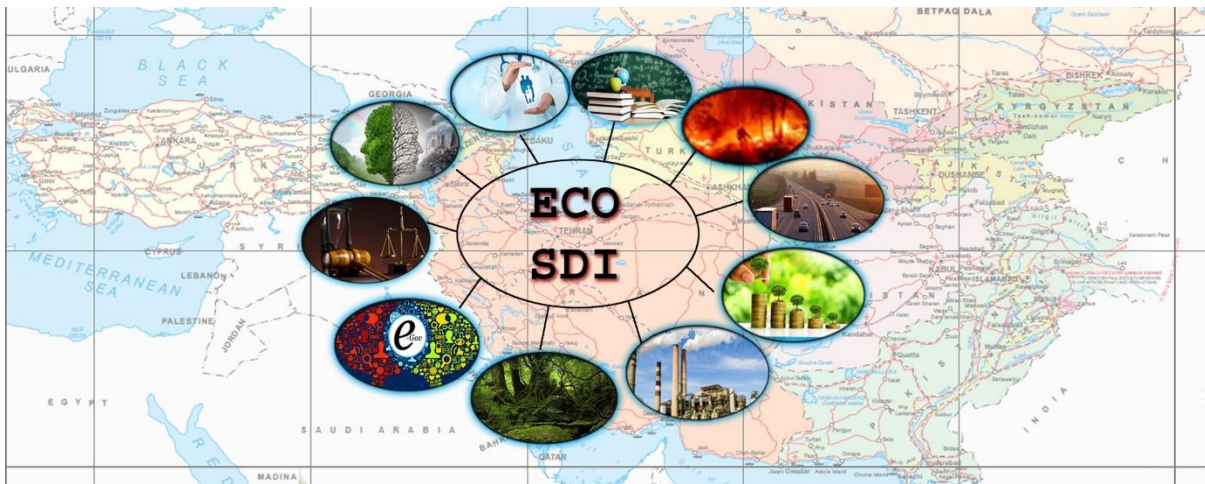


# Economic Cooperation Organization Capacity Building and Training Programmes



## Establishment of ECO-SDI to Combat the Challenges of Food Security in the ECO Region

**5-7 July 2022**

## **I. Background**

A virtual capacity-building workshop titled “Regional Spatial Data Infrastructure (SDI) for Sustainable Development in ECO Countries” was jointly organized by the Survey of Pakistan and Geological Survey of Pakistan with the support of the Economic Cooperation Organization (ECO) from 13-15 September 2021 at Islamabad, Pakistan. The workshop was the first of its kind and was quite a successful event on the topic. A total of 13 presenters from the USA, UK, Turkey, Azerbaijan, Iran, Canada, Ethiopia, Nepal, and Pakistan shared their research relevant to SDI. After the successful completion of the first workshop, the next virtual capacity-building workshop on “Establishment of ECO-SDI to combat the challenges of food security in ECO region” will be held from 5-7 July 2022.

Food security is a huge challenge. According to the Global Food Security Index, the majority of countries in the ECO region are ranked low due to food security challenges. The challenge of food security is so big and complex that no country alone can cope with it, especially in the developing world. Therefore, regional efforts are being made to pool resources to combat the challenges of food security. Spatial Data Infrastructures (SDIs) are being implemented around the world to effectively manage and share spatial data for addressing socio-economic problems including food security. The growing volume of scientific literature suggests that ready access to spatial data empowers policy-makers to make sound decisions for resolving socio-economic problems. In this regard, spatial data is an important resource for combating food security problems.

The accessibility and availability of spatial datasets through ECO-SDI will help to understand the root causes of food insecurity in the region and therefore to prepare relevant evidence-based strategies. ECO-SDI will facilitate access to the needed information such as agricultural land, climate, crop calendar, consumers, farmers, crops, road network, and water resources to combat the food security challenge. All member states i.e. Pakistan, Iran, Turkey, Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan will be benefitted jointly. Moreover, ECO-SDI will certainly support the Hand-in-Hand initiative by FAO to confront food security in countries where national capacities and international support are limited.

## **II. About the Virtual Capacity Building Workshop**

This Virtual Capacity Building Workshop will be jointly organized by the Survey of Pakistan and Geological Survey of Pakistan with the support of the Economic Cooperation Organization (ECO). It will be a six-session workshop held over three days. The program is designed to raise and improve awareness, knowledge, and understanding of the regional SDI, to introduce and inform participants from the ECO region of the overarching strategic framework, the implementation guidance, approach, and available resource materials to operationalize the SDI according to their national as well as regional circumstances. It aims at sharing knowledge and experiences among ECO member countries engaged and interested in operationalizing country-level SDIs, in the battle against the gigantic challenge of food insecurity faced and being faced by the people belonging to the ECO region.

The virtual capacity-building workshop seeks to contribute to the strengthening of nationally as well as regionally integrated geospatial information management towards the production, dissemination, and application of geospatial information for the implementation of national as well as regional development priorities. The workshop will provide a networking opportunity for geospatial professionals of ECO countries, as well.

The objectives of the workshop are to:

- a) Raise awareness, and improve knowledge and understanding of the use of spatial information to combat the challenges of food security
- b) Introduce an approach to understanding challenges of food security in the ECO region to implement regional SDI to take up such challenges.
- c) Share national experiences in designing and developing country-level Action Plans for SDIs to combat socio-economic challenges.

## **III. Relevance of this workshop to the ECO Region**

The Economic Cooperation Organization (ECO) region is facing multiple challenges such as the COVID-19 pandemic, climate change, food security, rapidly depleting natural resources, and energy crises. To address these challenges, collaborative efforts by the ECO member states

are required. This includes sharing geospatial information. Regional SDIs are being implemented to enable sharing of geospatial information resources held by member states.

The establishment of Regional Spatial Data Infrastructure (RSDI) for the ECO Region, will act as a catalyst in regional efforts for combating the food security challenges faced by the region as well as promotion of scientific data & knowledge sharing, research, and training in various fields of geomatics, including geodesy, cartography, photogrammetry, Geographic Information Systems (GIS), and Remote Sensing (RS).

#### IV. Participants

The Virtual Capacity Building Workshop is open to interested participants, but prior registration is required for all interested participants. The **Registration Link** is <https://forms.gle/29KQBr8ZaAM456c29>. Participants are expected to be geospatial professionals of ECO Member States with an aim to address and improve the availability, accessibility, and application of geospatial information nationally and regionally, and to realize the vital and integrative role of geospatial information to combat the challenges of food insecurity.

#### V. Provisional Annotated Agenda

The provisional annotated agenda for the Virtual Capacity Building Workshop is as follows:

<b>Day 1: July 5, 2022</b> <i>12:00 – 13:00 hrs</i> <i>(UTC+5, Pakistan time)</i>	<b>Inauguration</b> <ul style="list-style-type: none"> <li>❖ Welcome address by the Honorable <b>Surveyor General of Pakistan</b></li> <li>❖ Group. Photo</li> <li>❖ Address by <b>Deputy Secretary-General ECO</b></li> </ul>
<i>13:00-13:40 hrs</i>	<ul style="list-style-type: none"> <li>❖ ECO-SDI in the Context of Sustainability and UN SDGs <b>Dr. Muhammad Nawaz</b>, National University of <b>Singapore</b></li> </ul>
<i>13:40-14:20 hrs</i>	<ul style="list-style-type: none"> <li>❖ SDI Fabrication for ECO: A step towards food security and sustainable agriculture <b>Dr. Farha Sattar</b>, Charles Darwin University, <b>Australia</b></li> </ul>
<i>14:20 -14:40 hrs</i>	<b>Lunch Break</b>
<i>14:40-15:20 hrs</i>	<ul style="list-style-type: none"> <li>❖ Using Earth Observation Data to Support Agricultural Management in Azerbaijan <b>Miss Sona Guliyeva</b> , GIS trainer /GIS center, <b>Azerbaijan</b></li> </ul>

<i>15:20-16:00 hrs</i>	<ul style="list-style-type: none"> <li>❖ Impact of Climatic variabilities on food security in Pakistan: Inferences from Geospatial Technologies <b>Prof. Dr. Syed Amer Mahmood</b> <b>Chairman</b> Department of Space Science, <b>Pakistan</b></li> </ul>
<i>16:00-16:40 hrs</i>	<ul style="list-style-type: none"> <li>❖ NSDI for Mapping and Monitoring of Agricultural Production in Pakistan - Opportunities and Challenges <b>Dr. Muhammad Imran</b>, PMAS-Arid University, <b>Pakistan</b></li> </ul>
<i>16:40-17:20 hrs</i>	<ul style="list-style-type: none"> <li>❖ NSDI vs Cadastre System for Agricultural-based Economic Development <b>Mr. Asmat Ali</b>, Survey of <b>Pakistan</b></li> </ul>
<i>17:20-18:00 hrs</i>	<ul style="list-style-type: none"> <li>❖ Integrated Framework for information sharing: Food Security Perspective <b>Mr. Munir Ahmad</b>, Survey of <b>Pakistan</b></li> </ul>

<b>Day 2: July 6, 2022</b> <i>12:00 – 12:40 hrs</i> <i>(UTC+5, Pakistan time)</i>	<ul style="list-style-type: none"> <li>❖ High-cadence satellite data for operational crop monitoring of large areas <b>Prof. Don Grant Australia &amp; Dr. Giles D’Souza, UK</b></li> </ul>
<i>12:40 -13:20 hrs</i>	<ul style="list-style-type: none"> <li>❖ Spatial Microplanning for Socio-economic development <b>Dr. Tayyab Shah</b>, University of Saskatchewan, <b>Canada</b></li> </ul>
<i>13:20-14:00 hrs</i>	<ul style="list-style-type: none"> <li>❖ Food Security in Iran and Strategy Plan Customization <b>Miss. Zohreh Osanlou</b>, National Cartographic Centre <b>Iran</b></li> </ul>
<i>14:00-14:20 hrs</i>	<b>Lunch Break</b>
<i>14:20-15:00 hrs</i>	<ul style="list-style-type: none"> <li>❖ Predicting Crop Yield from Satellite Imagery in Thrace Region (Turkey) to Feed NSDI Data Store <b>Mr. Abdulvahit Torun</b>, Middle East Technical University, <b>Turkey</b></li> </ul>
<i>15:00-15:40 hrs</i>	<ul style="list-style-type: none"> <li>❖ Remote sensing-based pre-harvest crop area estimation for Punjab, Pakistan <b>Dr. Ahmad Khan</b>, University of Maryland, <b>USA</b></li> </ul>
<i>15:40-16:20 hrs</i>	<ul style="list-style-type: none"> <li>❖ Monitoring Drought in Pakistan: Teleconnections and Uncertainties in Changing Climate <b>Dr. Muhammad Latif</b>, Department of Meteorology COMSATS University <b>Islamabad</b></li> </ul>
<i>16:20-17:00 hrs</i>	<ul style="list-style-type: none"> <li>❖ Integrated Context Analysis on Food Security and Natural Hazard <b>Mr. Iftikhar Abbas</b>, UN World Food Programme</li> </ul>
<i>17:00-17:40 hrs</i>	<ul style="list-style-type: none"> <li>❖ Geospatial applications in Food security analyses and Mapping by Food and Agriculture Organization (FAO) <b>Ms. Mehwish Ali</b> (GIS Specialist, FAO Pakistan) <b>Mr. Raja Ajmal Jahangeer</b> (Food Security Analyst, FAO)</li> </ul>

<b>Day 3: July 7, 2022</b> 13:20 – 14:00 hrs (UTC+5, Pakistan time)	❖ Future Food Security: Challenges, opportunities and way forward <b>Prof. Dr. Mohammad Akmal</b> , Department of Agronomy, The University of Agriculture, Peshawar, <b>Pakistan</b>
14:00 – 14:40 hrs	❖ Innovative Climate Smart Irrigation to Enhance Food Security <b>Dr. Bashir Ahmad, Director and Principal Scientific Officer</b> Pakistan Agriculture Research Council (PARC)
14:40 – 15:20 hrs	❖ Reclassification of Agroecological Zones of Pakistan for Sustainable Agriculture and Natural Resource Management <b>Dr. Arshad Ashraf, Principal Scientific Officer</b> Pakistan Agriculture Research Council (PARC)
15:20 – 16:00 hrs	❖ Role of Plant Breeding in Food Security and Adaptation to Climate Change <b>Prof. Dr. Naqib Ullah Khan</b> Department of Plant Breeding and Genetics University of Agriculture, Peshawar
16:00 – 16:40 hrs	❖ The Challenges of Seismic Hazards to Food Security: Case of Khyber Pakhunkhwa, Pakistan <b>Prof. Dr. Noor Jehan</b> VC (Ex) Women University Swabi, <b>Khyber Pakhtunkhwa</b>
16:40 – 18:00 hrs	❖ Recommendations <b>Mrs. Nagma Haider, Director</b> Geological Survey of Pakistan ❖ Concluding remarks by the Honorable <b>Director-General</b> Geological Survey of Pakistan

## VI. Organizers

Survey of Pakistan (<http://surveyofpakistan.gov.pk/>) and Geological Survey of Pakistan (<https://gsp.gov.pk/>) will jointly organize the workshop with the collaboration of the Secretariat of ECO (<http://eco.int/>). The venue of the workshop is, Geoscience Advanced Research Laboratories, Park Rd, Chatta Bakhtawar, Islamabad.

## VII. Point of Contact

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**Link to Previous Event**

<https://drive.google.com/drive/folders/1as4ZM1wamX4JkziMzKYLvyQbxBBA9DRO>