

United Nations International Conference on Space-based Technologies for Disaster Risk Reduction - "A Policy Perspective"

From space to policies and practice - use cases from the Lower Mekong countries

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Asian Disaster Preparedness Center (ADPC)

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ADPC's Vision



Safer communities and sustainable development through disaster risk reduction

ADPC Strategy 2020

ADPC's strategic focus & cross-cutting themes



Core Principles

- **Science**
- **Systems**
- **Applications**

Supporting SFDRR and SDGs

ADPC's strategic focus & cross-cutting themes



4 PRIORITIES FOR ACTION	Priority 1	Understanding disaster risk	National and local dimensions	Regional and global dimensions	
		<i>Policies and practices for DRR should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment.</i>			
	Priority 2	Strengthening disaster risk governance to manage disaster risk			
		<i>Disaster risk governance at the national, regional and global levels is of great importance for an effective and efficient management of disaster risk.</i>			
Priority 3	Investing in disaster risk reduction for resilience	<i>Public and private investment in DRR are essential to enhance the economic, social, health & cultural resilience of persons, communities, countries, their assets, as well as environment</i>			
Priority 4	Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction	<i>Strengthened disaster preparedness for response, recovery, rehabilitation and reconstruction are critical to build back better</i>			



Example:

Drought and Rice Yield Forecasting in Viet Nam



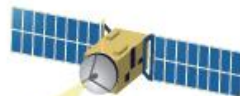
USAID
FROM THE AMERICAN PEOPLE



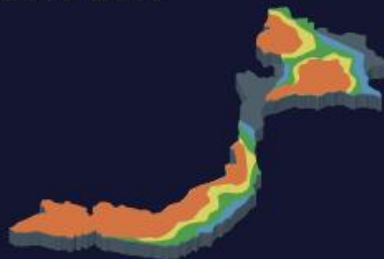
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SERVIR  **MEKONG**

ENHANCING DROUGHT AND CROP YIELD RESILIENCE IN VIETNAM



**DROUGHT IN VIETNAM
2015-2016**



52 PROVINCES
affected

(FAO, 23 August 2016)



2 MILLION PEOPLE
affected by drought

(UNICEF, 15 August 2016)



\$1.2 BILLION
needed for recovery

(Government of Vietnam/UNCT/OCHA, 21 Oct 2016)



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REGIONAL DROUGHT AND CROP YIELD INFORMATION SYSTEM



Drought



Area

Country Layer



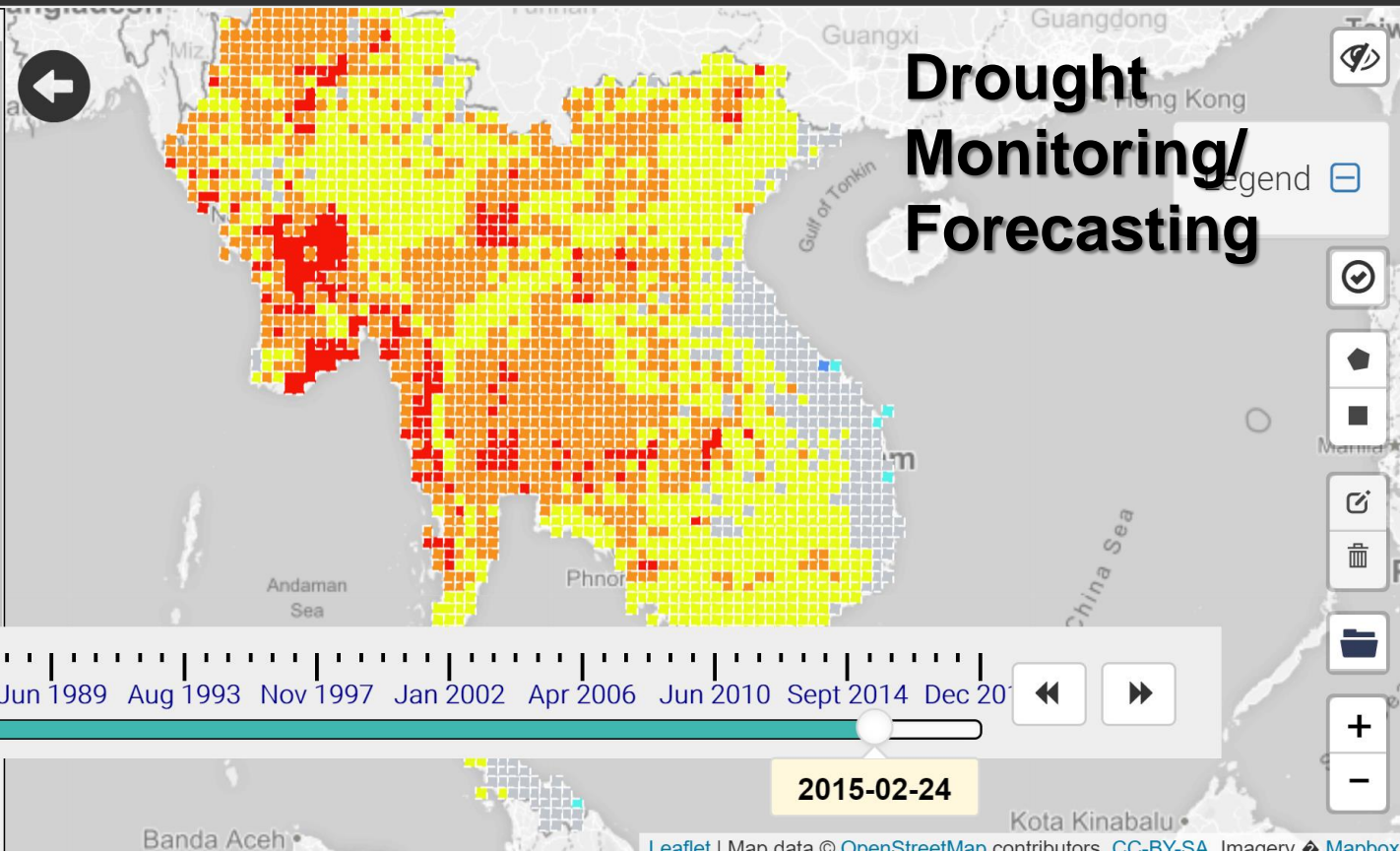
Select Index

Drought



Select Variable

Standardized Pre



Rice Yield Forecasting

With crop statistics, weather data, and soil data

Viet Nam

Crop Calendar (*major foodcrop)



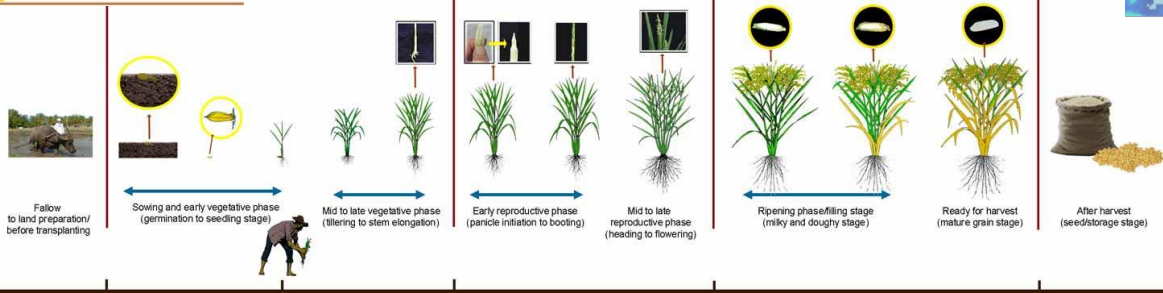
TRANSPLANTED RICE Growth Duration

FIELD

Vegetative Phase

Reproductive Phase

Ripening Phase



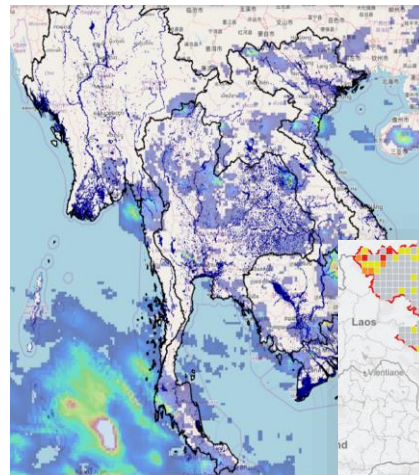
Short duration 35 - 55 days
 Medium duration 55 - 75 days
 Long duration 75 - 95 days

35 days

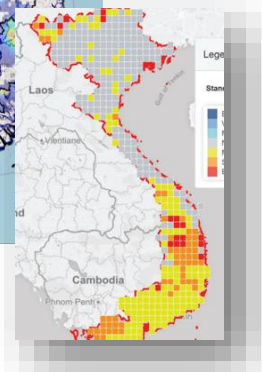
30 days

= 100 - 120 days
 = 120 - 140 days
 = 140 - 160 days

Crop Calendar – Crop Statistics



Weather Data



Soil Data

OUTCOMES

IMPACT

SERVIR-MEKONG SERVICE: ENHANCING DROUGHT AND CROP YIELD RESILIENCE IN VIETNAM



Improving drought monitoring and forecasting, co-developed with Vietnam's Ministry of Agriculture and Rural Development (MARD)



Drought advisory bulletin disseminated by MARD



Inclusion of both men and women in decision making

POTENTIAL BENEFICIARIES OF THE SERVICE IN NINH THUAN PROVINCE

SERVIR-Mekong piloted this service in Ninh Thuan province, which was most affected by the drought in 2015-2016. The Ministry of Agriculture and Rural Development is considering a replication of this service in other provinces.



Over 380,000 people in rural districts*

(Ninh Thuan Statistical Yearbook, 2016)



246,000 TONS of rice produced each year

(General Statistics Office of Vietnam, 2016)

* This represents the total rural population across 7 target districts in Ninh Thuan province that could benefit from this service.

Institutionalization
Policy Change

Improved livelihood
Improve economy

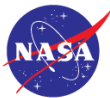


Example:

Satellite-based Flood Hazard Index for Myanmar



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SUPPORTING EARLY FLOOD PREPAREDNESS IN MYANMAR

2015 MYANMAR FLOOD



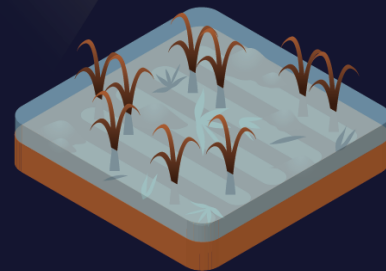
15,239 HOUSES
damaged

(Source: UNOCHA, August 2015)



OVER 1 MILLION
affected by flood

(Source: UNOCHA, August 2015)



OVER 527,000 HECTARES
of crops damaged

(Source: FAO, December 2015)



HISTORICAL FLOOD ANALYSIS TOOL



View Data

Analysis

Download

Select element to display

- Township Boundary
- State/Region Boundary
- Shelter Location
- Warehouse Location
- Population

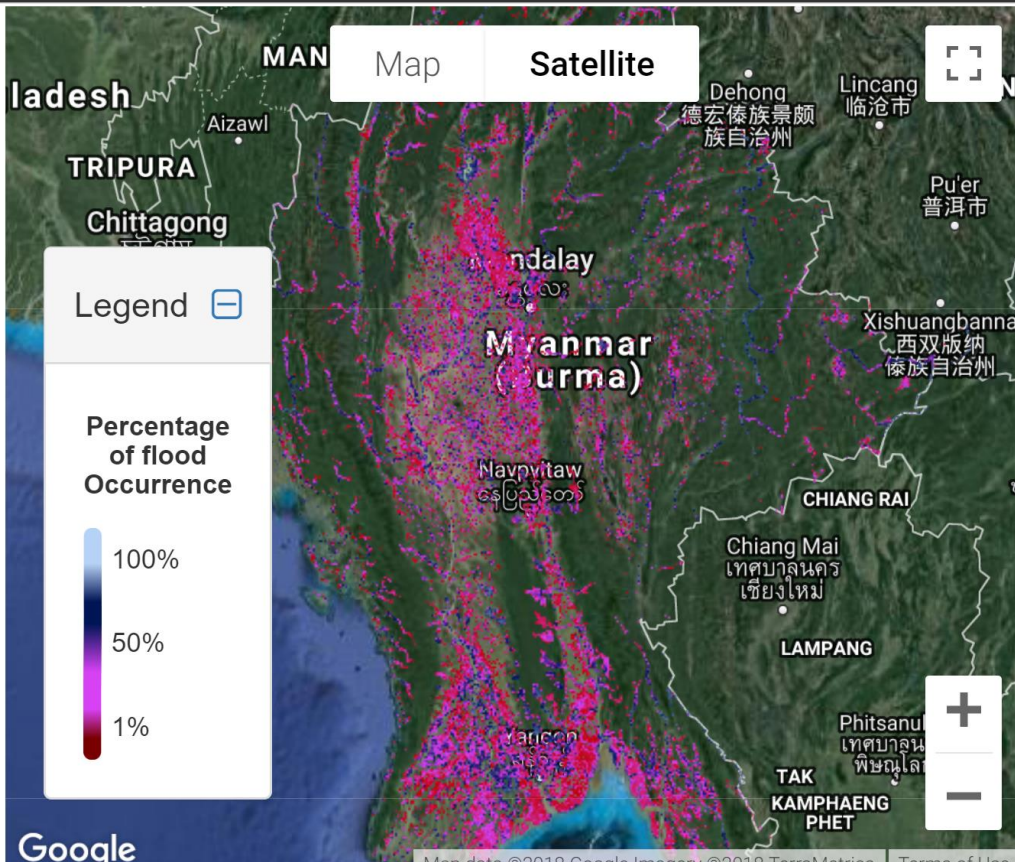
Select hazard to display

- Actual Flood Frequency

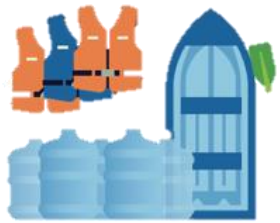
Opacity

- Aggregated Flood Hazard

Opacity



working with DDM to guide the resource allocation for flood relief supplies to townships.



Guiding the stockpiling of flood relief materials such as drinking water life vests, boats



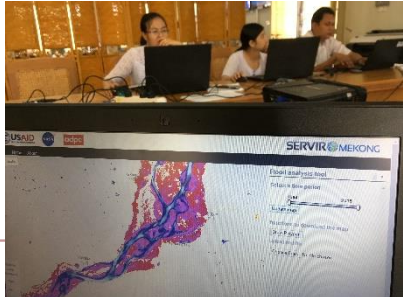
Support the Government of Myanmar in conducting risk assessments



Developing long-term flood preparedness and mitigation plans



Flooding in Chin State, Myanmar 2015
(Photo Credit: Department of Disaster Management, Myanmar)



Why did they work?

Demand Driven



Flooding in Chin State, Myanmar 2015
(Photo Credit: Department of Disaster Management, Myanmar)



Severe Drought in South-Central
Vietnam

Capacity Building and Co-development



Vietnam Academy of Water
Resources (VAWR)

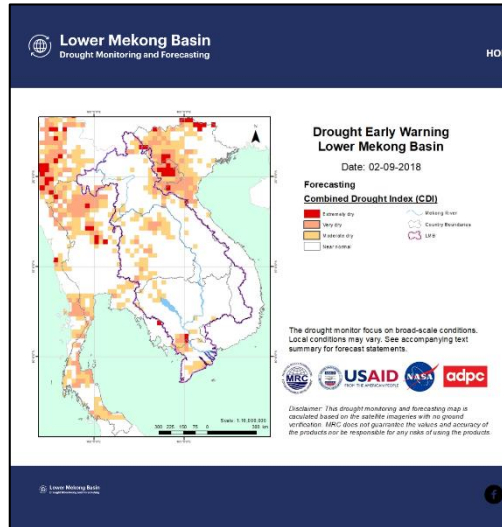
Ministry of Agriculture and
Rural Development (MARD)



Partnership

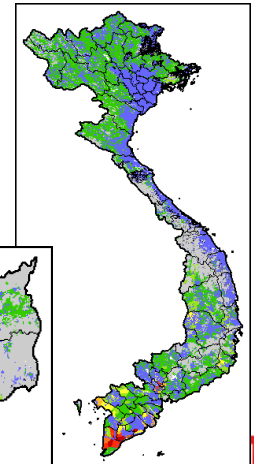
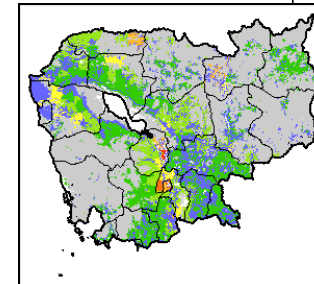


**UNESCAP's
Regional
Drought
Management
Capacity
Building
Program**



**MRC's Regional
Drought Early
Warning System**

**FAO's
Regional
Initiative on
Agricultural
Stress Index**



Connecting Space to Village in the Lower Mekong Region

SERVIR-Mekong is a geospatial data-for-development program that responds to the needs of Lower Mekong countries. [Learn more](#) ↻



DECISION
SUPPORT TOOLS



GEOSPATIAL
DATASETS



RESOURCES &
PUBLICATIONS

Request Technical Assistance

SERVIR-Mekong priorities are set by the expressed needs of stakeholders. Let us know the needs of your organization by requesting assistance.

For more info:

Flood in Myanmar

<https://bit.ly/2MOeNKt>

Drought in Vietnam

<https://bit.ly/2OC8Guy>

THANK YOU
FOR YOUR ATTENTION

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<http://www.adpc.net>



<http://www.drrprojects.net>



Group: Asian Disaster Preparedness Center



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