

Rejuvenating Watersheds for Agricultural Resilience through Innovative Development (REWARD) Program

Background:

The land resources of Karnataka are under severe stress due to continuing degradation and competing demands of land uses. Out of the total geographical area of 19.17 m.ha, more than 65 per cent of the cultivable area (about 13 m.ha) is under rainfed crops. Over the years, integrated watershed management has emerged as an appropriate option to reduce the severity of degradation and to improve the productivity on a sustainable basis. Accordingly, various watershed development programs have been designed and implemented in the past with huge financial outlay. The experience of World Bank supported SUJALA III Project in Karnataka has proved the importance of location specific recommendations based on site-specific land resource information and advisories. Land Resource Inventory (LRI) provides not only site-specific land resource information, but also thematic maps, advisories and tools (Digital Library, Portal, DSS & Mobile Apps) needed for the preparation of Detailed Project Report and for implementation and monitoring of Watershed and other line department programs in the state.

As a follow up of the above and in order to disseminate the scientific information already generated in about 1.4 m.ha, to make efficient use of the created infrastructure and to scale up LRI approach and site-specific interventions in the State, Watershed Development Department, Government of Karnataka has taken up, in the multi-state **REWARD Program** (Rejuvenating Watersheds for Agricultural Resilience through Innovative Development) at an estimated cost of 85.70 million USD.

REWARD Program comprises of Land Resource Inventory and Hydrological studies to enhance crop productivity.

Overall Objectives of REWRAD Program:

The main objectives of the REWARD program are to restore the ecological balance by harnessing, conserving, and developing degraded natural resources such as soil, vegetative cover, water and improving livelihood opportunities. This objective is elaborated as detailed below

1. To manage the natural resources based on watershed principle by using the Scientific Land Resource Information to improve the rainfed area land productivity and its production capabilities,
2. To improve the soil and water conservation outcomes and groundwater recharge
3. To improve the living status of the people of watershed area and provide livelihood activities to asset less farmers in the project area through various quality skill-based training programme, thereby providing employment opportunities at their doorstep
4. To strengthen the community-based organizations to manage the natural resources
5. To ensure adequate skill sets, to human resources of the department at the district/block/hobli levels for effective planning and program management
6. To enhance capacity of watershed committees and Gram Panchayats for increased participation and O&M
7. To strengthen the digital library/portal for LRI data management and dissemination
8. To use LRI and hydrology-based recommendations for detailed project reports (DPRs) for selected sub-watersheds and guide the implementation in a saturation mode
9. To empower the farming community in marketing their produce by value chain development projects through promotion of FPOs and PPPs in select watersheds
10. To create a mechanism for capacity building and continuous dissemination of LRI data and its updating through Advance Centre for LRI technology

Objectives of Land Resource Inventory:

1. Undertake Land Resource Inventory to identify and characterize the soils of the area and highlight their problems and potentials.
2. Grouping of soils under different series and classify the soil series according to soil taxonomy
3. Preparation of soil resource, fertility, land capability and crop suitability maps.
4. Preparation of Reports and Atlas at Micro-watershed level

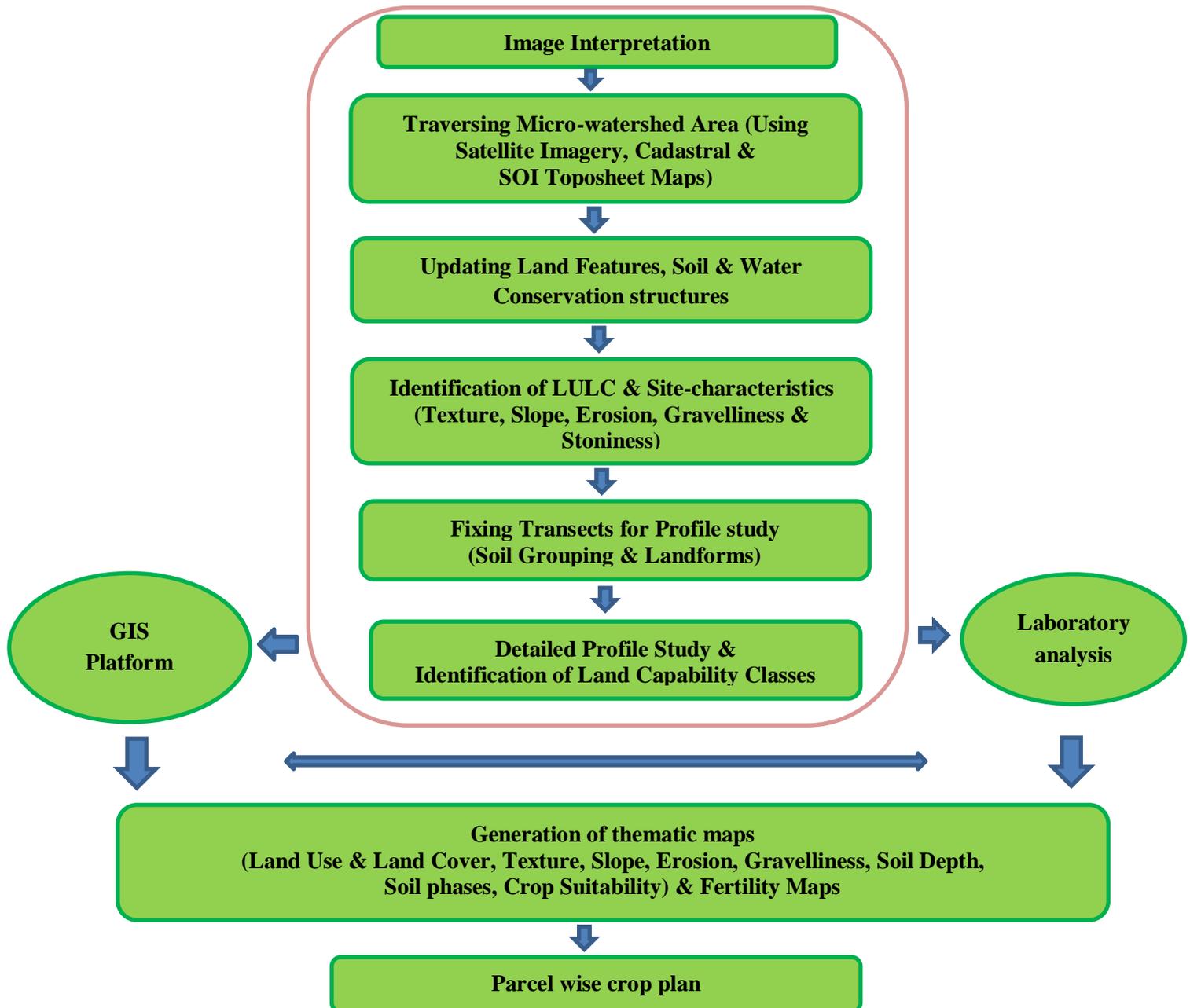
Objectives of Hydrology:

1. Establishment of one model micro-watershed in each district.
2. Monitor hydrological data in selected model micro-watersheds and bench mark sites

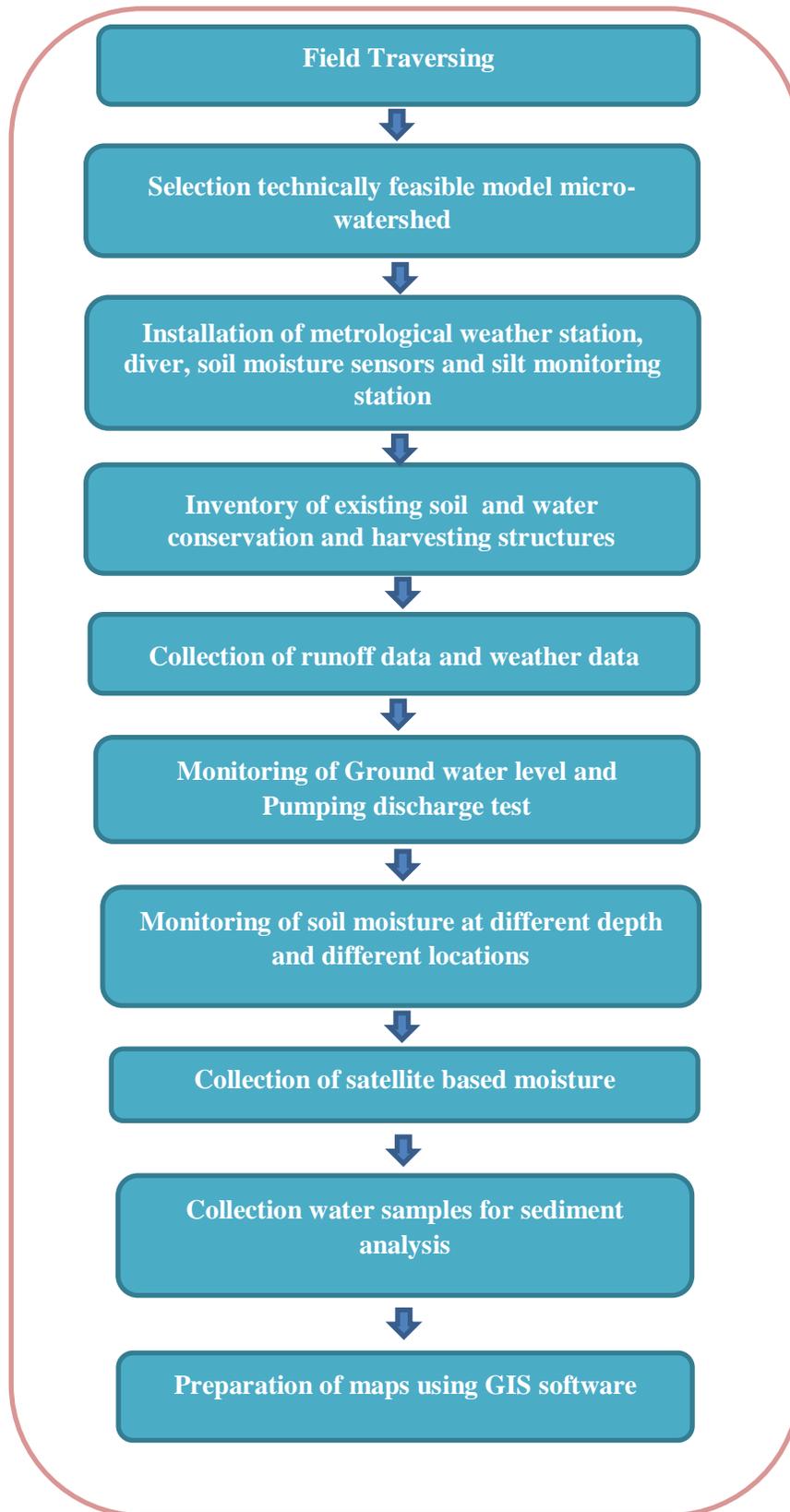
3. Calibration and validation of models for its accuracy and ease of use.
4. Demonstrate use of hydrological data collected in design of watershed treatment and management measures through the application of DSSs.
5. Preparation of existing structures, bund status, conservation plan and runoff maps.
6. Preparation of Hydrology Reports and Atlas at Micro-watershed level

Activities carried out under REWARD Project:

Land Resource Inventory Activities:

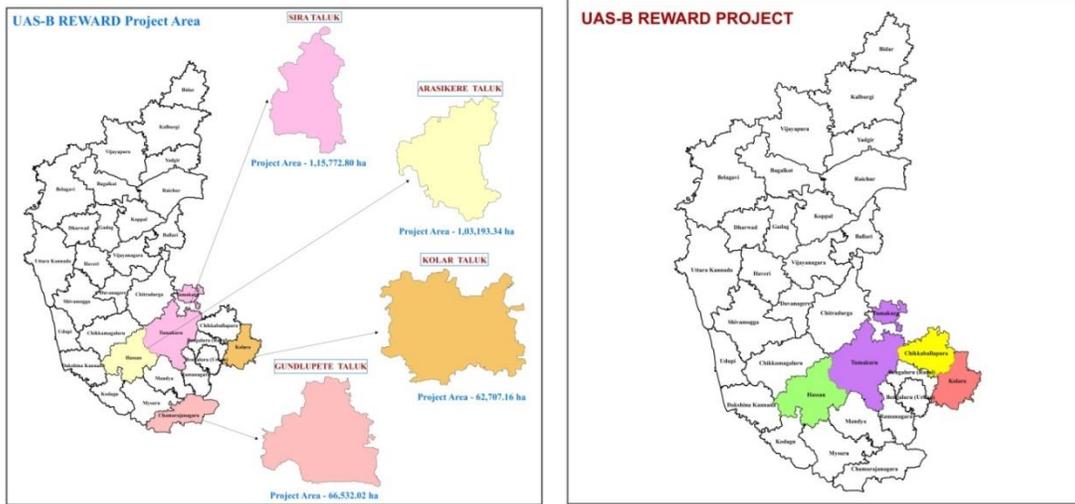


Hydrology Activities:



Area under REWARD Program:

Four Districts of Karnataka each are allotted for Land resource inventory (Arasikere, Gundlupet, Kolar and Sira taluk) and Hydrological studies (Arasikere, Chikkabalapura, Kolar and Sira taluk under UAS, Bangalore.



Area allotted for Land Resource Inventory:

One hundred and seventy five micro-watersheds from Hassan taluk, 121 micro-watersheds from Kolar taluk, 225 micro-watersheds from Sira taluk and 128 micro-watersheds from Gundlupete taluk.

Details of Sub Watersheds proposed for REWARD Program						
Sl No	District	Taluk	Area Details	SWS	No. of MWS	Project Area Proposed for LRI (ha)
1	Hassan	Arsikere	New area	20	175	1,03,193.34
2	Kolar	Kolar	New area	11	121	62,707.16
3	Tumkur	Sira	New area	21	225	1,15,772.80
3	Chamarajanagar	Gundlupete	New area	15	128	64,049.64
4	Chamarajanagar	Gundlupete	Sujala -III balance area	1	5	2,482.38
UAS Bangalore				68	654	3,48,205.32

Model Micro-watershed monitored under Hydrological Studies:

Allotted Model Micro-Watersheds – 5 Nos.						
District	Upgradation	Upgradation Taluk	Maintenance	Maintenance Taluk	New	New Taluk
Kolar, Hassan, Tumkur and Chikkaballapura	1	Tumkur	1	Turvekere	3	Bagepalli, Arsikere and Kolar

Output/Outcomes of REWARD Program:

1. Parcel/Survey number wise site characteristics, fertility status, land capability and suitability classes will be generated.
2. Various thematic maps, soil map, fertility maps and site-crop suitability maps will be generated and uploaded in Land Resource Inventory portal.
3. Based on the Land capability classification and Site-crop suitability assessment, crop plan will be prepared.
4. Based on the Hydrological studies through scientific approach, suitable Soil and Water Conservation plan will be suggested in Detailed Project Report (DPR).