarily implies the loss of graphical and photographic impact.

The mechanism of WAICENT generates a continuous, circular movement around the globe of information produced by the countries and sent to FAO, where it is analyzed, interpreted and organized, to be then disseminated on diskette, on CD-ROM, in books or on the Internet to the rest of the world. This is the system and the path of the future: information collected and then disseminated in the form most appropriate to the audience requesting it. No target audience is excluded; it is merely a question of defining the best vehicle of information transmission for each client-user.

The era of information technology offers new tools accompanied by a new, sophisticated vocabulary: “accessibility”, “user-friendliness”, “cross-platform portability”, etc. WAICENT is one of the products this technology has made possible.