

# International Training Program

## Use of Geographical Information Systems in Natural Resource Management

September 23 – October 4, 2002—At the premises of CIMMYT—Mexico

Geographic information systems usually abbreviated to GIS deals primarily with geographic or spatial features and attributed information. These capabilities enable resource planners and agricultural researchers to produce a combination of maps, tables, and text associated with a region and prepare action plans or simulate scenarios for planning sustainable agricultural development. These types of activities are widely applied in analysis and planning of many natural resource areas. This training course will be directed to explore the application of GIS in agricultural research and natural resource management. This will be accomplished by describing and evaluating examples on activities/projects in these areas, discussing approaches on the use of GIS for natural resources, developing exercises in the conformation of attribute and geographic data bases and data modeling, and applying GIS analytical techniques. The major objectives of the training program are:

- Acquaint the participant with basic principles of GIS and their use in natural resource management.
- Review techniques for maintaining geographic data bases that will be useful in projects and in experimental activities dealing with agricultural resource management.
- Evaluate and discuss modeling techniques in GIS.
- Discuss and apply GIS analytical capabilities to solve problems associated with agricultural and natural resource activities.

The training course will use a combination of lectures, computer training, and real case studies to enhance problem-solving skills in areas of natural resource and agricultural applications. Following completion of lectures and exercises, the participant will have an improved understanding of appropriate use of GIS techniques for geo-referenced data analysis, agricultural planning, and uses of GIS techniques for marketing and economic evaluation of agricultural projects.

### Agenda

GIS and its support with spatial analytical and display capabilities provide a platform for supporting multiple strategies in the integration of natural resource management. This training course will emphasize in the GIS applications for integrating natural resource from the point of view of agricultural production and environment conservation. The training course will cover:

- Introduction to concepts of spatial analysis and GIS fundamentals for resource management. Review operations to retrieve, summarize, and analyze both the attribute and graphical data embedded within a GIS.
- Develop case studies in soil fertility evaluation, soil erosion, land management, and environment management. Assess climatic impact on crops and agricultural production.
- Develop understanding and applications for combining GIS and crop simulation models and their capabilities, including data manipulation and analysis.

- Develop concepts on use and application of decision support systems DSS using GIS for agricultural production and soil conservation.
- Review concepts of spatial and geographic nature of agricultural data supporting marketing systems.
- Develop skills use to introduce GIS and WEB technology to an organization for supporting agricultural research and agricultural development programs.

### Participants (but not limited to)

- Agricultural researchers and agronomist in charge of extension service activities
- Fertilizer dealers
- Nutrient management specialists and soil scientists

You may subscribe to our e-mail announcements about IFDC training opportunities. Just send an e-mail message to [hrd@ifdc.org](mailto:hrd@ifdc.org) or [hrdu@ifdc.org](mailto:hrdu@ifdc.org) with "subscribe" as the subject message and you will receive periodic announcements.

- Resource management specialists
- Entry level GIS specialists

### Faculty

The program faculty includes scientists from IFDC with experience in GIS applications and decision support systems. In addition, scientists from international, regional, and national organizations will contribute to the program.

The program language will be English.

### Venue

The program will be held from September 23 to October 4, 2002, at the premises of the Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT) in Texcoco, Mexico. Board and lodging will be available at the Center. CIMMYT is located approximately 40 kilometers northeast of Mexico City. Participants are advised to register early to ensure the booking of the facilities.

### Weather

Mexico's climate has something for everyone; it's hot and humid along the coastal plains, and drier and more temperate at higher elevations inland (Guadalajara or Mexico City, for example). The climate around CIMMYT should be pleasant and dry.

### Enrollment

To enroll please mail, e-mail, or fax the attached registration form or enroll on IFDC's web page at [www.ifdc.org](http://www.ifdc.org). The program fee is due 4 weeks before the commencement of the program; thereafter, the late registration fee applies. The program fee will be refunded in full for cancellation made 2 weeks prior to the commencement of the program; thereafter, 80% of the paid fee will be returned and 20% will be charged to cover administrative costs. An organization wishing to enroll more than one participant must supply an enrollment form for each participant.

**Program Registration**  
**International Training Program**  
**Use of Geographical Information Systems in**  
**Natural Resource Management**  
**At the Premises of CIMMYT**  
**Mexico**

**September 23 – October 4, 2002**

**Program Fee: US \$2,100**

**Late Fee (after August 23, 2002): \$2,450**

Please complete this registration form and return the form with payment to IFDC before August 23, 2002. Registration can be done online at [www.ifdc.org](http://www.ifdc.org).

**Please Print or Type**

Full Name (Mr., Ms., Dr.)—as you want it to appear on your attendance certificate

Birthdate \_\_\_\_\_  
(Month) (Day) (Year)

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

City State Zip Code Country

Contact: Telephone Number/Fax/E-Mail: \_\_\_\_\_

Work Telephone \_\_\_\_\_

Home Telephone \_\_\_\_\_

Mobile/Cellular Telephone \_\_\_\_\_

E-Mail \_\_\_\_\_

Fax \_\_\_\_\_

Who Is Your Employer? \_\_\_\_\_

What Is Your Position Held at Your Organization? \_\_\_\_\_

Organization Funding Your Participation \_\_\_\_\_

Date Signature of Applicant

Date Signature of Employer/  
Funding Organization

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## Visa Requirements

A visa may be required to enter Mexico. Participants must ascertain visa requirements from the Mexico Embassy or Consulate in their country of residence well in advance since visa formalities may take a few weeks for completion. Visa application should be done as soon as possible. Please also ensure that any required health formalities are completed in time.

## Costs

The program fee is US \$2,100 per participant for pre-registration and US \$2,450 for late registration. This fee covers registration, surface transportation during field trips, training material, and break refreshments. The fee does not include travel to and from CIMMYT, food and lodging expenses, and other communication expenses. Field trip schedule, living expense estimates and other details will be supplied on request. To enroll please mail, e-mail or fax the attached registration form. The program fee will be refunded in full for cancellation made two weeks prior to the commencement of the program; thereafter, 80% of the paid fee will be returned and 20% will be charged to cover administrative costs.

## About CIMMYT

The Centro Internacional de Mejoramiento de Maíz y Trigo is a non-profit organization and conducts research on maize and wheat to help people overcome hunger and poverty and to grow crops without harming the environment. The International Maize and Wheat Improvement Center—better known as “CIMMYT,” which is its acronym in Spanish—works with research partners worldwide. Because it helps the world’s poorest people, its work is concentrated in developing countries. Its headquarters are in Mexico, and it has 17 regional offices.

**As a non-profit organization, IFDC is not in a position to finance or sponsor any participant.**

## About IFDC

IFDC is a nonprofit public international organization dedicated to increasing agricultural productivity and food production in the tropics and subtropics through the development and use of plant nutrients in sustainable crop production systems. Headquartered in Muscle Shoals, Alabama, U.S.A. IFDC is involved in human resource development, research, and technical assistance in collaboration with public, private, national, and international organizations throughout the world.

**Since 1974 IFDC has held over 600 workshops, study tours and training programs for over 8,000 participants from approximately 150 countries. The programs have covered a wide range of subjects including fertilizer marketing, production, distribution and handling, and numerous specialized subjects. In recent years related courses on sustainability, computer modeling and simulation, fertilizer recommendations, and environmental aspects of fertilizer production and use have attracted participants from around the world.**

**Additional information on our 2002 program agenda will be sent promptly upon request. We welcome your participation and encourage you to share program information with others.**

*IFDC reserves the right to modify or cancel any program or change the dates and/or venue of any program without the liability for compensation.*

### For more information:

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# International Training Program Use of Geographical Information Systems in Natural Resource Management



**Organized by:**

**IFDC—An International Center for Soil  
Fertility and Agricultural Development  
Muscle Shoals, Alabama (U.S.A.)**



**In cosponsorship with:**

**Centro Internacional de Mejoramiento de  
Maíz y Trigo (CIMMYT)**

