

# Decision Support Systems and Agro-meteorological Forecasting for Farmers: Experience in Myanmar



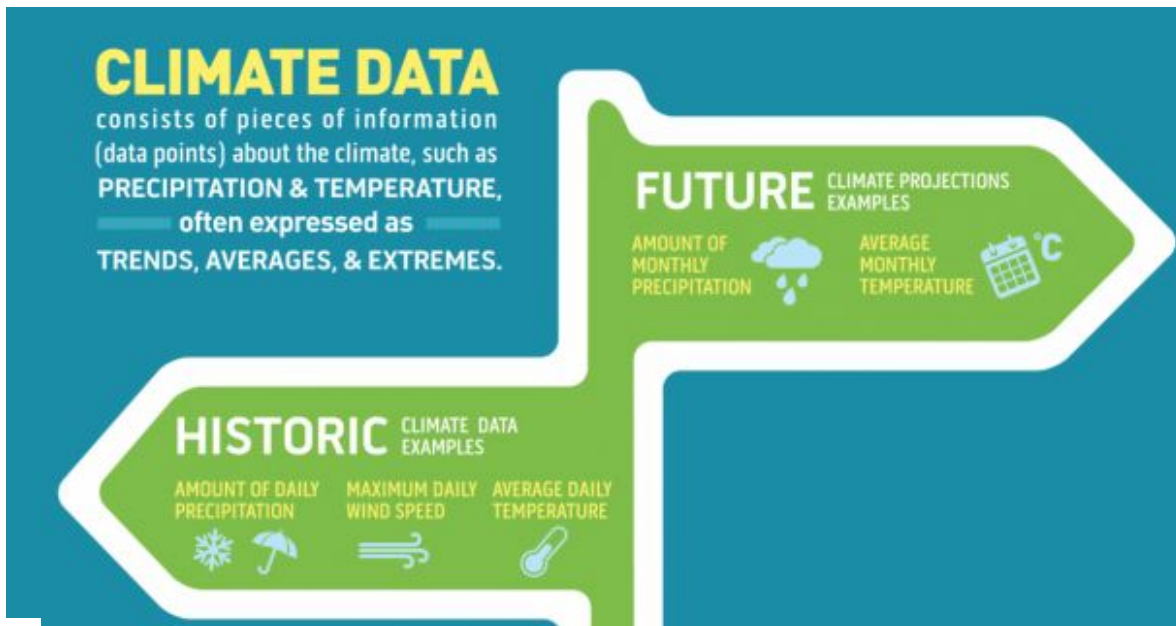
Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)

11 Mar 2021

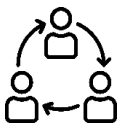
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# The Challenge



**TRANSLATION:** Making weather and climate data more **understandable**



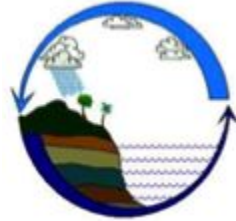
**COLLABORATION:** Ensuring weather and climate data **meets the needs of users**



**GUIDANCE:** Guiding weather and climate data users on **where to find and use** reliable data, and **understanding its limitations**

Transform data into **information products and services**

# RIMES' Approach



## SESAME

Development of decision-support system for translating forecast into crop-relevant information

Facilitating easy access of advisories through SMS, Facebook, and mobile application

Facilitating feedback

## FARM SCHOOL

Enhancing farmers' receptivity and capacity in ingesting multi-timescale information into plans and decisions

Facilitating regular discussions between farmers, extension workers and DMH for feedback and further capacity development

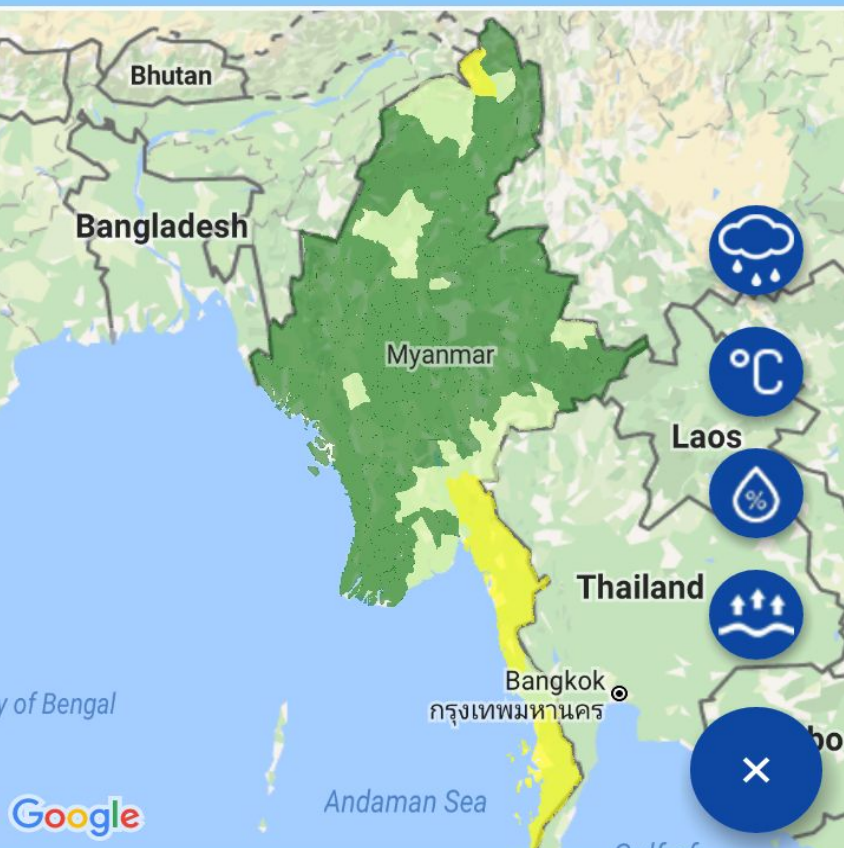
## FARMERS

Application of information for resource and risk management





RAIN : 2017-05-11



3 DAYS

10 DAYS

MONTH

SEASON

Taunggyi

Taunggyi: 2017-05-11 to 2017-05-20

Pentad 1

Pentad 2



Rain  
14.02 mm

Rain  
28.90 mm



Tmin  
24.24 °C  
Tmax  
31.32 °C

Tmin  
23.38 °C  
Tmax  
29.69 °C



Humidity  
69.84 %

Humidity  
79.76 %



PET  
66.63 mm/day

PET  
58.69 mm/day



Spell  
Dry

Spell  
Normal

Taunggyi



66.63 mm/day

58.69 mm/day



Spell  
Dry

Spell  
Normal

Expected accumulated rainfall for the first pentad is 14.02 mm. The spell is expected to be Dry. Expected variation in this pentad is likely to range from maximum temperature of 31.32 °C to minimum temperature of 24.24 °C.

Expected accumulated rainfall for the other pentad is 28.90 mm. The spell is expected to be Normal. Expected variation in this pentad is likely to range from maximum temperature of 29.69 °C to minimum temperature of 23.38 °C.

Past month and seasonal forecast, not available.

Monthly and Seasonal forecast, for the next month and season, not available, will be updated either after 9th of this month or whenever available.





SESAME advisory says that in the next 5 days, there's going to be heavy rain!

In that case, let's wait for the next 5 days before adding fertilizers.

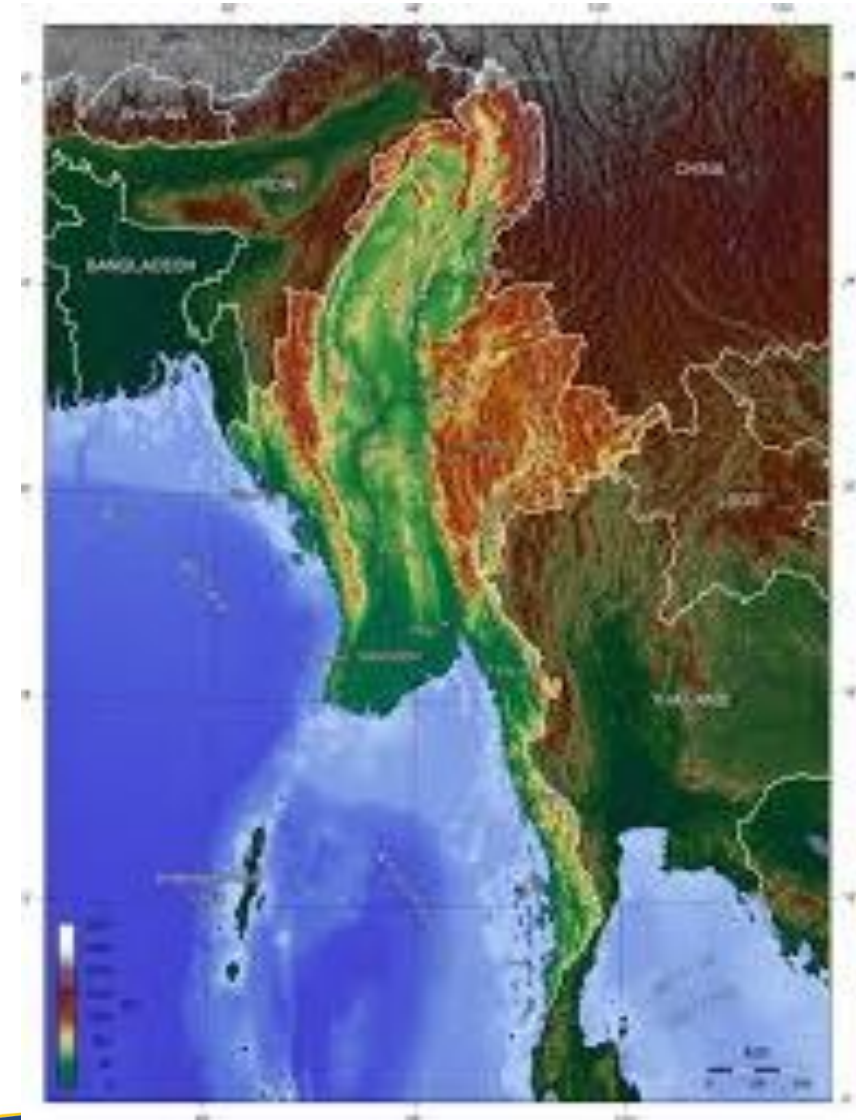
# Outcomes

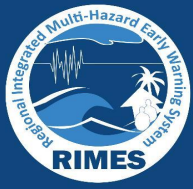
## Central Dry Zone of Myanmar during Cyclone Maaruthaa (Apr 2017)

Timely receipt of information and provision of advisories by DOA officials and extension workers, through SESAME, enabled farmers in the Central Dry Zone of Myanmar to i) **save their harvested crops** from being damaged, and ii) immediately prepare farm inputs and **facilitate early planting** of 3-month variety of sesame (planted in mid-April, instead of the usual mid-May and recorded good harvest in July - first good harvest in 7 years)

## Monywa Township

DoA Monywa District Officer received forecasted rainfall by the end of May and early June. He analysed the potential impacts of the forecast based on different crops cultivated in the area and provided advisories (e.g., summer crop farmers not to irrigate, green gram and sesame farmers to prepare drainage/leakage canals) resulting to **savings of over 2 million MMK** (USD1,500) of irrigation and related costs, **preservation of 87 acres of green gram valued at over 4.7 million MMK** (USD 3,600), and **increased production by 10% per acre of sesame** in at least 24 acres of farms where canals were made





**Thank you for your attention!**

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