Youth forum on Innovation Geospatial Information Applications

Enhancing Resilience in the Greater Mekong Sub-region

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Coordination Meeting for Implementing ”Intelligent Technology for Geospatial Management on Agricultural”

• Conducted 3 courses of training to related the technology for Geospatial management in Cambodia with GISTDA and AIR_CAS which supported by UNESCAP:
  • supporting officials in utilizing the CLM Rice Monitoring System.
  • delve into an analysis form of the Crop Watch Platform, fostering a bilateral exchange of insights.
The Geospatial Information Applications for Rice Monitoring in CLM Countries
Crop Watch Platform
16 Participants
7 Organization

CAMBODIA

Capacity Building (Completed Activities)
Validation Framework by using INAHOR with ALOS-2

The data of non-productive provinces are determined by DPS based on INAHOR value.

- There is no change with the last year's value.
- The tendency of increase and decrease is different from other districts.
- The difference is large with last year's value.
- The difference with INAHOR value is large.

Data of non-productive districts are determined by province office based on INAHOR value.

New Framework

Field Survey for Validation and Collecting Training Data
Challenge

1- **Early detection of crop diseases and pests**: Crop monitoring to detect and identify crop diseases and pest infestations at an early stage. It can be timely interventions on pesticides or the implementation of disease management strategies to prevent the spread of diseases and minimize crop losses.

2- **Monitoring of crop growth and development**: this stage of growth, health, and overall condition ad information can help farmers decisions regarding irrigation, fertilization, and other agronomic practices to optimize crop growth and yield.

3- **Assessment of crop health and stress**: Crop monitoring can be used to assess nutrient deficiencies, and environmental to implement appropriate measures to address these issues and ensure the health and productivity of their crops.

4- **Prediction of crop yield and production**: to monitoring on data management on time which can be used to predict crop yield and production. This information can be valuable for farmers, policymakers, and other stakeholders in planning and decision-making related to food production, distribution, and market supply.

5- **Monitoring of climate and weather patterns**: to monitor climate and weather patterns, including temperature, rainfall, and humidity. to anticipate and prepare for weather related risks and challenges, such as droughts, floods, and extreme weather events.
Challenge (Cont’s)

6- **Remote sensing and satellite imagery:** Using satellite imagery and remote sensing technology, it is possible to monitor crop growth, land use, and changes in agricultural practices over time. This can provide valuable data for understanding the impact of climate change, land degradation, other environmental factors on smallholder agriculture.

7- **Mobile technology:** Mobile phones and other digital tools can be used to collect and analyze data on agriculture stakeholders, such as crop yields, market prices, and weather patterns. This information can help farmers make more informed decisions and improve their productivity.

8- **Field surveys and interviews:** Conducting field surveys and interviews with farmers can provide valuable insights into their farming practices, challenges, and needs. This information can be used to design targeted interventions and support programs to improve smallholder agriculture.
Recommendation

1. **Integrated Approaches**: Encourage the integration of multiple data sources and methodologies for comprehensive crop monitoring on Earth observation data with ground validation methods like crop cutting experiments to enhance the accuracy and reliability of yield models to support the development of advanced remote sensing technologies, machine learning algorithms, and data analytics tools for more accurate and timely crop yield predictions.

2. **Capacity Building**: Required Training workshop especially human resource development subject Master of space technology.

3. **Data management**: Required owner operating system related to space technology innovation.

4. **Budgeting Program**: Cambodia required to foster the program remote sensing and satellite is potential topics to predicted early stage of drought and flood for crop monitoring timely.
Thank You