

SOUTH ASIA DROUGHT MONITORING SYSTEM (SADMS)

A collaborative project by IWMI, GWP and WMO under Integrated Drought Management Programme

Giriraj Amarnath, Niranga Alahacoon, Peejush Pani, Vladimir Smakhtin
International Water Management Institute (IWMI), Sri Lanka



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SADMS OVERVIEW

- Goal - build climate resilience, reduce economic and social losses, and alleviate poverty in drought-affected regions in SA through an integrated approach to drought management
- SADMS Integrates remote sensing and ground truth data (vegetation indices, rainfall data, soil information, hydrological data)
- SADMS supports regionally coordinated drought mitigation efforts that can be further tailored to national level
- SADMS is a partnership with WMO, GWP and GWP South Asia, and Governments in SA.

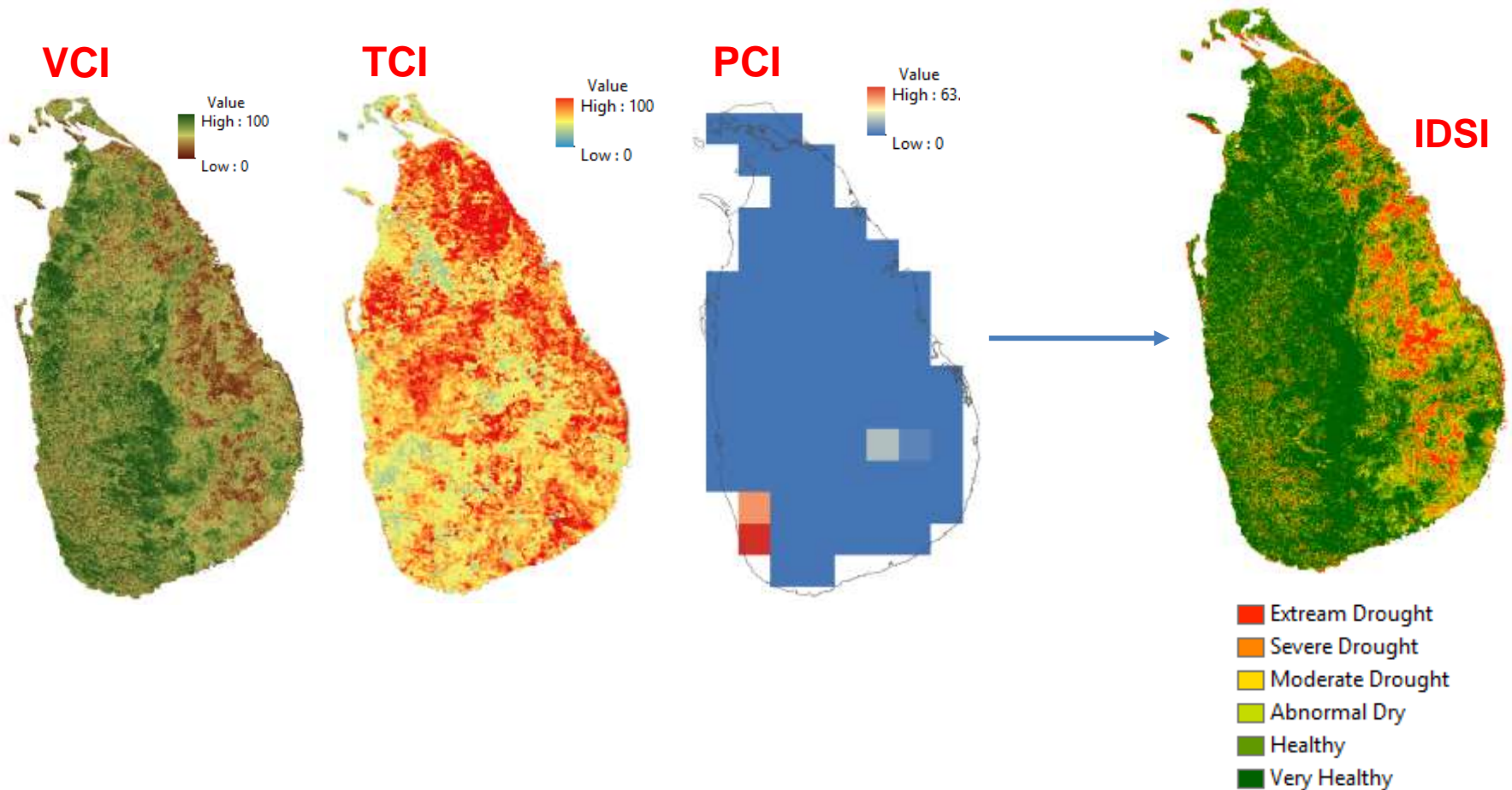
SADMS INDICES

Vegetation Condition Index (VCI): Data: MODIS, 500m, 8-day

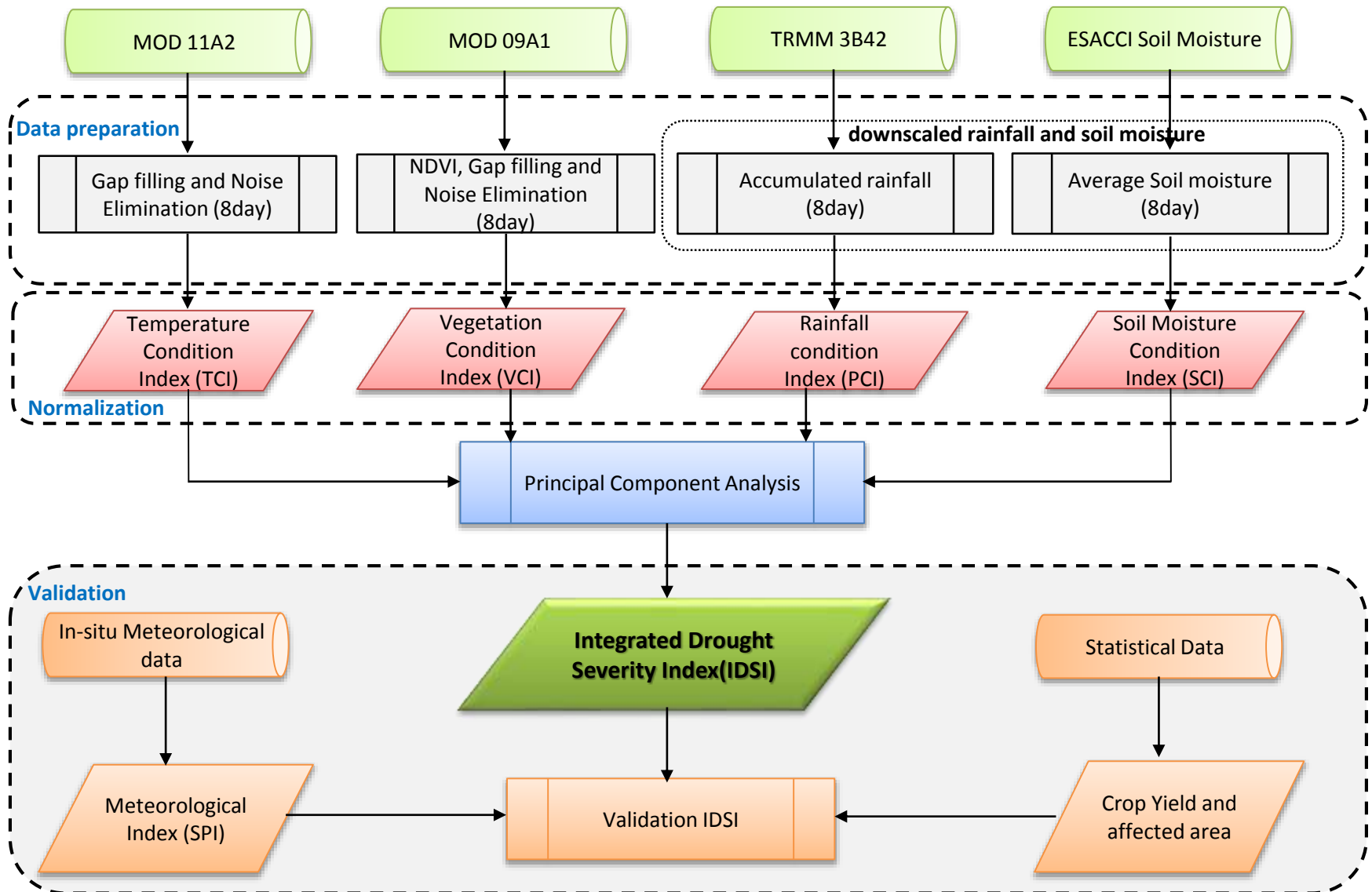
Temperature Condition Index (TCI): Data: MODIS, 1000m, 8-day

Precipitation Condition Index (PCI): Data: TRMM 3B42, 0.25o; daily

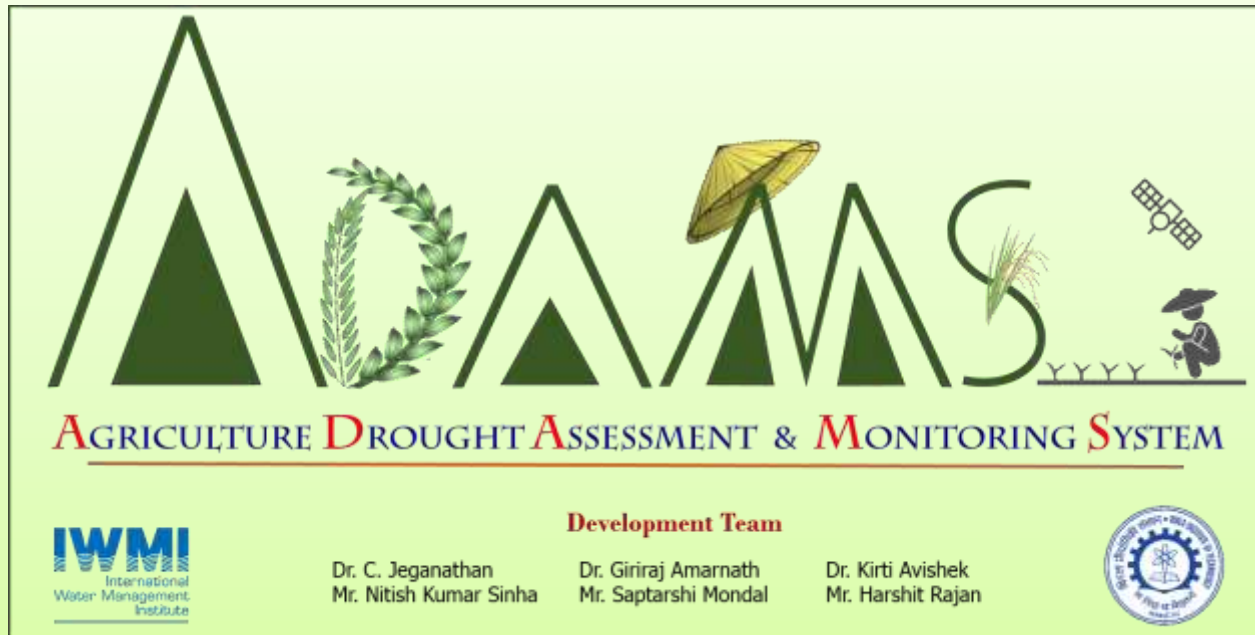
IDSi – Integrated Drought Severity index



SADMS FLOW CHART



SADMS DATA PROCESING “ENGINE”



- Allows automated image processing, calculation of drought indices
- Developed using ArcGIS ArcObject and Visual Basic
- Can be used in other regions

IDS I FOR SRI LANKA, 2001 EXAMPLE



121 – May 1st week



201 – July 3rd week



225 – Aug 2nd week



241 – Aug-4th Week

High : 100
Low : 0



305 – Nov 1st week



281 – Oct 3rd week



273 – Oct 1st week



257 – Sep 2nd week

SADMS EVALUATIONS:

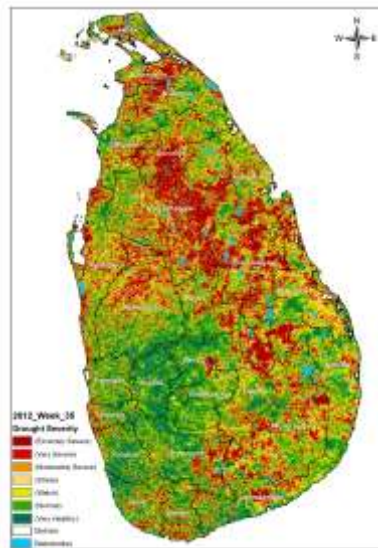
UN-WFP 2001 Field Assessment Report



September 2001 -257



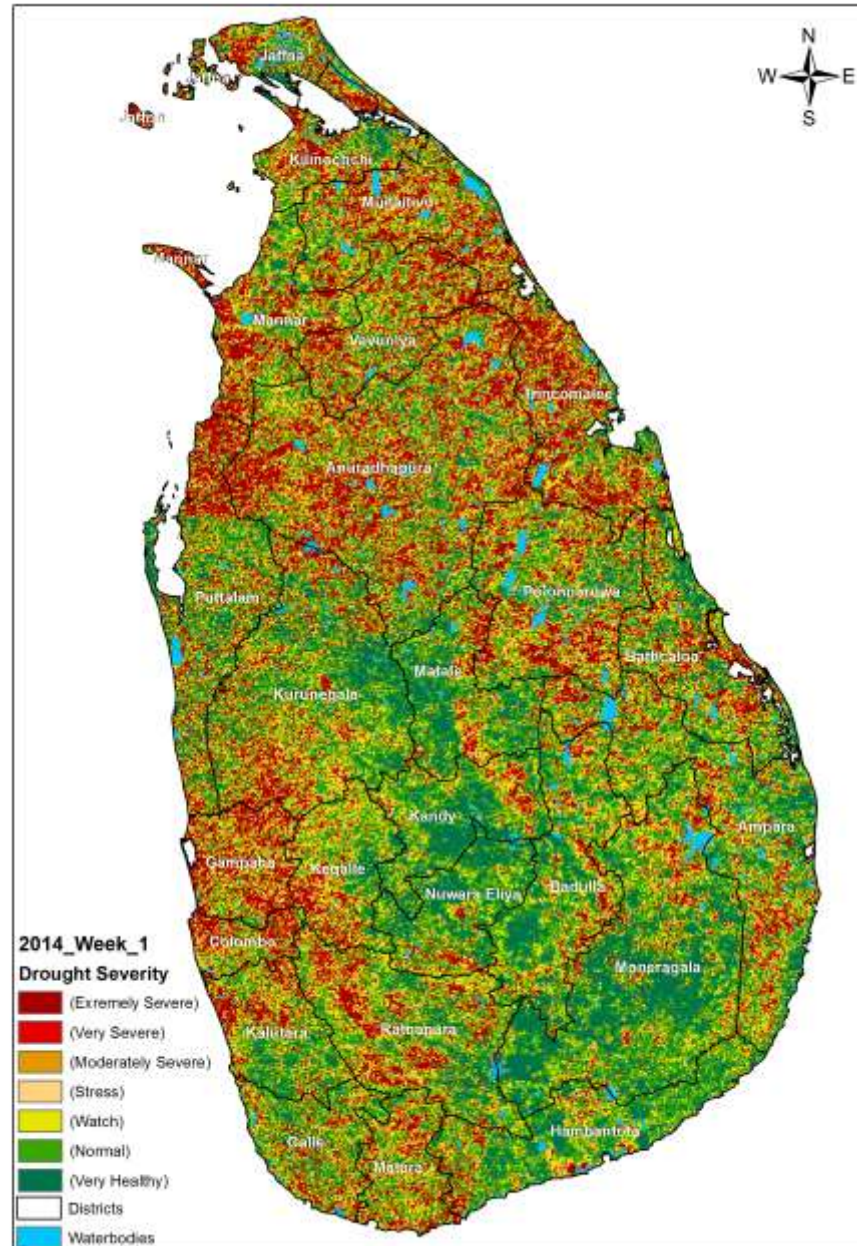
IFRC 2012 Field Assessment Report



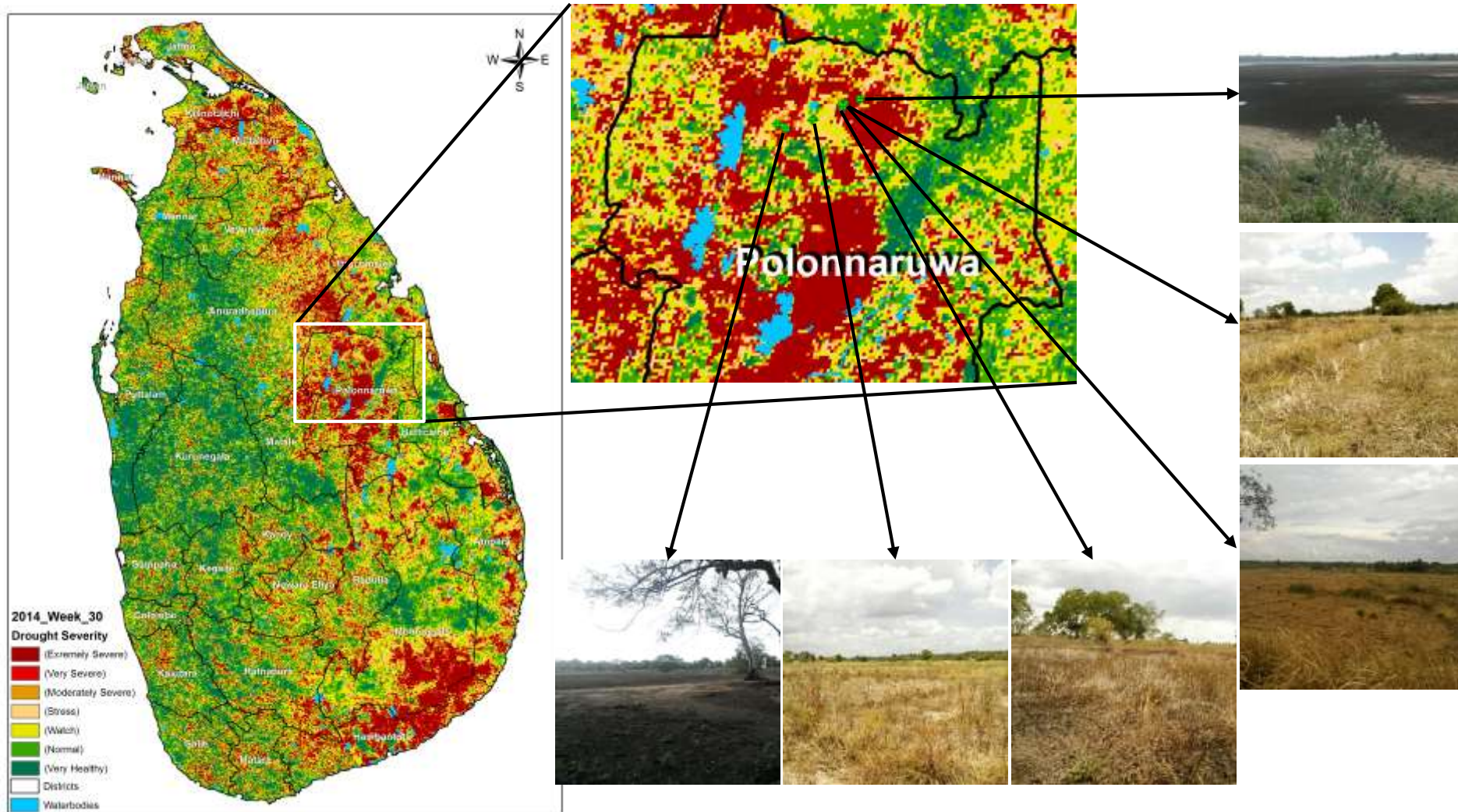
35th week (Sept_30th2012)



OPERATIONAL PRODUCT IN SL; FOR DMC, 2014-15

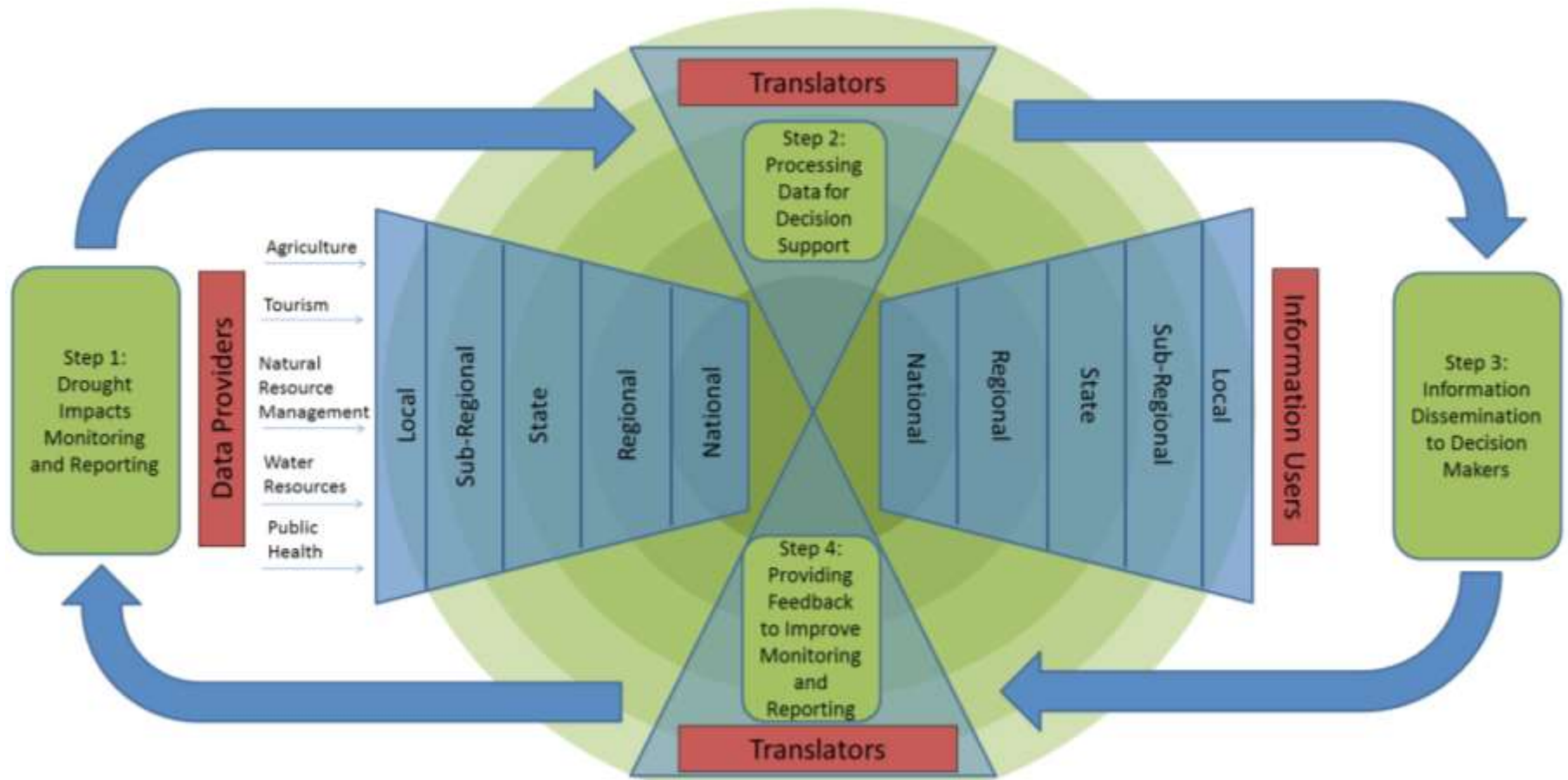


FIELD VERIFICATION; Joint DMC-IWMI mission, July 2015



Accuracy - over 90%

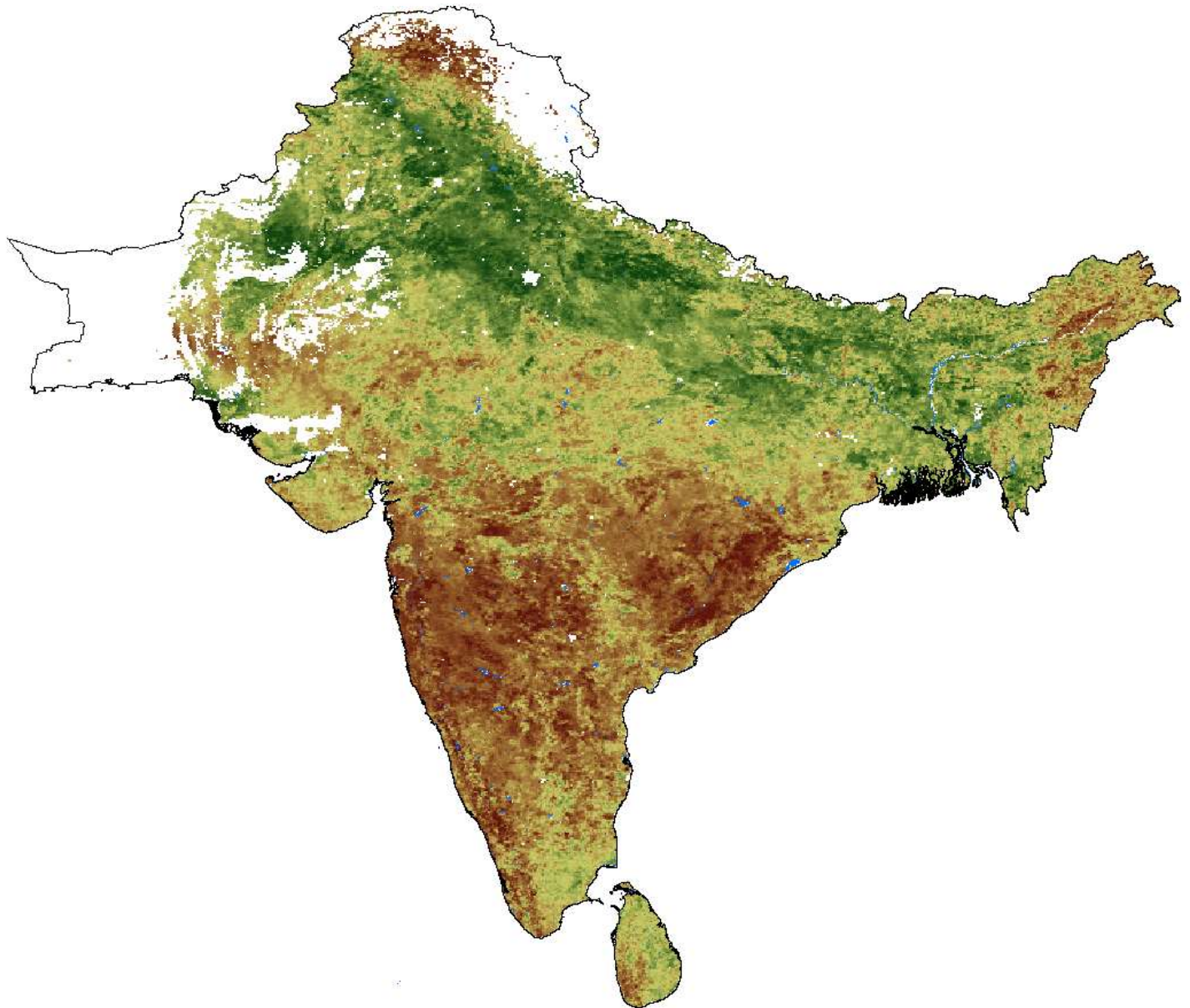
DROUGHT IMPACTS REPORTING



- Sri Lanka: all 4 steps, with DMC
- Maharashtra State, India: close to step 3, with DMA

SOUTH ASIA –

Operational Product From September 2015



WAY FORWARD

- Continue field verification in various parts of SA , to “fill” SADMS drought severity levels with local content and to put an accuracy label on each land use region-wide.
- Adding time series graphs to show “how deep” in drought - at a location, district, etc. Formulate “triggers” and messages with required actions for parties involved
- Design the web site for SADMS, and make it accessible to all parties involved. Operational product is being rolled out from September 2015. Region includes Afghanistan.
- Regional sharing and dissemination of operational drought information
- Operational drought monitoring system(s) installed in national center(s), or / and identified regional hub
- National capacity in drought monitoring built in all participating countries

THANK YOU



