

EARTH OBSERVATION SYMPOSIUM (B1)  
International Cooperation in Earth Observation Missions (1)

Author: Mr. EDILBERTO HERNANDEZ  
Mexican Space Agency, Mexico, hernandez.edilberto@aem.gob.mx

CHALLENGES IN EARTH OBSERVATION IN MEXICO

**Abstract**

THIS WORK INTENDS TO SHOW HOW MEXICO HAS DEVELOPED CAPACITIES IN OBSERVATION OF EARTH AND IN GENERAL IN AEROSPACE, AND HOW THE MEXICAN SPACE AGENCY IS CONTRIBUTING TO THIS TASK.

MEXICO HAS BEEN USING SATELLITE IMAGES FOR OBSERVATION OF THE EARTH SINCE THE 1980s WITH THE LANDSAT SATELLITES AND SINCE THE 1990s WITH THE SPOT 2 AND SPOT 4 SATELLITES, FOR THE ESTIMATION OF CROPS OF MAIZE AND BEAN, THAT HAVE BEEN THE FOOD BASIS OF THE MEXICANS.

DUE TO DIFFICULTIES FOR THE TIMELY PROCUREMENT OF IMAGES, ESPECIALLY FROM THE SPOT SATELLITES, AS WELL AS DELAYS IN THE MANAGEMENT OF RESOURCES FOR THE PURCHASE, AND DELAYS IN THE TAKING OF IMAGES OF INTEREST AREAS, THE MINISTRY OF AGRICULTURE, LIVESTOCK, RURAL DEVELOPMENT, FISHING AND FOOD, DECIDED IN 2003 TO INSTALL ITS OWN GROUND STATION FOR THE RECEPTION OF SPOT SATELLITE IMAGES, AND PURCHASED THE ANNUAL TELEMETRY SERVICES UNDER A MULTI LICENSE THAT ALLOWED THE FREE DISTRIBUTION OF SATELLITE IMAGES TO ALL THE MINISTRIES OF THE FEDERAL, STATE, AND MUNICIPAL GOVERNMENT ENTITIES REQUESTING THEM.

THIS GROUND STATION THAT WAS INSTALLED IN COORDINATION WITH THE MINISTRY OF MARINE, AND AFTERWARDS WITH THE MINISTRY OF NATIONAL DEFENSE, HAS GREATLY FACILITATED THE OPPORTUNITY AND SUFFICIENT AVAILABILITY OF SATELLITE IMAGES IN THE MINISTRIES THAT USE THIS TECHNOLOGY FOR THE DEVELOPMENT OF THEIR FUNCTIONS, AS ARE THE MINISTRY OF ENVIRONMENT, AGRICULTURE, LIVESTOCK, RURAL DEVELOPMENT, FISHERIES AND FOOD, NATIONAL SECURITY, INSTITUTIONS SUCH AS THE NATIONAL INSTITUTE OF STATISTICS, GEOGRAPHY AND INFORMATICS, THE NATIONAL COMMISSION FOR THE KNOWLEDGE AND USE OF BIODIVERSITY, AND THE NATIONAL CENTER FOR PREVENTION OF DISASTERS, AMONG OTHERS.

CURRENTLY, THE MEXICAN SPACE AGENCY, CREATED IN 2010, CONSIDERING THE IMPORTANCE OF PROMOTING THE DEVELOPMENT OF THIS TECHNOLOGY, IS FOSTERING THE DEVELOPMENT OF REGIONAL SPECIALIZED SPACE CENTERS, EACH OF WHICH WILL DEVELOP SPECIFIC TECHNICAL CAPACITIES TO BE LINKED WITH THE MEXICAN INDUSTRY, DETONATING THEREFORE THE DEVELOPMENT OF MEXICO IN THE AEROSPACE FIELD, SIMILAR TO WHAT HAPPENED TO THE DEVELOPMENT OF THE AERONAUTICAL INDUSTRY SOME YEARS AGO, AND THAT CURRENTLY HAS SIGNIFICANT PARTICIPATION AT A GLOBAL LEVEL; IN THIS DEVELOPMENT, THE OBSERVATION OF EARTH HAS SPECIAL RELEVANCE, WITHOUT UNDERMINING THE PART OF TELECOMMUNICATIONS AND GEO POSITIONING.