

GIS Working Group Meeting – 7th December 20213

Chair: Zaw Win (MIMU)

Participants: ADRA, ARC, ADPC, BS, BRAC Myanmar, CDE, CP AoR, COAR, DRC, FSCMM, GH, IPA, ICRC, IFPRI, IOM, JOICFP, MAUK, MC, MSU, MDO, HALO, UN-Habitat, UNICEF, UNOCHA, UNODC, UNRCO, WFP, WHO, WVM, WWF, WF and MIMU (53 participants from 32 organisations)

1 Methodology for Crop Mapping in Myanmar – ADPC

SERVIR, a unique partnership between US-AID and NASA, uses geospatial satellite data to address climate change in over 40 countries. They have now expanded to Southeast Asia and focus on weather, climate, water resources, disasters, land use, ecosystem, and food security.

Introduction

- ADPC introduced the Rice Mapping initiative, highlighting the services provided and the challenges addressed by the project. Topics included the coverage of rice-producing states/regions, specific time period of monsoon season, and the need for continual mapping and data updates.

Methodology Overview (2021-2022)

- The presenters detailed the consistent methodology used in recent years, primarily on imagery sources from satellite sensors such as Sentinel-1, Sentinel-2, and Planet. The importance of specific bands in the model, such as Sentinel-1 VV, VH, and VH/VV ratio bands, was also discussed.

Methodology Overview (2017-2020)

- The methodology for 2017-2020 mainly utilized Sentinel-1 imagery, with emphasis on inundation patterns. Sentinel-2 and biannual Planet imagery were used for visual inspection. A chart summarized the methodology and highlighted the significance of Sentinel-1 bands in the model.

Data Processing and Model

- The presenters explained the data processing and model development, including the use of reference points in Google Earth Engine (GEE) for training data in analysing 2021 data. A Random Forest model was employed for binary rice/other pixel classification, generating probability maps. Continuous efforts to improve model performance were outlined, involving the study of each year's probability maps and adjustments to training data.

Validation and Confidence

- Validation processes for 2021-2022 were presented, involving the Pontus method to estimate area and assess uncertainty based on a stratified random sample from the model output, and interpretation using Collect Earth Online (CEO). The adjustment of area estimates according to an accuracy matrix was also discussed.
- Validation processes for 2017-2020 included comparing maps with 2021-2022 maps and visually inspecting suspect areas.

Results

- Preliminary results for 2017-2020 were presented, indicating comparable estimates to GAD data despite differences in data and methodology. The continuous rice mapping approach was emphasized for a better understanding of factors influencing food security in Myanmar.

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| | <p>Conclusions and Future Work</p> <ul style="list-style-type: none"> The meeting concluded with the presenters outlining future work, including finalizing the historical model, repeating the process for the 2017-2020 summer seasons, mapping and rigorously validating specific regions in 2021 and 2023, and revising the model based on insights gained from historical mapping. |
| <p>2</p> | <p>Advanced Disaster Analysis and Mapping (ADAM Project) – WFP</p> <p>The ADAM platform is a tool that provides real-time updates on tropical storms, earthquakes, and other disaster-related emergencies. It offers a free-subscription service for users to access the platform and receive real-time data on various regions.</p> <p>The platform has three main features: forecasting, monitoring, and reporting. Users can subscribe to the platform to receive real-time updates on rainfall, flooding, and other related information. The platform also provides a report on the locations and statistics of people living in affected areas.</p> <p>For monitoring and reporting, users can use various tools and databases such as GEM, GEE, ECMWF, GDACS, NASA models, and other cloud-based data. The platform also offers support to review previous data and API integration.</p> <p>The platform is currently available on the website, where users can access the data and request updates. The platform has already analysed over 200 disasters, fulfilling the request from over 20 humanitarian aid organizations. The platform has been recommended for organizations to use when making disaster-related assessments.</p> <ul style="list-style-type: none"> ADAM about page – gis.wfp.org/adam ADAM Alerts – ADAM report sent via email if subscribed (Floods, Earthquakes, Tropical Storm) ADAM Live Map – View last 14 days of events and download GIS data ADAM Dashboard – download historical ADAM events ADAM API – programatically access historical events, reports, disaster data ADAM Annual Report |
| <p>3</p> | <p>MIMU</p> <p>Recently Finished Activities</p> <ol style="list-style-type: none"> 5W Products as of Oct 2023: The presenter provided an overview of the recent 5W products, highlighting key achievements and deliverables. IM Workshop to WHO: A workshop/training on Information Management was conducted for WHO, focusing on relevant tools and methodologies. Basic QGIS Training for UN-Habitat: The team successfully conducted a Basic QGIS training session for UN-Habitat. PowerBI Training for IMN Members: A training session on PowerBI was organized for members of the Information Management Network (IMN), aiming to improve data visualization and analysis capabilities. <p>Current Activities in Dec 2023</p> |

1. Updating PCode: The team is actively involved in updating the Pcode with village data from partner organisations.
2. Updating Baseline Dataset: Work is underway to update the baseline dataset, incorporating the latest information from internationally published sources.
3. IM Workshop to IMN Members: An Information Management workshop is scheduled for IMN members.
4. Basic QGIS Training to IMN Members: Continuing the training efforts, a Basic QGIS training session is also planned for IMN members.

Activities in Early 2024

1. Assessment/Publication Tracking: The team will continue assessments and publications tracking in regular rounds.
2. Advanced Excel Training: A training on Advanced Excel is scheduled, targeting colleagues from partner organisation with basic Excel knowledge.
3. Launching PCode Version 9.5: The launch of PCode Version 9.5 is planned, based on the current work mentioned above.
4. 5W Updates with Support Sessions: Updates to the 5W products will go ahead in the first regular round, accompanied by support sessions to assist users in navigating the data collection processes.

4 AOB

Next meeting is tentatively scheduled for Q2 2024.