USAID/BURMA Buy-in

Geospatial Applications for Food Security and Sustainable Landscapes

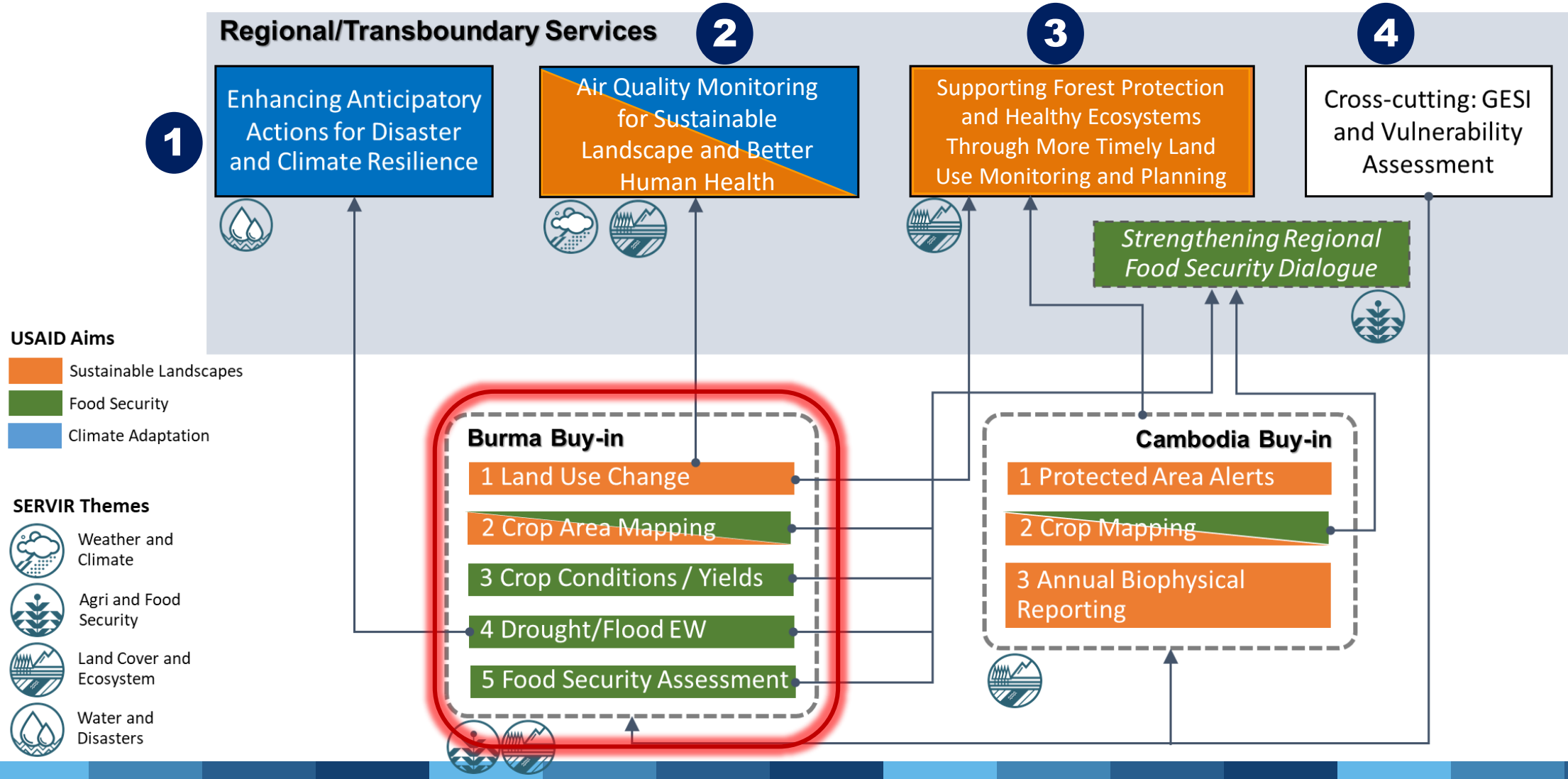
August, 2023

Development problem

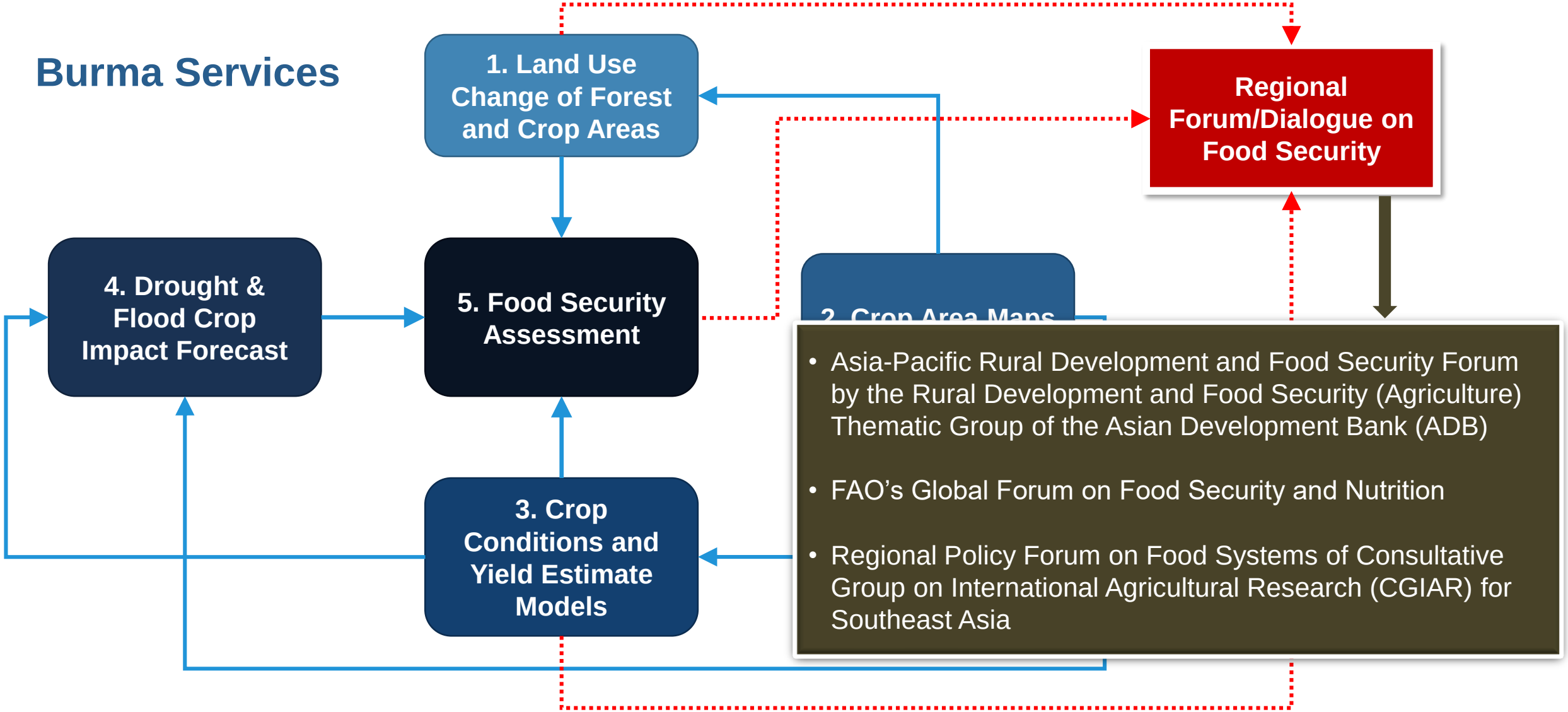
- Hunger and the need for humanitarian assistance has grown even more complex and severe across Myanmar, with the triple impact of pre-existing poverty, COVID-19 and the current political crisis.
- More than a year on from the military takeover, the economy is spiraling downwards, leaving millions of people struggling to find viable livelihoods, basic services and, increasingly, facing challenges to meet their basic food needs.
- Food insecurity is rising, with conflict, increasing commodity prices, access and movement restrictions all playing a part.
- More than **13.2 million people** (1 in 4) across the country are now moderately or severely food insecure, with concerning implications for malnutrition in 2022.

Source: WFP, 2022

Proposed Regional Services of SERVIR-SEA and Linkages with the Bilateral Buy-ins from USAID/Burma and USAID/Cambodia



Burma Services

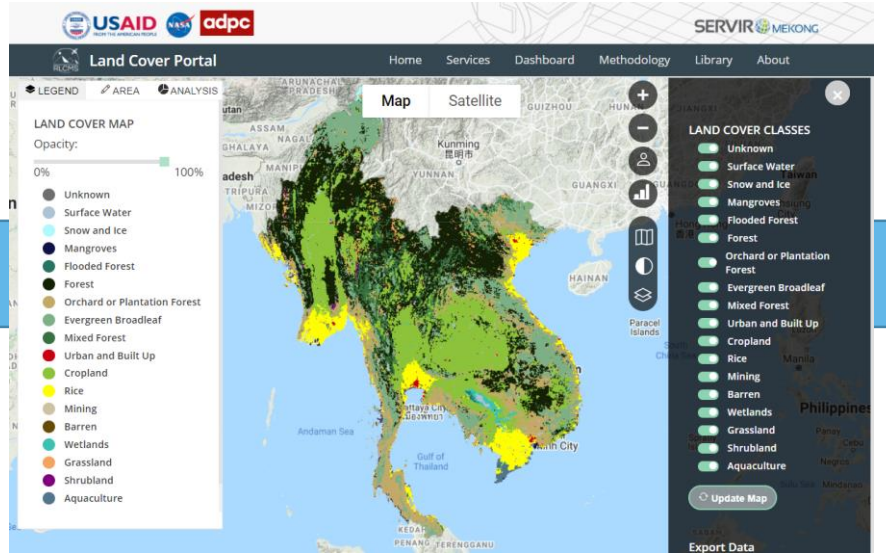


Burma Service 1: Land Use Change of Forest and Crop Areas

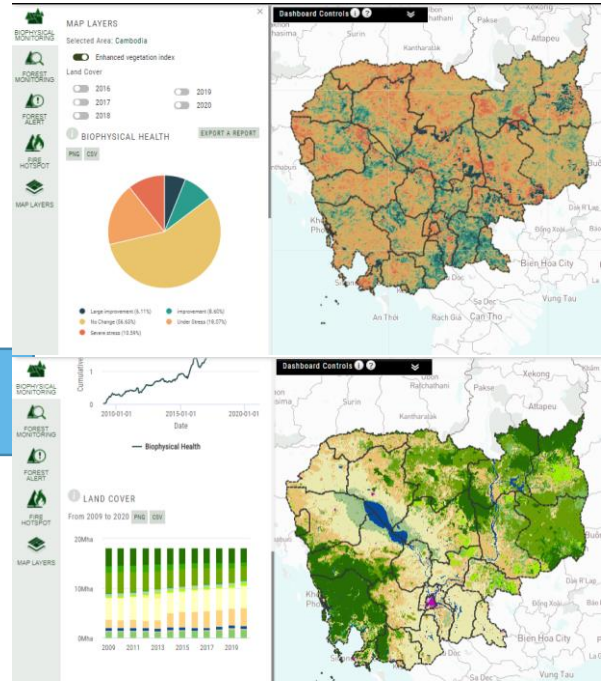
Objective: To understand land-level impacts of a multitude of confounding factors: conflict and violence, closing of international movements and limitations to domestic movements, protectionist policies, market access shifts, and climate change

Outputs of Burma Service 1

- An interactive web-based **Burma Landscape Monitoring** tool – *2 versions*



Regional Land Cover Monitoring System



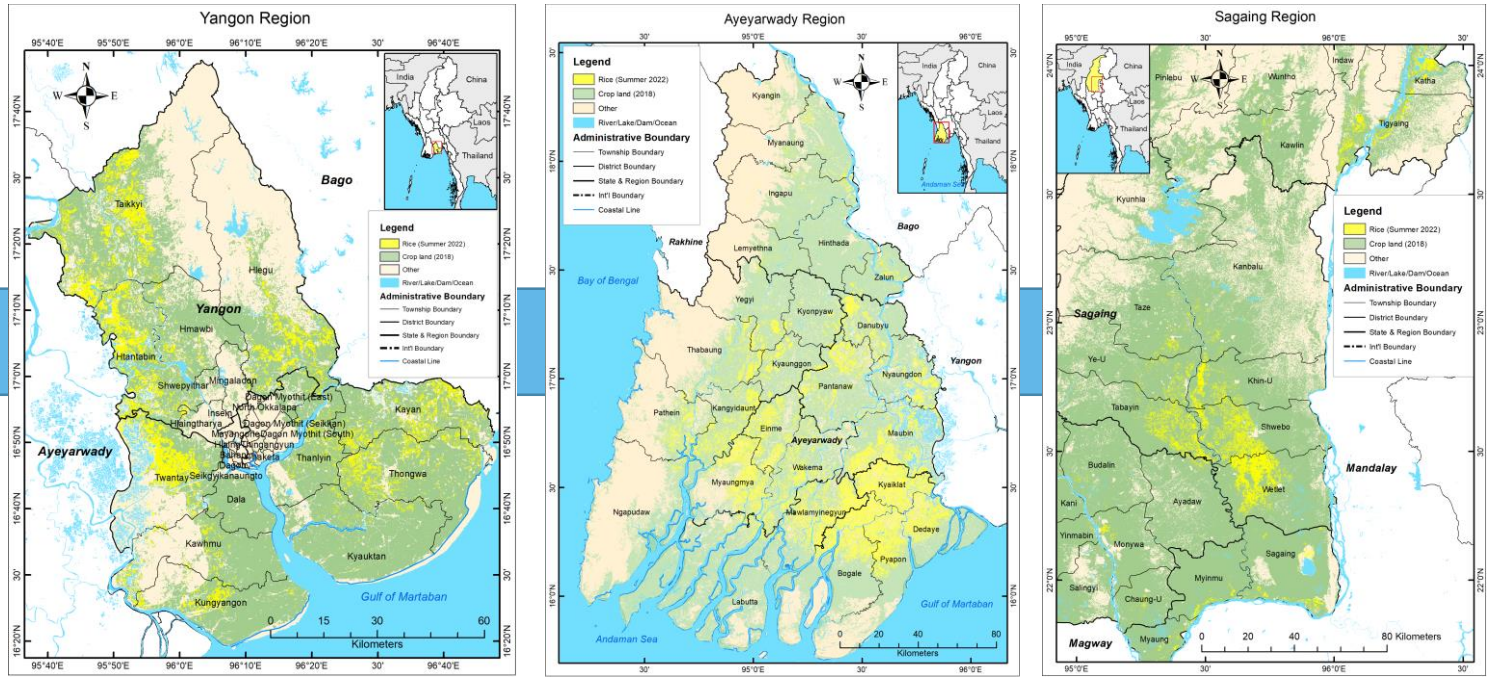
Cambodia Biophysical M&E Dashboard and Forest Alert System

Burma Service 2: Crop Area Mapping

Objective: To determine if the crop planting areas have changed from the previous years, as the first step to understand the overall change in the crop production change in Burma.

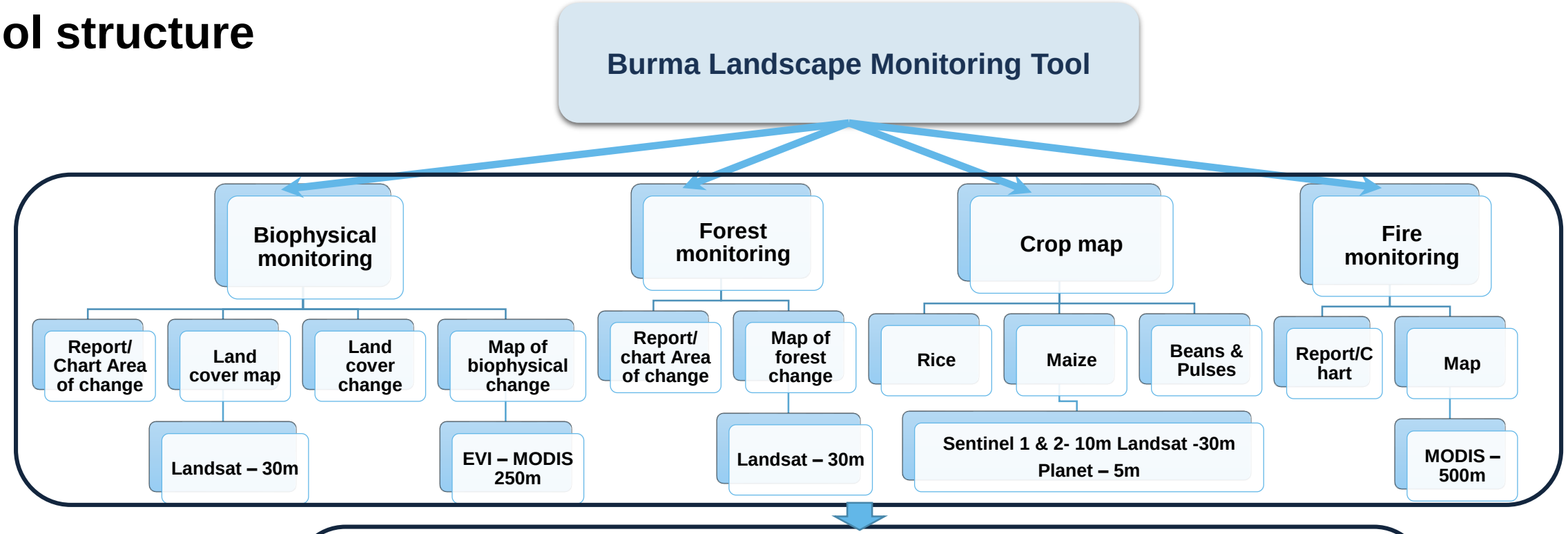
Outputs of Burma Service 2

- Maps of seasonally updated rice areas for 11 regions/states
- Maps of annually updated maize areas for Shan state
- Maps of annually updated pulses areas for key pulses growing townships in Magway



Pilot Study (2022) for USAID Transparency and Inclusive Growth Activity (TIGA)

Tool structure



Tool interface

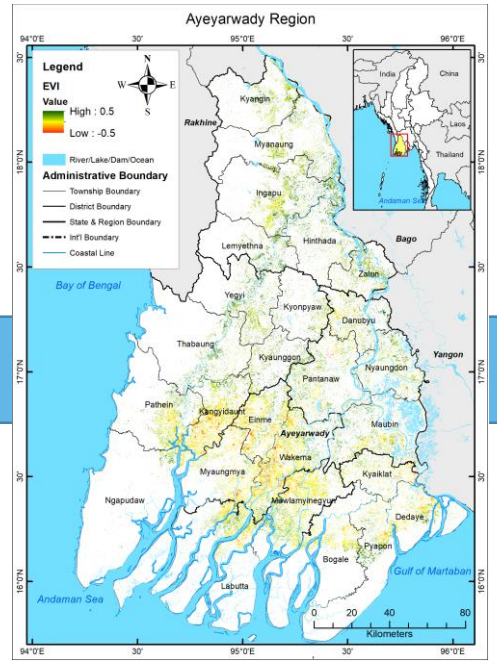
- View map
- Download table, chart
- Download data
- Export reports

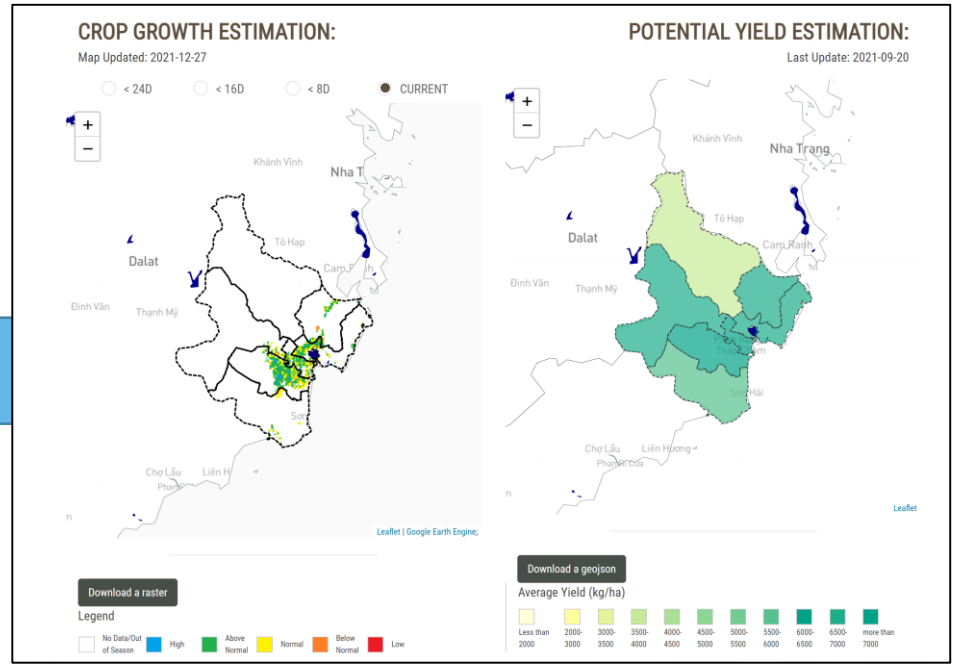
Burma Service 3: Crop Conditions and Yield Estimates Modeling

Objective: To estimate the conditions and yields of key crops, as one indicator of food security in Burma

Outputs of Burma Service 3

- ***Crop condition maps*** for rice, maize, and pulses for different phenological stages, updated annually
- ***Yield estimates*** for rice, maize, and pulses



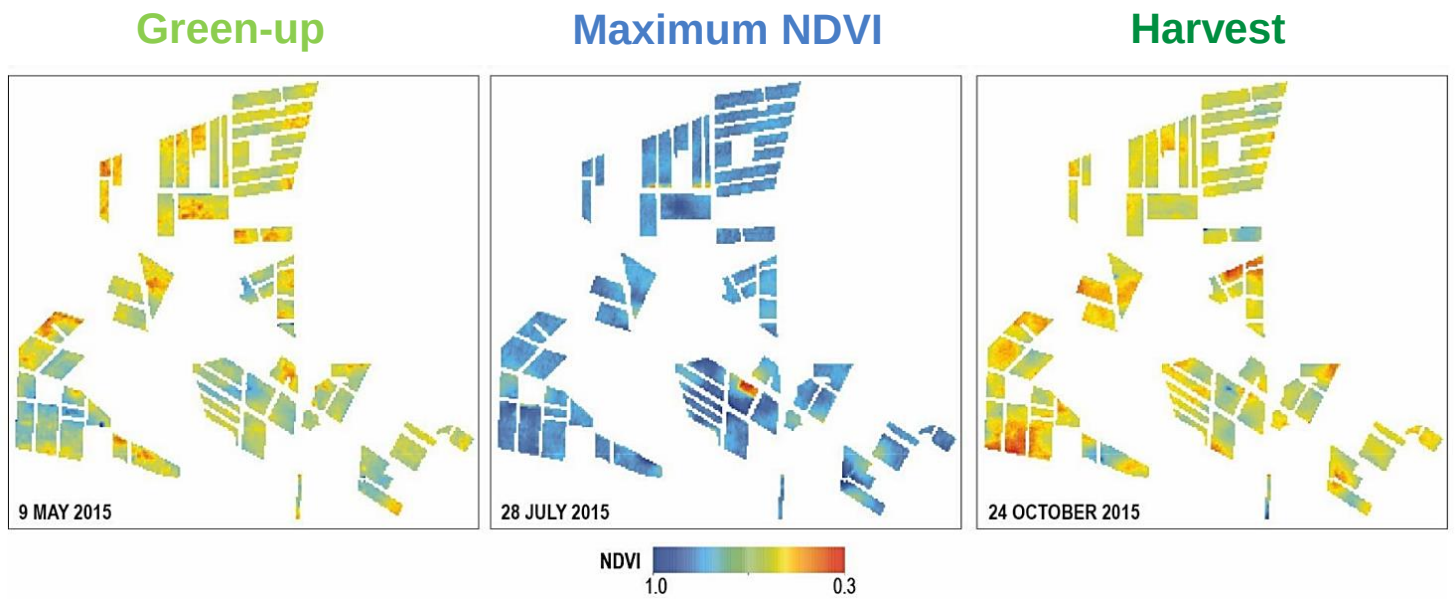


Pilot Study (2022) for USAID Transparency and Inclusive Growth Activity (TIGA) & Rice Yield Estimation in Ninh Thuan Province, Vietnam

Burma Service 3: Crop Conditions and Yield Estimates Modeling (Contd.…)

Outputs of Burma Service 3

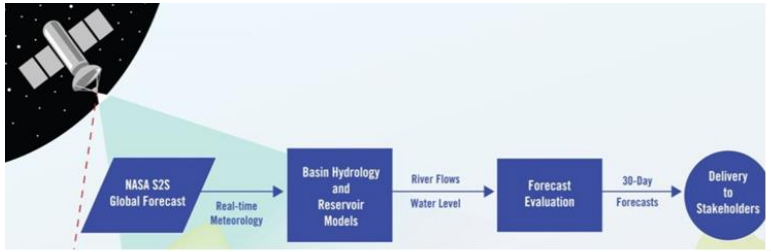
- Rice crop map showing different ***phenological stages***, updated annually



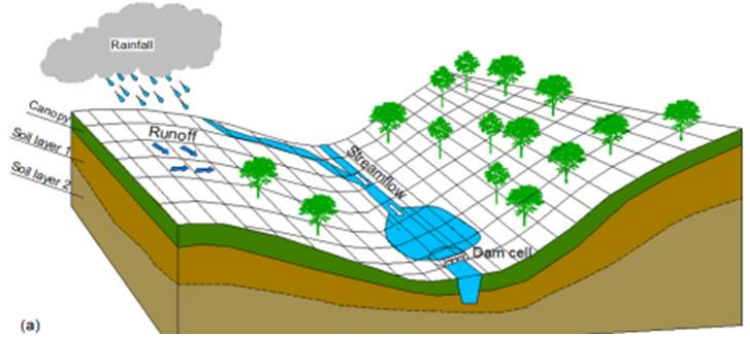
MODIS NDVI images at the dates of the key seasonality parameters of rice crop for 2015 (Onojeghuo et al., 2015)

Burma Service 4: Drought & Flood Crop Impact Forecast

Objective: To identify areas at risk from flood and drought; to estimate damage from flood and drought on crops; and to devise an early warning system for Burma

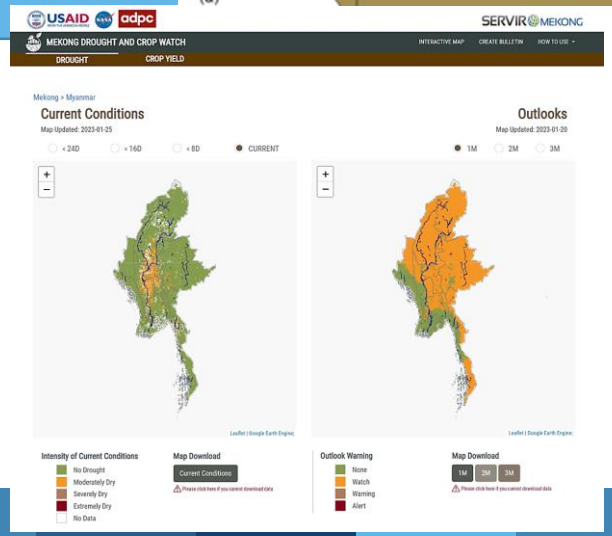


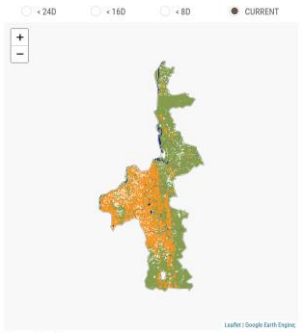
Sub-seasonal-to-Seasonal Forecasting using Earth Observation technologies



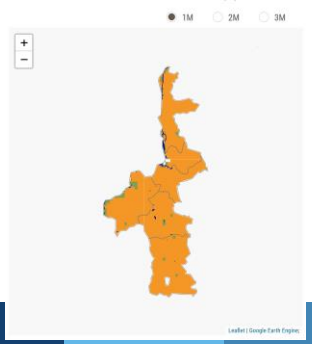
Outputs of Burma Service 4

- Web-based flood and drought forecasting system
- Crop impact assessment module
- Comprehensive early warning system for potential crop damage
- Operational use of the early warning system by NGOs and international organizations





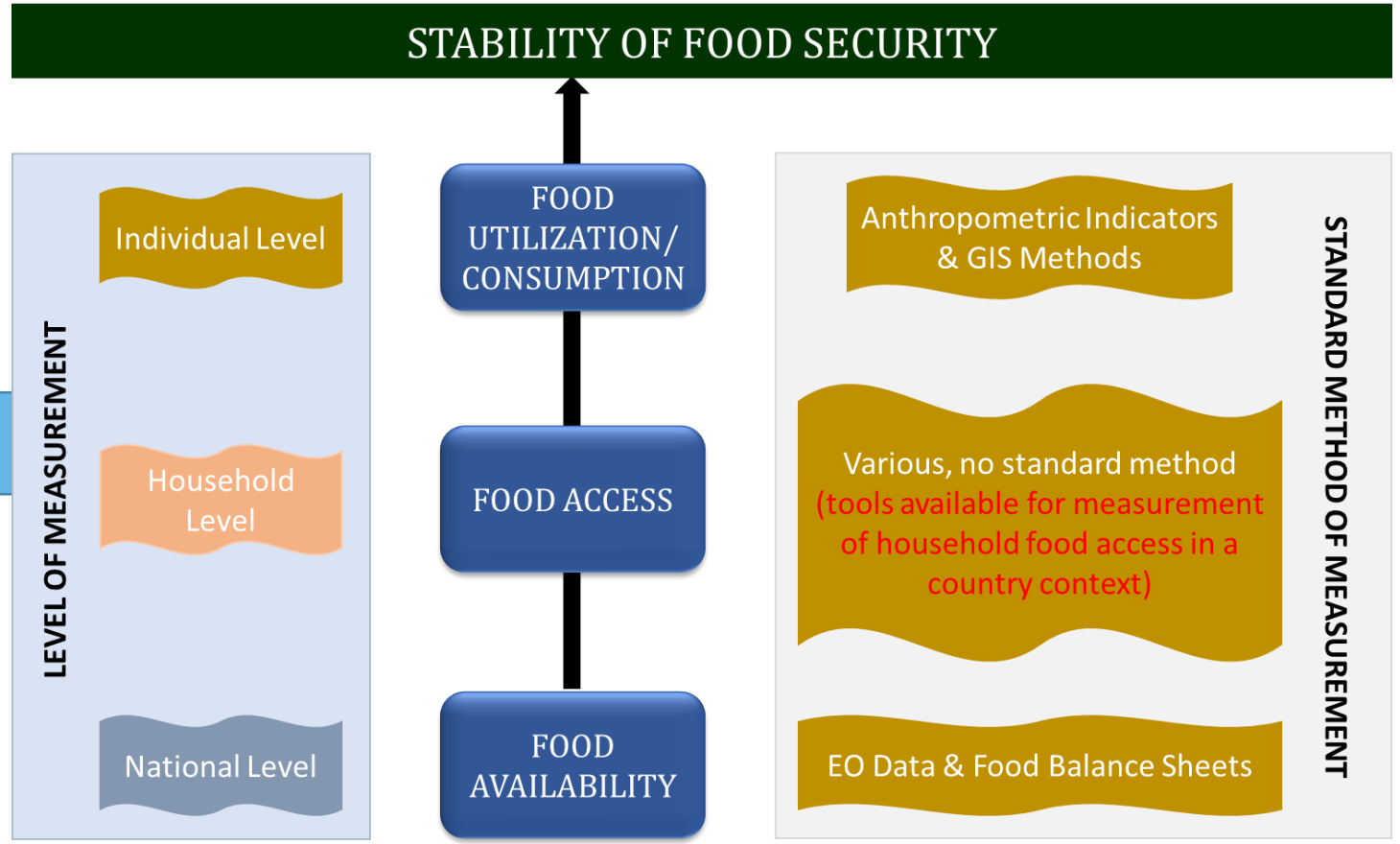
Near Real-time Drought Monitoring and Forecasting integration



5. Food Security Assessment

Stakeholders: WFP, IFPRI, IRRI, FAO, CSO's, Local NGOs

Objective: To assess the food security situation of Burma, based on the 4 main pillars: (1) food availability, (2) food access, (3) food utilization, and (4) food stability



Outputs of Burma Service 5

- Annual food security assessment report for Burma for 2023-2026
- National and regional workshops for sharing the findings of the food security assessment

Measurement approaches to assess the three elements of food security (USAID Technical Note No. 12, 2011; Modified by ADPC on December 1, 2022)

Partners and Beneficiaries

- **USAID Activities**: USAID Transparency and Inclusive Growth Activity (TIGA), USAID Myanmar Agriculture Policy Support Activity (MAPSA), LIFT
- **International Orgs**: UNDP, IFPRI, FAO, WFP, World Bank
- **NGOs:** WWF, Fauna and Flora International (FFI)
- **CSOs**: Gender Equality Network (GEN Myanmar), Community Based Organizations, Myanmar Rice Industry Association (MRIA), Myanmar Rice Miller Association (MRMA), Myanmar Rice & Paddy Traders Association (MRPTA), Myanmar Paddy Producers Association (MPPA), Myanmar Agribusiness Public Corporation Ltd (MAPCO), Agriculture and Farmers Federation of Myanmar, Myanmar Labour Alliance
- **Private Sector:** Rubber and Palm Oil Company, Rice, Maize Trader companies
- **Local Communities:** Farmers

Thank You!!