

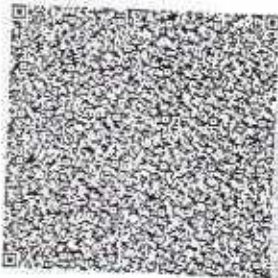


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# INDIA NON JUDICIAL Government of Karnataka

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## MEMORANDUM OF UNDERSTANDING

NATIONAL BUREAU OF SOIL SURVEY AND LAND USE PLANNING  
PARTNERING WITH KARNATAKA WATERSHED DEVELOPMENT  
DEPARTMENT FOR IMPLEMENTATION OF WORLD BANK FINANCED  
KARNATAKA WATERSHED DEVELOPMENT PROJECT II  
(KWDPII - SUJALA III)

(CREDIT NUMBER 5087-IN)

L. S. Kulkarni  
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1. This Memorandum of Understanding dated sixth day of January, 2014 and executed between: **Department of Watershed Development, Government of Karnataka**, having its office in Seventh Floor KHB Complex, Cauvery Bhawan, KG Road, Bangalore – 560 009 represented by its Commissioner or his authorized representative (herein after called as Department of Watershed Development – Client) is the **First party**, which term shall mean and include Executors, Administrators.

and

The **National Bureau of Soil Survey and Land Use Planning (NBSS&LUP)** a premier institute under the Indian Council of Agricultural Research (ICAR) New Delhi Government of India represented by its Regional Head, Bangalore or his authorized representative (herein after called as NBSS&LUP Bangalore- Project Partner) as the **Second party** and which term shall mean and include Executors, Administrators.

## 2. WHEREAS:

2.1 The Government of Karnataka, Govt. of India and World Bank, have designed a new Watershed development model to strengthen the GOI sponsored IWMP and its convergence with other developmental programs, particularly NREGS. Such a project would contribute to deeper and more sustainable improvements in productivity and livelihoods of small farmers in rainfed areas. Accordingly GOK proposes to implement the World Bank assisted Karnataka Watershed Development Project-II (KWDP-II) at an estimated cost of 85.70 million USD. The Project will be implemented over a period of six years from 2013-14 to 2018-19 in seven districts of Karnataka State viz Bidar, Gulbarga, Yadgir, Koppal, Gadag, Davanagere and Chamarajnagar in selected 434 Micro-watersheds (Batch 4 and 5 of IWMP) in two Phases covering 2,08,660 ha.

2.2 KWDP-II intends to demonstrate more effective watershed management through greater integration of programs related to rainfed agriculture, innovative and science based approaches and strengthened institutions and capacities of stake holders at different levels through:

- Characterization of natural resources at cadastral level for resource potential and conservation;
- Understanding hydrological dynamics vis-a-vis hydrogeology, climatic variability and develop tools to measure them;
- Establishing state of the art Digital Library, watershed management portal for the decision support system
- Enable and strengthen the local watershed institutions in a participatory bottom up approach for sustained development;

and incorporate the same into the watershed planning and implementation to address the needs of rain fed farmers for sustainable natural resource management for ensuring economic equity.

The project would strengthen the involvement of small and marginal farmers in the existing extension delivery systems, agricultural schemes and value chains, to increase opportunities to adopt new technologies. The project would also strengthen the financial convergence between IWMP and MNREGS and technical convergence through effective integrated watershed planning incorporating the other developmental schemes. Better convergence is expected to result in more science-based targeting and higher quality of resource conservation interventions. The adoption of enhanced systems and new tools should result in measurable incremental investments and subsequent benefits in watershed development outcomes in the project areas for subsequent up scaling.

### **2.3 Project Components:**

Component 1: Support for Improved Program Integration in Rainfed Areas

Component 2: Research, Development and Innovation

Component 3: Institutional Strengthening

Component 4: Strengthening Horticulture in Rainfed Areas

Component 5: Project Management and Coordination

### **2.4 Project Stakeholders:**

- Watershed Development Department (WDD), GOK
- Departments of Agriculture and Horticulture, GOK
- State Agriculture, Horticulture and Veterinary Universities
- National Bureau of Soil Survey & Land Use Planning, (NBSS&LUP), ICAR
- Indian Institute of Science (IISc)
- Karnataka State Remote Sensing Applications Centre (KSRSAC)
- Karnataka State Natural Disaster Monitoring Centre (KSNDMC)
- District and Taluk level Watershed Teams and Watershed Committees, and Community Institutions such as, Area Groups / Farmer Groups, Producer Groups, HOPCOMS and Self-Help Groups
- Local Self Governance Institutions like Gram Panchayath and Zilla Panchayath
- Raitha Samparka Kendras (RSKs) and Krishi Vignana Kendras (KVKs)

### **2.5 Project Implementing Agency:**

Watershed Development Department (WDD) and Horticulture Department (HD) of Government of Karnataka (GoK) are the implementing agencies. They are responsible for achieving the goals and objectives of the project. The Commissioner - WDD Bangalore will be the Project Director responsible for overall project implementation.



## 2.6 Project Management and Implementation Arrangements:

**Project oversight:** The WDD and DoH under the GoK would be the implementing agencies for the project and be responsible for ensuring that the project development objectives are met. Oversight would be provided by the Project Empowered Committee (PEC). The PEC would review progress and approve yearly plans and budgets, and provide policy guidance. The PEC comprises of Secretaries from relevant departments in the GoK, to ensure guidance for the more integrated and convergence approaches that the project will pilot and promote. The PEC would closely work with the SLNA, which monitors the implementation of IWMP.

**Project Management - Watershed activities:** A Project Planning and Management Unit (PPMU) would be set up within the WDD, which would assume direct responsibility for day-to-day project management, coordination and implementation. The PPMU, made up of key Departmental directors from WDD and partner GOK agencies would take the lead role in planning, coordination and monitoring of the project performance in line with the project implementation schedule, and facilitate regular decision making for implementation of various components of the project and be responsible for inter-institutional coordination. It would also ensure that resources are budgeted and disbursed, and that project accounts are audited.

The PPMU would be led by a full-time Project Director assigned from the WDD, supported by i) a **Project Technical Cell (PTC)** with full-time technical contracted or deputized specialists, who would provide advice and project related support on technical matters for integrated watershed planning and monitoring and hydrology, and overall M&E and reporting; ii) a **Research and Extension Cell (REC)**, with designated officers from WDD and the Departments of Agriculture and Horticulture, and training coordinator who would guide and coordinate project activities relating to delivering research outputs, technology transfer and strengthening local institutions; and iii) a **Financial Management and Procurement Cell (FMPC)** which would be responsible for the accounting, procurement and financial control of the project. The PPMU would be responsible for approving all contracting and procurement across all watershed components, consultancies and specialized agencies.

The PPMU will be working with a range of project partners and existing institutional systems across different components. At District and Taluk levels, the project would provide incremental support manpower, training and equipment to build capacity and strengthen the arrangements already in place, mainly the existing District Watershed Development Teams (DWDTs) and Taluk level Watershed Development Teams (WDT) under the IWMP, and agriculture extension units, especially farmer contact centers (also known as RSKs), so that the local units can access and use a greater range of information products, decision tools, and manage field demonstrations.

## 2.7 Importance of Component 1:

The Component 1: Support for Improved Program Integration in Rainfed Areas is central to the realization of Project goals and objectives. Under this component, the Natural Resource base of the Micro-watersheds will be characterized and digital library will be established. The information generated will be used in establishing Watershed Management Portal at UAS, Raichur, and disaster recovery unit at UAS Dharwad. The Digital data will be used for developing DSS Applications. The Final Product of this component is to facilitate Community based Micro-watershed Master Planning with the help of new scientific tools and planning processes. It also encompasses concurrent community M & E.

## 3. WHEREAS:

NBSS&LUP has the necessary expertise and has years of experience to conduct and promote research in the National Agricultural Research System in the areas of Soil Survey, Pedology, Geomorphology, Remote Sensing, Geographical Information System, Cartography, Land Evaluation and Land Use Planning and hence considered as exceptionally well qualified to partner with KWDD for the successful implementation of KWD-II on a sustainable basis;

As a lead Agency, NBSS&LUP shall guide the partner institutions on all aspects related to Natural Resource characterization of Batch 4 and 5 micro watersheds in seven project districts, preparation of alternate land use plans including Logistics and Capacity Building and guide to establish Digital Library and Portal and Watershed Decision Support System, as planned in the partner institutions.

The financial outlays for the component for which NBSS&LUP will be responsible have been worked out in consultation with officials of NBSS&LUP Bangalore and is as follows:

### FINANCIAL OUTLAY FOR THE COMPONENT TO BE IMPLEMENTED BY NBSS&LUP WITH BREAKUP (Rs. Lakhs)

Annexure No. as given in Cost table <sup>1</sup>	Details	Equipments/ Tools, Maps etc.,	Operating Cost <sup>2</sup>	Man power cost-salary <sup>3</sup>	TA & DA	Institutional Charges	TOTAL
101	A.1.1.DSS for Integrated	357.00				21.45	378.45

<sup>1</sup> The Annexure numbers 101, 102 etc. as given in column 1 and the references A.1.1, A.1.2, etc. as given in column 2 of the above table are as per the cost table prepared for the Project in 2012.

<sup>2</sup> These are in conformity with the definition of Operating costs as given in the Project Agreement.

<sup>3</sup> Pertains to the salary of consultants / contractual staff hired by NBSS&LUP & not of the regular employees of NBSS&LUP



	Watershed Planning						
102	A.1.2. Development of Land Resources Portal			161.70		24.26	185.96
103	A.2.1 GIS Facilities	113.30					113.30
104	B.1.1 Strengthening of Lab Facilities	60.06				4.50	64.56
✓105	B.1.2. Equipment for Field Soil Survey Operations	37.33					37.33
106	B.2.1 Hardware & Software for Digital Library	125.90	48.00			13.35	187.25
110	B.2.5 Compiling existing datasets, maps, literature, books, reports from various agencies		3.00			0.45	3.45
115	B.3 Hydrological data acquisition systems	4.00				0.60	4.60
116	B.2.7 Soil Survey Consultancy			86.40			86.40
✓118	B.2.7 cost of Field Work		43.20	19.44	60.00	16.60	139.23
119	B.6.2 Salaries for Junior & Senior Researchers			194.40	22.73	25.44	242.57
120	B.6.3 Soil and water analysis		6.00			0.90	6.90
121	B.6.4 Stationery & report printing		39.80			5.97	45.77
122	B.6.5 Rental of field project office	3.00	13.92			2.54	19.46
	<b>Total</b>	<b>700.59<sup>4</sup></b>	<b>153.92</b>	<b>461.94</b>	<b>82.73</b>	<b>116.06</b>	<b>1515.24</b>

The above costs have been worked out in consultation with NBSS-LUP and they are agreeable for the same. The Cost Tables referred to above are attached.

<sup>4</sup> Out of the proposed total outlay of Rs.1515.24 lakhs about Rs 500.00 lakhs worth of equipments is likely to be procured by WDD and hence the net total expenditure to be incurred by NBSS&LUP would be about Rs.1015.24 lakhs

The Abstract particulars of IWMP proposed Watersheds is given in Annexure I

**4. NOW THEREFORE THE PARTIES AGREE TO IMPLEMENT KWDP-II PROJECT WITH THE FOLLOWING UNDERSTANDINGS:**

**4.1 Responsibilities of NBSS&LUP (Second Party):**

The Specific tasks to be performed by NBSS&LUP will include (but not limited to):

1. Establish a dedicated Project unit at their Bangalore centre to undertake the tasks assigned. The team of scientists shall be from different disciplines such as Soil Science, Remote Sensing and GIS applications, Agronomy, Soil and water Conservation Engineering, Hydrology, Agricultural Economics and any other discipline as deemed necessary for the effective project execution; The team identified and agreed are as under. In case any of the following is not available due any valid administrative reason, they shall be replaced by equally qualified, experienced and competent personnel. The qualification and experience of the present team as well as the minimum qualification and experience required for the position is given below:

No	Name	Designation	Qualification	Field of Specilisation	Experie nce- years
<b>Lead Scientist</b>					
1	Dr. L G K Naidu	Principal Scientist&Head	M.Sc (Ag), Ph.D	Agronomy- Land Evaluation	36
2	Dr. Rajendra Hegde,	Principal Scientist	M.Sc (Ag), Ph.D	Agronomy- Land Use Planning	21
<b>Land Resource Inventorisation</b>					
3	Dr.S.Thayalan	Principal Scientist	M.A(Geogr aphy), Ph.D	Soil Geomorpholo	36
4	Dr.Anil Kumar	Principal Scientist	M.Sc (Ag), Ph.D	Soil Science	25
5	Dr.S. Dharumarajan	Scientist	M.Sc (Ag), Ph.D	Soil Science	5
6	G. Vasundara	Scientist	M.Sc (Ag), Ph.D	Soil Science	5
7	Dr.M.Lalitha	Scientist	M.Sc (Ag), Ph.D	Soil Science	2
8	Dr.M.Chandrakala	Scientist	M.Sc (Ag), Ph.D	Soil Science	2



9	Dr.K.V.Niranjana	Chief Technical Officer	M.Sc (Ag), Ph.D	Soil Science	25
10	Dr.B.A.Dhanorkar	Chief Technical Officer	M.Sc (Ag), Ph.D	Soil Science	25
<b>Agronomic / Climatic Inputs and Best Management Practices and Options</b>					
11	Dr. Rajendra Hegde,	Principal Scientist	M.Sc (Agri), Ph.D	Agronomy-Land Use Planning	21
12	Dr. L G K Naidu	Principal Scientist	M.Sc (Agri), Ph.D	Agronomy-Land evaluation	36
<b>GIS &amp; Remote Sensing</b>					
13	Dr. S Srinivas	Senior Scientist	M.Sc(Stat), Ph.D	GIS for Agriculture	24
14	Dr.M.Ramesh	Chief Technical Officer	M.Sc.(Geog ) Ph.D	Geography, GIS, DEM	24
15	DH.Venkatesh	Senior Technical Officer	M.Phil	IT & GIS	20
<b>Laboratory Analysis and Interpretation</b>					
16	Dr.K.M.Nair	Principal Scientist	M.Sc (Ag), Ph.D	Soil Science	36
17	Dr.S. Dharumarajan	Scientist	M.Sc (Ag), Ph.D	Soil Science	5
18	G. Vasundara	Scientist	M.Sc (Ag), Ph.D	Soil Science	5
19	Dr.M.Lalitha	Scientist	M.Sc (Ag), Ph.D	Soil Science	2
20	Dr.M.Chandrakala	Scientist	M.Sc (Ag), Ph.D	Soil Science	2
<b>Hydrology, Soil &amp; Water Conservation</b>					
21	Dr.Sunil Maske	Scientist	M.Tech (SWCE)	Soil & Water Conservation	12
<b>Socio-Economic Data collection and Interpretation</b>					
22	Dr. S C Ramesh Kumar	Principal Scientist	M.Sc (Ag), Ph.D	Agriculture Economics	20

Note: The minimum qualification required is a Post Graduate degree in the relevant field and 2 years experience for Scientist, 5 years for Senior Scientist and 10 years for Principal Scientist positions.

2. Assign clear cut roles and responsibilities to the scientists with periodic review arrangements to the satisfaction of WDD;

3. Co-ordinate with WDD in organizing stakeholder workshops for orientation of the project partners, project staff and Line Departments including IWMP NGOs;
4. Provide guidance in establishing GIS Lab and Strengthening Laboratory facilities in Project partner institutions;
5. Advise WDD and other partner institutions more specifically SAUs / SHU on the requirement of various RS inputs / imageries, theme maps as the project progresses;
6. Develop standard protocols, Proformas and Manuals for field survey and laboratory analysis for soil & water samples;
7. Train the SAUs and SHU / community in RS, GIS and Natural Resources Survey / Characterization;
8. Develop guidelines for Sub-watershed level Assessment and monitor the same;
9. Undertake 1 pilot sub-watershed assessment involving all project partners and local community;
10. Undertake natural resource survey / characterization in 7 pilot micro-watersheds involving concerned project partners;
11. Co-ordinate natural resource survey / characterization and socio economic surveys for baseline data in the remaining project watersheds;
12. Undertake characterization of correlated soil series from the project districts;
13. Perform periodic review and setting priorities related to field survey, correlation & data interpretation, data integration, generation of thematic layers and authentication;
14. Provide guidance to all project partners in establishing Digital library, and provide guidance to UAS Raichur for hosting Watershed Management Portal;
15. Develop Decision Support System (DSS) in collaboration with WDD and project partners;
16. Develop guidelines to draw treatment plans integrating with other Programmes to incorporate into the Participatory Micro-watershed Master Plans including Land use plan;
17. Co-ordinate with WDD in capacity building programs;
18. Organize stakeholder workshops one in each in project districts (related to 7 pilot micro-watersheds) for validating the treatment / master plans and incorporate the outcomes into the master plan revisions and handholding assistance to the Universities;



19. Review to finalise and incorporate the Treatment and Master plan revision as validated in the pilots;
20. Advise on setting up Management Information System (MIS);
21. Prepare Procurement Plan (in consultation with WDD) for the procurement of Works, Goods and Services as may be required for the implementation of Component 1 of the Project and revise the same as necessary at least once a year;
22. Provide the generic, functional specifications for the major equipment to be procured by WDD through International/National Competitive Bidding;
23. Procure minor equipment, tools, field work and laboratory equipment, chemicals as per requirement of the Project by following shopping procedures as prescribed by World Bank Guidelines and Procurement Manual;
24. Maintain all the procurement related documents in a proper and systematic manner so that they can be easily retrieved and produced to the officials of the Bank or their authorized auditors for their review as and when they request for the same.;
25. Shall ensure utilization of funds for approved project activities only and ensure that the underlying records, books of accounts are adequately maintained for the purposes of audit.
26. Freely share/exchange the data (soft and hard copies) generated by them with the entire project partners in the best interests of the project. Confidentiality shall be adhered to while sharing the same with agencies other than the partners unless and otherwise desired by the WDD;
27. Hire necessary manpower by following procedure of NBSS&LUP with concurrence of WDD as regards, the qualification, experience and number;
28. **Submit the following reports/outputs (or any other as may be desired by Bank and or WDD) as per program agreed with WDD;**
  - Stake holder Workshops for Project orientation, Periodic review and report generation
  - Protocols for GIS and Analytical labs
  - Protocols for RS inputs / imageries, cadastral / theme maps
  - Standard protocols, Proformas and Manuals for field survey and laboratory analysis for soil & water samples
  - Training University, Line Departments including WDD and community
  - Sub-watershed assessment guidelines
  - Field survey progress review reports and data / output, authentication protocols

- Protocols for Digital Library, Watershed Management Portal & DSS Applications
- Treatment plan guidelines for participatory microwatershed plans
- One pilot sub-watershed assessment and report for each district
- Land Resource maps and reports, theme maps and treatment plans for 7 pilot micro-watersheds
- Soil series correlation report for the project districts
- 7 pilot micro-watersheds treatment validation for master plan revisions
- Community interfacing Workshops for validating treatment plans and Master plan revisions in 7 pilots
- Review report on Master plan revisions for all the project micro-watersheds as validated in the pilots
- Expenditure reports highlighting the actual expenditure against payments received to be submitted in agreed format on a quarterly basis to WDD.

29. Follow and adhere generally to the following Schedule of Activities:

Sl No	Task	Time Schedule from the date of signing of MOU
1.	Establish dedicated Project unit at Bangalore centre consisting of Subject experts from different disciplines viz., Soil science, Remote sensing & GIS applications, Agronomy / Soil and Water Conservation Engineering, Hydrology / Agricultural economics and any other discipline as deemed necessary for the effective project execution. Assign clear cut roles and responsibilities to the scientists with proper periodic review arrangements to the satisfaction of WDD.	Within 1 month
2.	Organize stakeholder workshops for orientation of the project partners, project staff and Line Departments including IWMP NGOs	As per mutually approved program within 36 months
3.	Provide Guidance to Project partner Institutions in establishing GIS Lab and Strengthening Laboratory facilities	Within 6 months
4.	Prepare and submit Procurement Plan for procurement of necessary works, goods and consultancies with guidance from WDD.	Within 2 months



5.	Provide the generic, functional specifications for the major equipment to be procured by WDD through International/National Competitive Bidding;	Within 3 months
6.	Procure minor works, equipment and other materials as per approved Procurement Plan through shopping procedures	As and when required throughout the Project period.
7.	Submit requirement of man power to WDD for review and conveying approval;	Within 1 month
8.	Hire man power as per approval	Within 3 months
9.	Advise on Preparation of bid documents for the required tools and equipments	Within 15 days of WDD seeking such advice
10.	Advise WDD and other partner institutions more specifically SAUs / SHU on the requirement of various RS inputs / imageries, theme maps as the project progresses	As and when sought within 36 months
11.	Develop standard protocols, Proformae and Manuals for field survey and laboratory analysis for soil & water samples	Within 4 months
12.	Train the SAUs and SHU / community in RS, GIS Techniques and Natural Resources Survey / Characterization in collaboration with KRSRAC	As per mutually agreed program within 12 months
13.	Develop Guidelines for Sub-watershed level Assessment	Within 3 months
14.	Undertake 1 pilot sub-watershed assessment involving all project partners and local community	As per mutually agreed program within 6 months
15.	Undertake natural resource survey / characterization in 7 pilot micro-watersheds involving concerned project partners	As per mutually agreed program within 12 months
16.	Co-ordinate natural resource survey / characterization and Socio economic surveys for baseline data	As per mutually agreed program within 36 months
17.	Perform characterization of correlated soil series from the project districts	As per mutually agreed program within 36 months
18.	Conduct periodic review and set up priorities related to field survey, correlation, data interpretation, data integration, generation of thematic layers and authentication	As per mutually agreed program within 36 months

19.	Operationalize Digital library , in all SAUs / SHU	As per mutually agreed program within 24 months
20.	Develop Decision Support System (DSS) Applications in collaboration with WDD and project partners	As per mutually agreed program within 24 months
21.	Develop guidelines to draw treatment plans integrating with other programs to incorporate into the participatory micro-watershed master plans including land use plan utilising pilot watershed data	As per mutually agreed program within 18 months
22.	Co-ordinate with WDD in capacity building programs	During the entire project period
23.	Organize stakeholder workshops one in each project districts (related to 7 pilot micro-watersheds) for validating the treatment / master plans and incorporate the outcomes into the master plan revisions	As per mutually agreed program within 18 months
24.	Review to finalise and incorporate the Treatment and Master plan revision as validated in the pilots	As per mutually agreed program within 36 months

The services shall be for the project duration of six years. The service period could be extended on mutual consent.

#### **4.2 Responsibilities of Karnataka Watershed Development Department (KWDD)- (First Party):**

To support NBSS-LUP in performing its activities, the WDD shall:

1. Provide a framework and guidelines to facilitate effective implementation of the KWDP – II;
2. Liaison with Project District ZPs and PRIs for effective program convergence;
3. Provide Financial support, Logistics;
4. Procure all major equipments as may be required by NBSS&LUP and provide the same timely to NBSS&LUP;
5. Workout a mutually agreed schedule for the outputs to be submitted by NBSS &LUP;
6. Enable conducive working environment for collaboration between various stakeholders involving Line Departments and Project Partners of the Project;



7. Facilitate the participation of district and taluk WDTs, Watershed Committees (EC) and Various Community based organizations (CBOs), User Groups, SHGs including the IWMP-NGO, training coordinators in all the activities of the Project partners;
8. Get involved in the project inception activities like State / District level stakeholder workshops and awareness programs and provide necessary information and clarification;
9. Make necessary modifications from time to time (based on the learning) in the Operations Manual for convergence of IWMP and Sujala III;
10. Undertake periodic review of Project Progress with various groups of Stakeholders & NBSS&LUP;
11. Maintain transparency at all levels in financial transactions;
12. Continuously evolve and update the guidelines and recommendations for project implementation, based on the experiences generated by the Project partners and other institutions at the project level;
13. Hold periodic workshops and other consultation processes for mid-course corrections and as and when the need arises.
14. Constitute a Review and Co-ordination Committee consisting of members from the WDD, Department of Horticulture including representatives from NBSS&LUP, SAUs, SHU, KVAFSU, KRSAC, KSNDMC and IISC to monitor project progress and undertake mid-term review and to suggest modifications and refinements if any as and when required.

#### 4.3 Payment terms and conditions:

##### 4.3.1 Fund release and audit:

The WDD will release funds to NBSSLUP as per schedule given below on completion of tasks as specified here under and to the satisfaction of the review committee (PTC) headed by the Commissioner.

Sl No	Task	Time Schedule from the date of signing of MOU	Schedule for release funds as % of the Net estimated outlay of Rs.1015.24 lakhs
1.	Establish dedicated Project unit at Bangalore centre consisting of Subject	Within 1 month	10 <sup>2</sup>

<sup>2</sup> The 10% release is to facilitate the establishment of dedicated unit and as an upfront availability of funds to undertake other project related activities.

	experts from different disciplines viz., Soil Science, Remote Sensing & GIS applications, Agronomy/Soil and Water Conservation Engineering, Hydrology / Agricultural Economics and any other discipline as deemed necessary. Assign clear roles and responsibilities to each scientist with proper review arrangements		
2.	Provide Guidance to Project partner Institutions in establishing GIS Lab and Strengthening Laboratory facilities	Within 6 months	5
3.	Prepare and submit Procurement Plan for procurement of necessary works, goods and consultancies with guidance from WDD.	Within 2 months	1
4.	Provide the generic, functional specifications for the major equipment to be procured by WDD through International/National Competitive Bidding;	Within 3 months	3
5.	Submit requirement of man power to WDD for review and conveying approval;	Within 1 month	2
6.	Hire man power as per approval	Within 3 months	5
7.	Develop standard protocols, Proformae and Manuals for field survey and laboratory analysis for soil & water samples	Within 4 months	5
8.	Train the SAUs and SHU / community in RS, GIS Techniques and Natural Resources Survey / Characterization in collaboration with KSRSAC	As per mutually agreed program within 12 months in 2 installments	5
9.	Develop Guidelines for Sub-watershed level Assessment	Within 3 months	5
10.	Undertake 1 pilot sub-watershed assessment involving all project partners and local community	As per mutually agreed program within 6 months	5
11.	Undertake natural resource survey / characterization in 7 pilot micro-	As per mutually agreed program	7



	watersheds involving concerned project partners	within 12 months in 2 installments.	
12.	Perform characterization of correlated soil series from the project districts	As per mutually agreed program within 36 months in 3 installments.	1 per district Total 7
13.	Operationalize Digital library in all SAUs	As per mutually agreed program within 24 months in 4 installments	12
14.	Develop Decision Support System (DSS) Applications in collaboration with WDD and project partners	As per mutually agreed program within 24 months in 2 installments	5
15.	Develop guidelines to draw treatment plans integrating with other programs to incorporate into the participatory micro-watershed master plans including land use plan utilising pilot watershed data	As per mutually agreed program within 18 months in 2 installments	6
16.	Organize stakeholder workshops one in each district (related to 7 pilot micro-watersheds) for validating the treatment / master plans and incorporate the outcomes into the master plan revisions	As per mutually agreed program within 18 months in 2 installments	7
17.	On Final Review of tasks entrusted and submission of completion reports to the satisfaction of WDD	At the end of the project	10
<b>Total</b>			<b>100</b>

✓ NBSS-LUP shall maintain dedicated Bank account to operate this fund. NBSS&LUP shall follow strictly the provisions of the Financial Management and Procurement Manual. All the expenditures, financial transactions shall be subject to internal auditors appointed by WDD under the project and further subject to external audit by C & AG. NBSS-LUP shall render prescribed IUFIR statements to the WDD every quarter to facilitate reimbursement claims by the WDD. The oversight of C&AG audit for WDD is extended to cover these transactions.

#### 4.3.2 Institutional charges:

The project shall provide institutional charges on all the recurring costs/charges from the State's (GoK) share to the Project.

#### **4.3.3 Procurement of Materials, Equipments, Hardware, Software:**

WDD shall procure all Materials, Equipments, Hardware, Software and supply to NBSS&LUP.

#### **4.4 Other terms and conditions:**

##### **4.4.3 Ownership of tools, equipment/infrastructure procured for the Project;**

During the project period, the WDD shall be the owner of all the project assets. However the assets would be utilised by NBSS-LUP during implementation of the Project. After the completion of the project, a Committee would be constituted by WDD to assess the usefulness or otherwise of the equipments procured, feasibility and utility of the equipment installed, for the Component executed by NBSS-LUP and make recommendation to WDD. Appropriate decision would be taken based on the recommendations of the Committee in consultation with NBSS-LUP and no-objection of the Bank would be obtained before taking action.

##### **4.4.4 Intellectual Property Rights:**

The Intellectual Property rights will be shared between WDD and Project partners. Confidentiality of non-public information will be privy to the project, GOK, WDD and the World Bank.

##### **4.4.5 Modifications to MOU:**

Terms and Conditions of MOU may be reviewed and modified by mutual consent as per the requirement of various components / activities as and when the need arises and no-objection of the World Bank would be obtained before modification of the MOU. No over run cost will be permitted with the outlay proposed and Tasks in the MoU.

#### **4.5 Settlement of disputes:**

In case of any dispute and/or any difference of opinion, the same shall be amicably settled in a meeting between the Regional Director NBSS&LUP and Commissioner KWDD and Project Director KWDP-II. In the case of non-settlement of dispute, the cases would be settled following the Government of India Guidelines if any. In the absence of such GOI Guidelines the disputes shall be referred to Additional Chief Secretary and Development Commissioner, Government of Karnataka, whose decision shall be binding for both the parties.

#### **4.6 Termination;**

The MOU may be terminated by Mutual consent of both WDD and NBSS&LUP with one month prior notice by either parties, , due to any unforeseen circumstances or in the event of suspension of loan by the World Bank and / or partner (NBSS&LUP) failing to perform the specified tasks as mentioned in clause (4.1) of MoU.



In witness thereof the parties to the MOU have signed and affixed their respective seals to this and on the date mentioned above.

For and on behalf of

National Bureau of Soil Survey  
and Land Use Planning

*L. Sripala Krishna*  
Signature: *Saidur*  
6-1-14

Regional Head, NBSS&LUP

Bangalore.

Head, Regional Centre, NBSS & LUP  
Hebbal, Bangalore-560 024

For and on behalf of

Department of Watershed Development  
Department

Signature: *Hes...*

Project Director & Commissioner,

KWDP-II, WATERSHED  
DEVELOPMENT DEPARTMENT





# ANNEXURE - I

## Particulars of IWMP Watersheds proposed (Abstract)

Sl No	District	Taluk	No of Projects	No. Of Gram Panchayats	No, of MWS	Project Area Proposed for treatment (ha)
<b>Batch 4 IWMP Projects</b>						
1	Bidar	3	3	11	26	15750.50
2	Chamrajnagar	2	2	6	23	11267.43
3	Davanagere	3	3	11	29	15390.52
4	Gadag	4	4	15	58	20005.00
5	Gulbarga	5	5	14	48	25010.20
6	Koppal	3	3	10	30	14512.00
7	Yadgir	2	2	6	19	10565.66
	<b>Total</b>	<b>22</b>	<b>22</b>	<b>73</b>	<b>233</b>	<b>112501.31</b>
<b>Batch 5 IWMP Projects</b>						
1	Bidar	2	2	9	19	10015.00
2	Chamrajnagar	2	2	8	23	10090.00
3	Davanagere	2	2	7	18	10557.72
4	Gadag	4	4	13	56	20539.94
5	Gulbarga	6	6	23	55	29479.55
6	Koppal	1	1	5	10	4990.00
7	Yadgir	2	2	6	20	10486.88
	<b>Total</b>	<b>19</b>	<b>19</b>	<b>71</b>	<b>201</b>	<b>96159.09</b>
	<b>Grand Total</b>		<b>41</b>		<b>434</b>	<b>208660.40</b>

