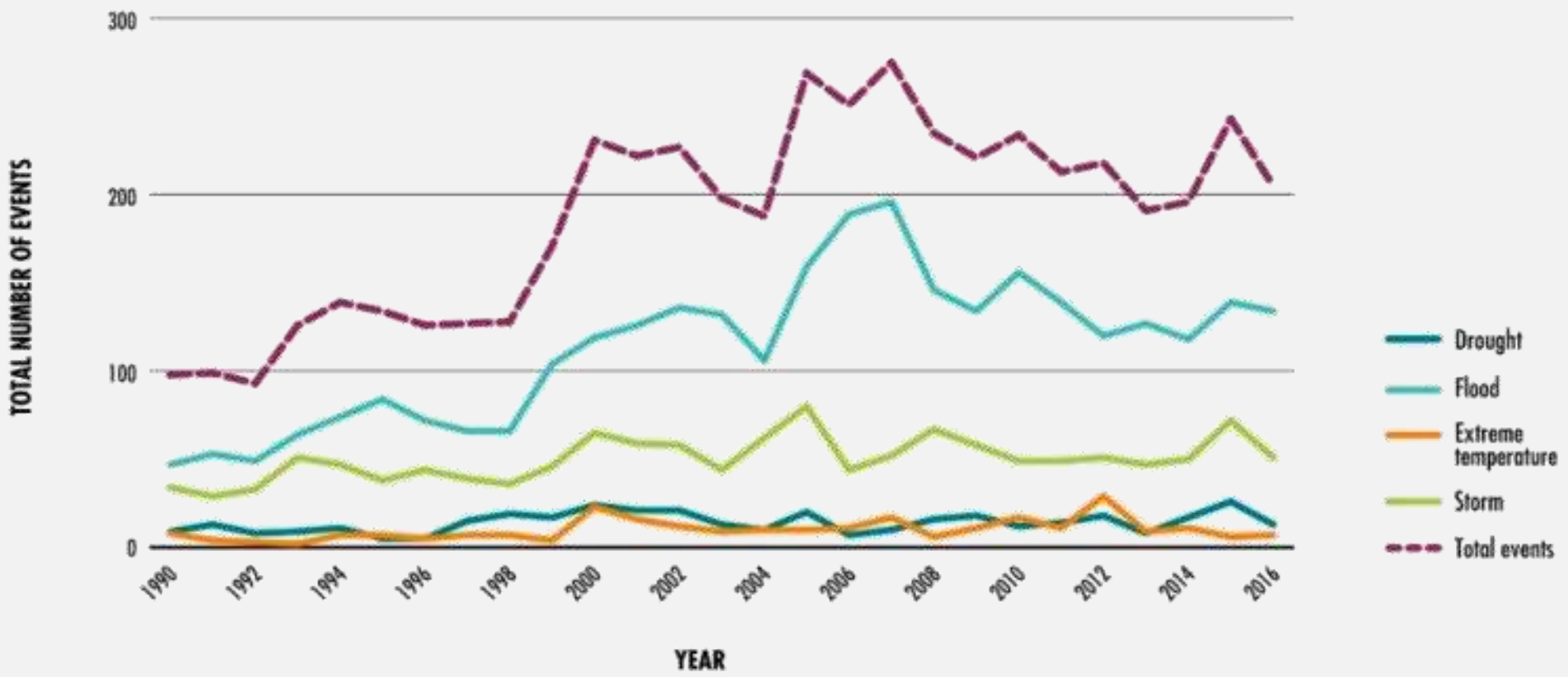
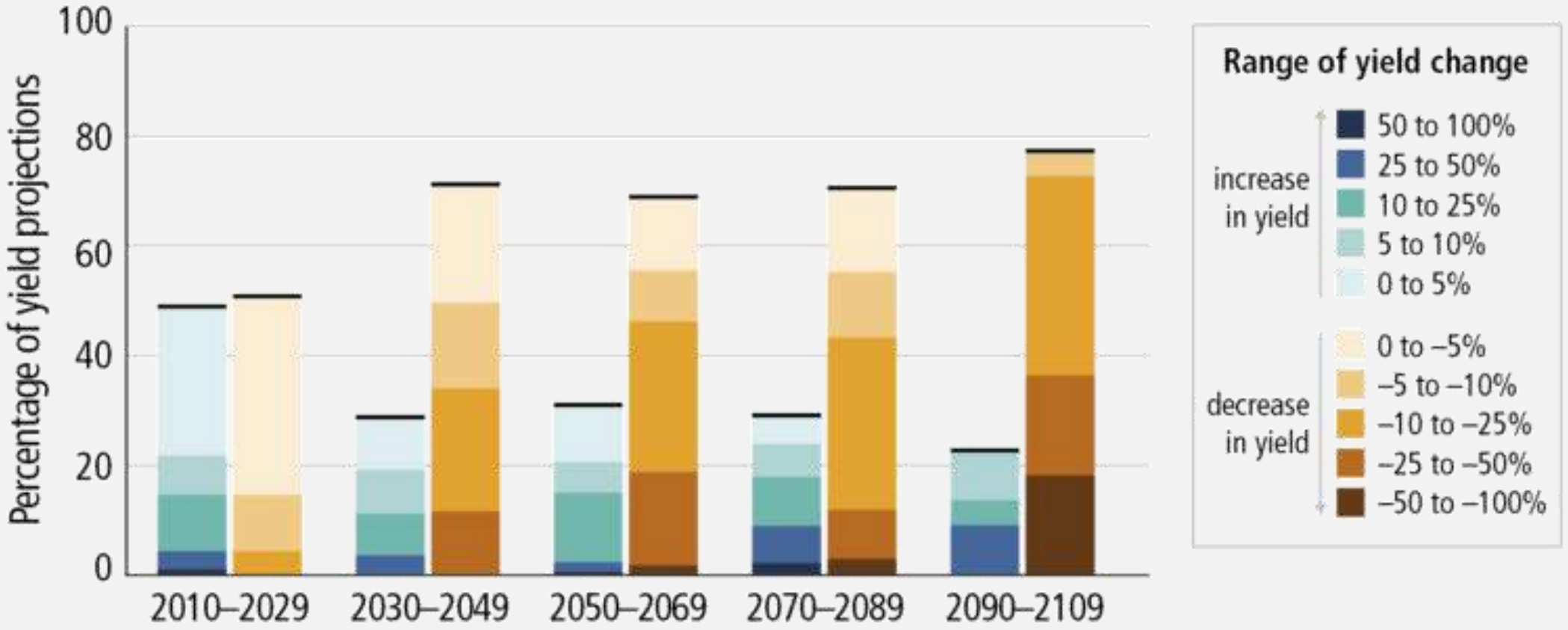
Vassar LABS

Water Security for Agriculture and Rural Development

CLIMATE CHANGE & AGRICULTURE

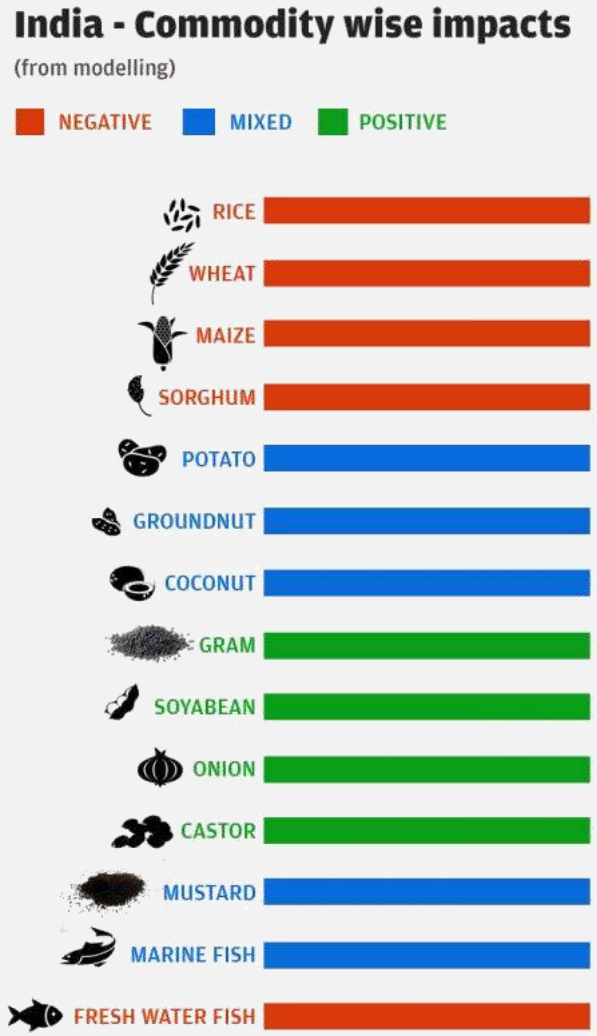


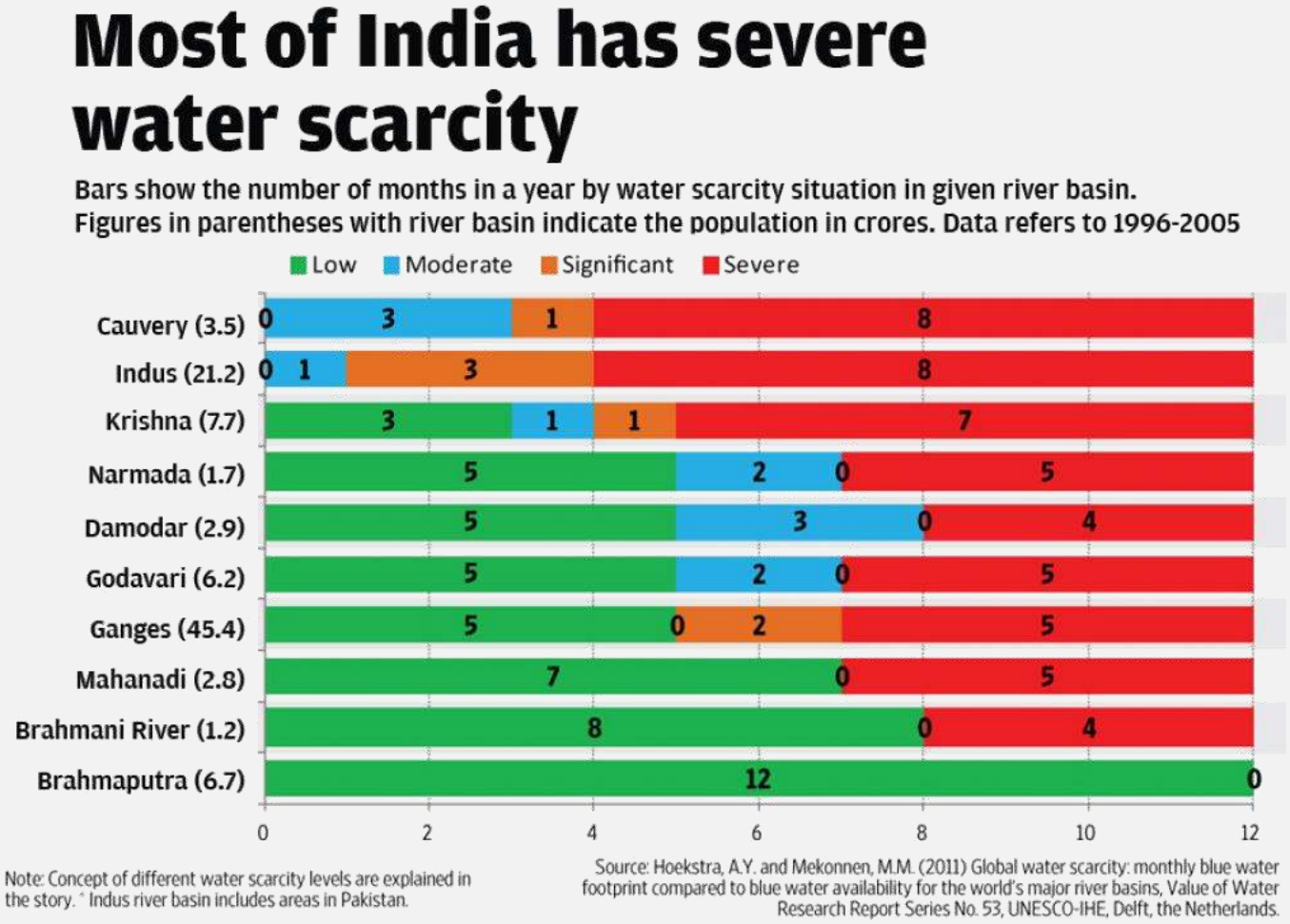
CLIMATE CHANGE & AGRICULTURE



https://www.stat.berkeley.edu/~aldous/157/Papers/extreme_weather_resilience.pdf

SITIUATION IN INDIA





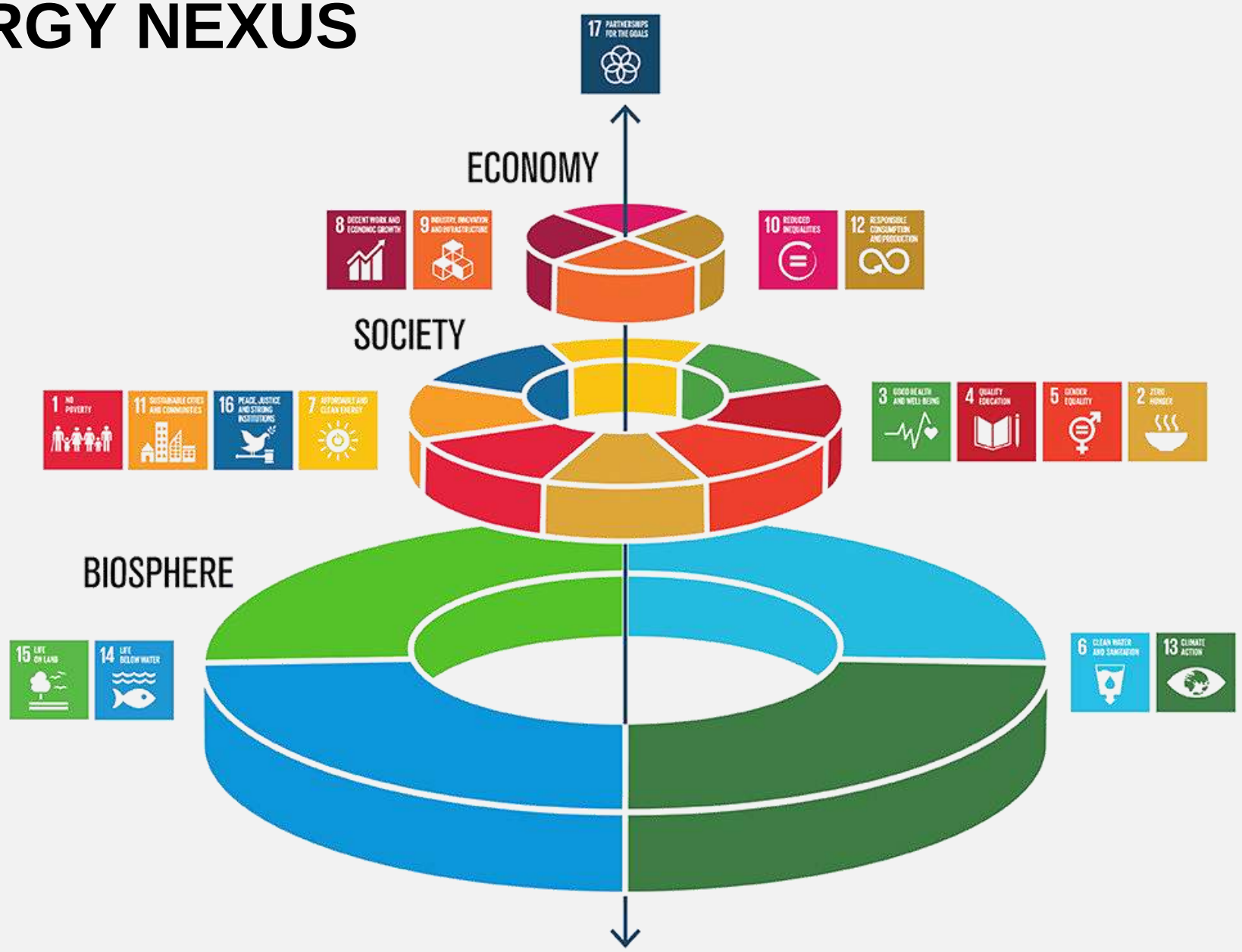
WATER FOOD ENERGY NEXUS

Fulfil water demand

competing water management due to diversified stakeholders of water

Crop risks

The climate change directly impacts risks for crops which needs to be assessed in near realtime



MORE CROP PER DROP

Assessing Crop Risks

Remote sensing based near realtime analysis of crop health and crop water demand

Optimizing Canal's Productivity

Planning & release management with assessment of irrigation in near realtime using remote sensing

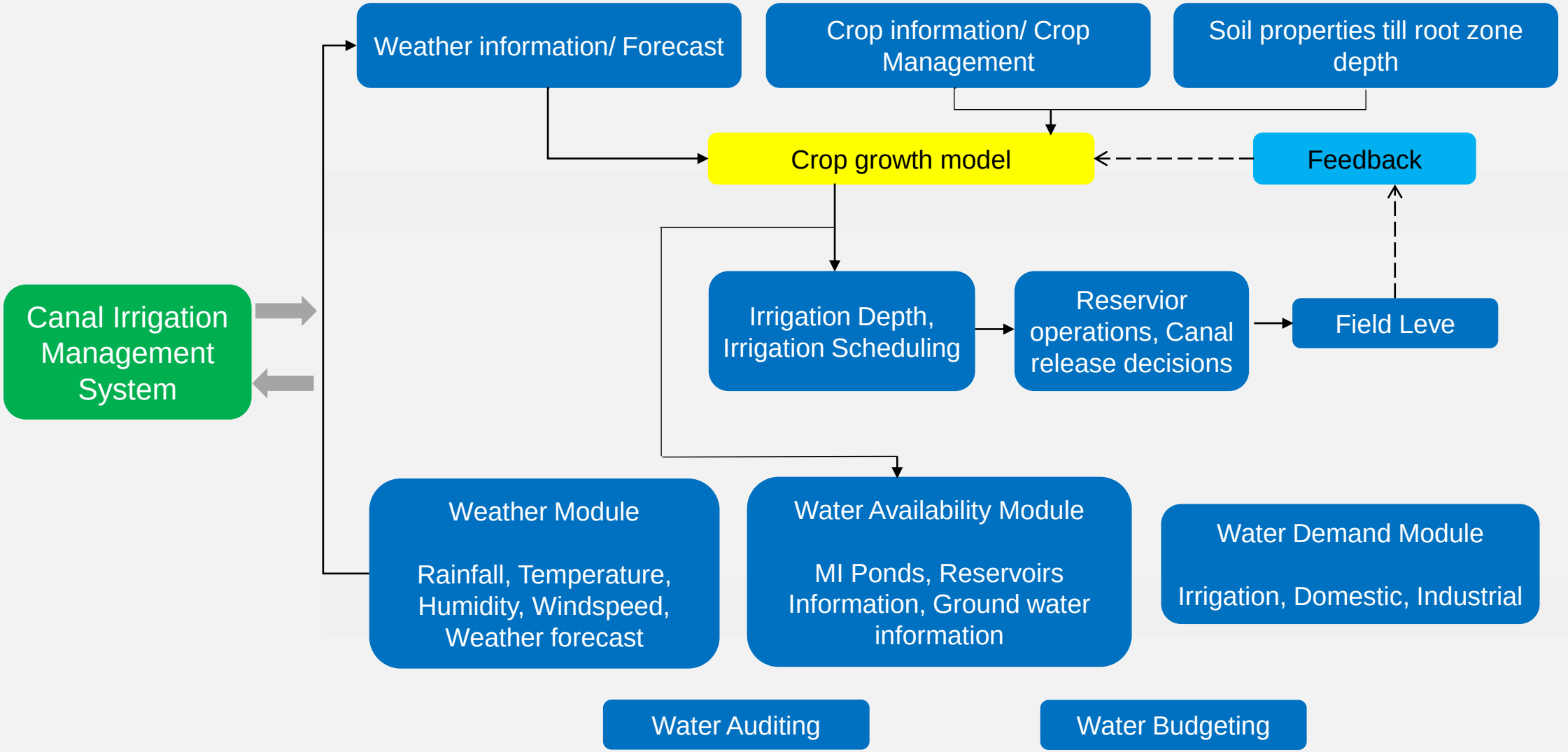
River interlinking

Linking rivers for interbasin transfer and optimizing transfer for power utilization and water efficiency.

Tapping Flood Water

With the help of interbasin transfers, and cascade of tanks, tap the flood water for future utilization

CANAL AGRICULTURE MANAGEMENT



CANAL AGRICULTURE MANAGEMENT

Last Mile Participatory Planning

Capturing demands till canal subminor level in the command area

Warabandi based on crop sown analysis

Weekly water release scheduling to ensure equitable distribution of water resources

Reservoir release planning & irrigation assessment

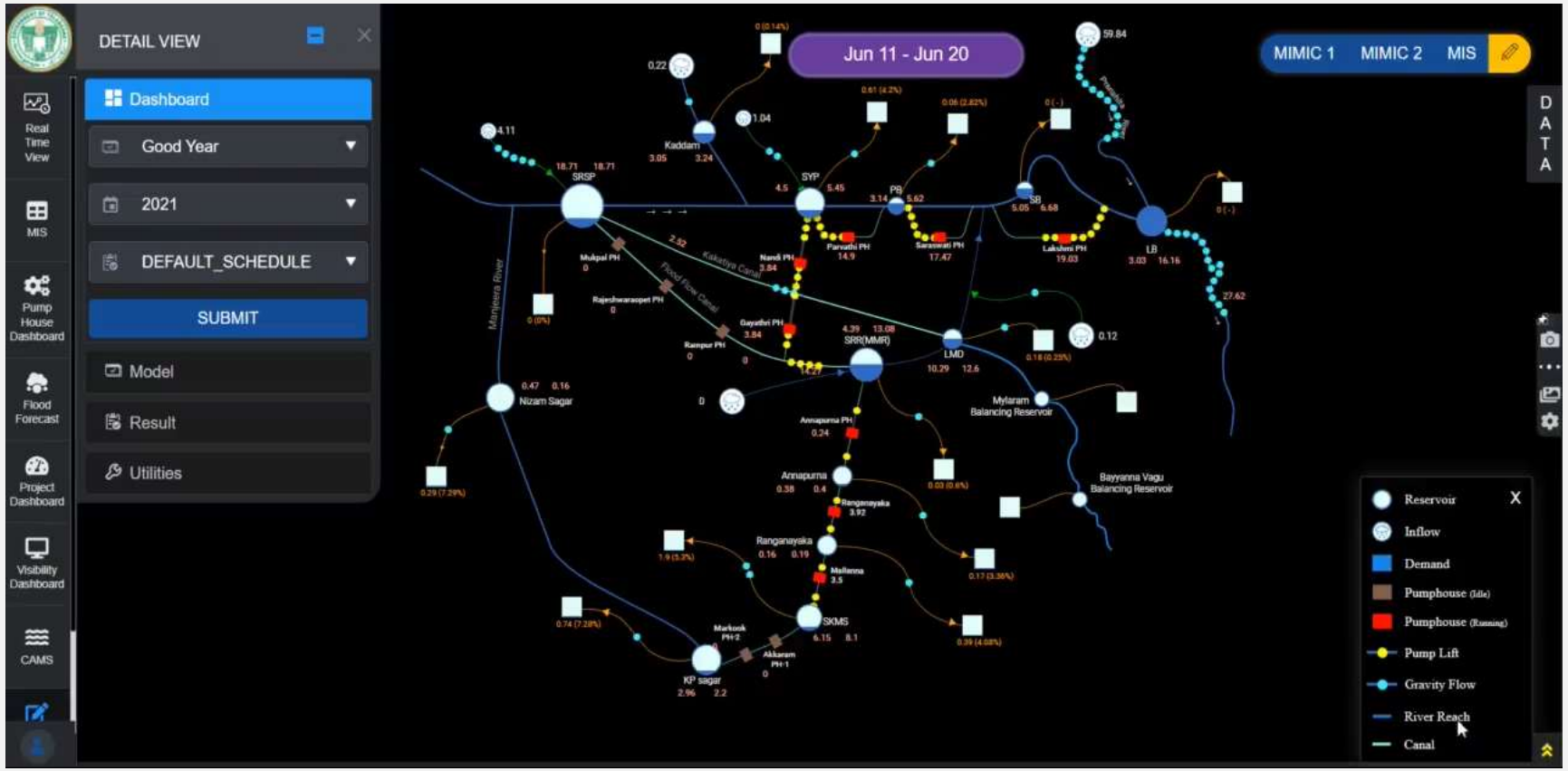
Holistic reservoir planning by considering water demand, weather forecast in catchment and command as well as current water in project

LEVERAGING LIFT SCHEMES

Mitigating water deficit via complex chain of lift schemes

Optimizing pump operations

Decision support & performance monitoring



CROP RISK MONITORING IN NEAR REALTIME: AI ON SATELLITE DATA

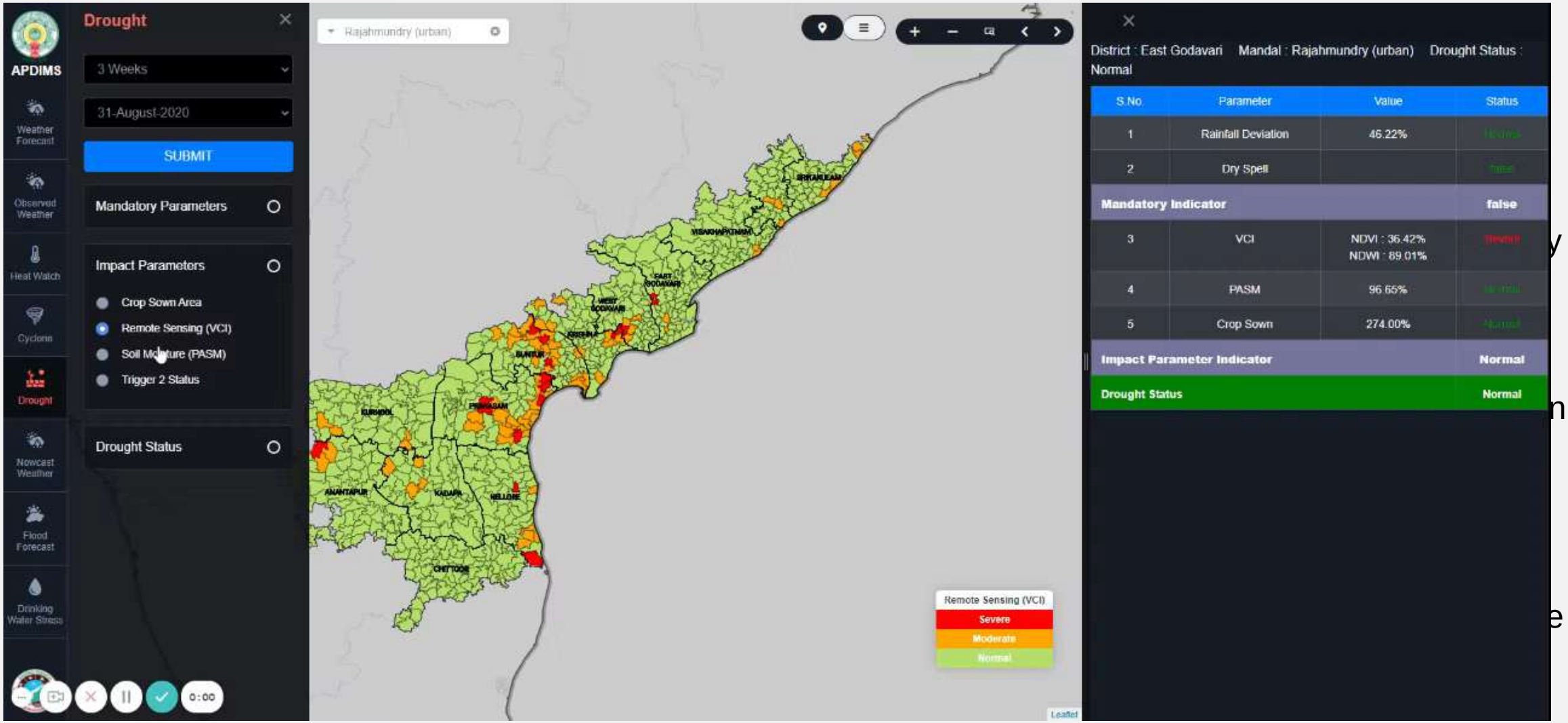
Farm boundary detection

AI based farm boundary extraction from satellite data

Near Realtime crop health and stress

Monitoring crop health and stress in near real-time using satellite data and AI

EARLY SEASON DROUGHT



- Area Sown

Vassar LABS

THANK YOU

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