

# CENTRE OF EXCELLENCE ON WATERSHED MANAGEMENT

UNDER REWARD PROGRAMME



*CoE is a premier centre for watershed management funded by World Bank which foresees site specific scientific advisory on soil, water and crop management through land resource inventory (LRI) and hydrological assessment*



**THE WORLD BANK**

*The **University of Agricultural Sciences, Bangalore** is a premier institute of learning, research and outreach activities. The National and International research projects implemented by the University have led to development of many technologies in different domains of agriculture. It has pioneered many innovations on watershed development programs in the country and with the experience of successfully completing Rajanukunte, Kabbalanala and Mittimeri watersheds, for which the UAS(B) has received National Productivity Council Award and recently completed the most acclaimed World Bank supported SUJALA III project from 2013 to 2019 in Karnataka state is well positioned to shoulder the responsibility of hosting the Centre of Excellence for watershed management under the World bank supported multi state REWARD program.*

*The **Centre of Excellence (CoE)** on watershed management is a designated Centre at UAS, GKVK, Bengaluru established during 2022 and inaugurated by Hon'ble Chief Minister Shri. Basavaraj Bommai. The centre utilizes in-house resources and knowledge in association with premier institutions to take science based tools to communities and stakeholders working towards agriculture resilience and to enhance the viability and quality of rural livelihood support systems. It plays a key role in demonstrating the application of science based and community supported approach in watershed development, impart training to the members of line departments of the state and beyond, develop manuals, refinement of decision support system, exchange knowledge, facilitating the development of dissemination tools and a host of other outputs needed for mainstreaming the LRI and hydrology approach in the country for watershed management.*



# OBJECTIVES

Capacity building on LRI, Hydrology, RS & GIS, DSS, DL/Portal and monitoring & evaluation

Linking science and community needs in watershed management for post project sustainability

Refinement of protocols and guidelines for LRI, Hydrology & DSS

**CoE**

Development of guidelines and protocols for watershed planning, implementation and monitoring

Validation of DSS and Mobile applications

Knowledge exchange program, identification of best management practices, pilot studies and demonstrations

**Centre of Excellence** on watershed management utilizes the diverse talent expertise of Universities, Research Centres, Government Departments and NGO's across the world to achieve the objectives. The centre through knowledge exchange program envision to develop cost effective tools for scientific studies, resource conservation modules and plans for watershed monitoring and management to provide best land use planning and resource management options to the stakeholders.



# THEMATIC AREAS OF CoE

## 1. Training and Capacity Building

The CoE offers short and long term certified training programmes related to LRI, Hydrology, Geospatial technologies to the scientific partners, implementing officers of REWARD and Non-REWARD States

- Pre-field activities - base map preparation, image interpretation, etc.,
- Field activities - traversing, transect selection, profile study, grid soil sampling, soil mapping, land use, existing soil and water conservation structures and well inventory
- Post-field activities - laboratory analysis, processing field data through GIS and preparation of thematic maps

### Hydrological data interpretation

- Weather, climatic and geohydrological data capturing, analysis and interpretation to include in DSS
- Measurements and monitoring of hydrological variables- soil moisture, ground water fluctuation, runoff, sediment yield and evapotranspiration etc.,
- Soil and water conservation planning, identification of recharge sites for water harvesting structures and their integration in DSS

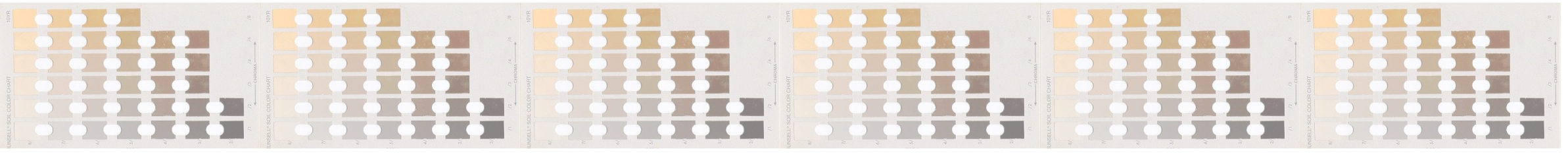
### Geospatial technology

- RS and related technologies for data capturing in a watershed
- Interpretation of the data
- GIS for data handling and preparation of thematic maps
- New technological options like IoT, artificial intelligence for resource inventory

### DPR preparation

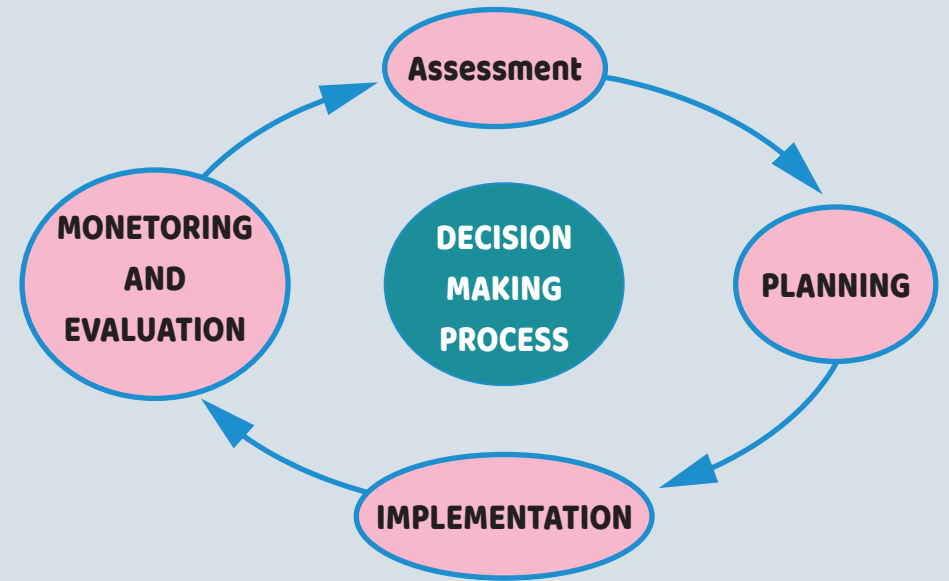
- Guidelines for detailed project report preparation
- Data set needed for DPR preparation
- Draft DPR preparation ground truthing and validation
- Implementation of DPR





## 2. Refinement and development

- LRI and Hydrology protocols
- DSS, mobile applications and their validation



## 3. Knowledge exchange program

- Organization of national and international conferences, workshops, seminars, symposia and brain storming sessions
- Interaction with watershed domain experts across the world
- Issue based research projects on identified theme areas of watershed management will be allotted to Ph.D scholars on competitive mode
- Demonstration and monitoring of issue based research program in a model watershed



## 4. Planning, implementation and monitoring of watershed

- Establishment of model watershed
- Monitoring resource conservation strategies
- Identification of suitable conservation and best watershed management practices
- Impact assessment of treated watersheds for successful implementation



## 5. Link science and community needs in watershed management

- Monitoring, Evaluation and Learning
- Upliftment of livelihood of farmers in watershed areas
- Convergence of rural development schemes of line departments
- Establishment of linkage between science based development and their impact on livelihood strengthening and value chain



# Knowledge partners

**National Institutes:** DoLR, NRAA, ICRISAT, CRIDA, ICAR-IISWC

**Lead partners:** NBSS &LUP, IISc

**Scientific partners:** State Agricultural Universities- UASB, UASD, KSNUAHS, UASR, UHSB, WDD, KSDA, KSNMDC, KRSRAC and line Departments related to Panchayath Raj institute

**In-house Knowledge Resources**

## Special Officer

**Dr. S. S. Prakash**

Dean (Agri.)  
CoA, V C Farm, Mandya

## Co-ordinators

**Dr. A. Sathish**

Professor  
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**Dr. Mudalagiriappa**

Chief Scientist  
AICRP for DLAP, UASB

**Dr. M. N. Thimmegowda**

Professor and Scheme Head  
AICRP on Agrometeorology, UASB

**Dr. S. B. Yogananda**

Professor and Head  
Dept. of Agronomy, CoA, V C Farm, Mandya

**Dr. A. P. Mallikarjuna Gowda**

Professor of Horticulture and  
Senior Farm Superintendent, ZARS, UASB

**Dr. Y. N. Shivalingaiah**

Professor and Head  
Dept. of Agril. Extension, CoA, UASB

**Dr. Siddayya**

Professor and Coordinator  
PPMC, UASB

**Dr. R. Suma**

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**Dr. M. K. Prasanna Kumar**

Professor  
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**Dr. Premanand B. Dashavant**

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