Agriculture Mission Mode Project
(National e-Governance Programme)

Service 2 : Providing Information on Soil Health

Department of Agriculture & Cooperation
Ministry of Agriculture
Government of India

Agricultural Informatics Division
National Informatics Centre (NIC)
Ministry of Communications & Information Technology
Government of India

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Presentation will cover

1. Aim
2. Objectives
3. Implementation Strategy
4. System Characteristics
   ❖ As-Is
   ❖ To-Be
5. Stakeholders
6. Deliverables

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To develop, test and operationalise Application Software (Apps) and Portlet, for this Service, using ICT Technology :

1. Content Management System (CMS) – Service Portalet development

2. Database & Applications Development
   a. Transaction based (Database Tools)
   b. Work-flow based (Workflow engine)

3. GIS and Data Analysis (Spatial and Non-Spatial);

4. Alert and Expert Advisory System;

5. Information Service through Delivery Channels (using end-user computing facilities – Mobile Applications etc);

3. Implementation Strategy

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- ✓ **Formulation of System Requirements Specifications (SRS);**
- • **Design of solution components;**
- • **Development of Application Software (Apps) of Service;**
- • **Installation, Integration and Testing of Apps;**
- • **Security Audit, Testing and Certification of Apps.**
- • **Pilot Run, User Acceptance, Testing and Stabilization of Apps;**
- • **Documentation of Apps (Software and Services)**
- • **Handholding and Maintenance Support of Apps;**
- • **Capacity Building (through Training) for Operationalisation of Apps;**

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1. Soil health characteristics – Agro-climatic zones wise (133)
2. Package of Practices suitable to Soil characteristics
3. Balanced use of Fertiliser (In-Organic / Organic) – INM practices
4. Details of Soil Testing Laboratories and their automation for quick dissemination of results (including Laboratories of fertiliser companies and research institutions)
5. Generation of computerized Soil Health Card and National Soil Heath Database
6. Soil Maps of :
   I. Rapid Reconnaissance Survey
   II. Detail Soil Survey
   III. Land Degradation Mapping
   IV. Soil Resource Mapping
7. Organic farming – Participatory Guarantee System for Organic Farming – Certification Process

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8. **Alert & Expert Advisory** (on soil suitability and crop suitability; fertiliser usage, INM practices, FAQs, GAP, POP, etc.)
9. Grievances redressal (**type of grievances**)
10. Generation of Various Reports and Queries
    - I. Reports Related to Soil Testing
    - II. Reports Related to Expert Advisory
    - III. ….
    - IV. ….
11. **Integration** with Kisan call Centre (1800-180-1551) and State level Call Centres; IVRS based and Speech Recognization based System etc
12. **Integration** with e-Learning (in language)

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AS-IS : existing system

S.No.	Activity	Mode
1	Receipt of Soil Sample	Manual
2	Collection of Fees	Manual
3	Receipt Generation	Manual
4	Inward Entry of Sample	Manual
5	Testing of Sample	Physical process, through approved standard procedures
6	Result and Analysis of Soil Sample	Automated in Maharashtra & Karnataka (is being done through standalone software – no data sharing happening through the existing system, except manual printouts of reports being sent to department and farmers)
7	Providing Recommendations	Automated in Maharashtra & (is being done through standalone software – no data sharing happening through the existing system, except manual printouts of reports being sent to department and farmers)
8	Generation of Soil Health Card	Automated in Maharashtra & Karnataka (is being done through standalone software – no data sharing happening through the existing system, except manual printouts of reports being sent to department and farmers)
9	Dissemination of Results	Manual

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TO-BE

S.No.	Activity	Mode
1	Receipt of Soil Sample	Automated
2	Collection of Fees	Automated – through web based application
3	Receipt Generation	Automated – through web based application
4	Inward Entry of Sample	Directly into the web based application
5	Testing of Sample	Physical process, through approved standard procedures
6	Result and Analysis of Soil Sample	Automated in Maharashtra & Karnataka (but in the new system it will be done through web based software)
7	Providing Recommendations	Automated in Maharashtra & (but in the new system it will be done through web based software)
8	Generation of Soil Health Card	Automated in Maharashtra & Karnataka (but in the new system it will be done through web based software)
9	Dissemination of Results	Automated. A SMS will be pushed to the mobile of the farmer by the system. It will be available on the web also and farmer can directly download it from there. This will also be linked to SAP & CAP as the software will be web based.
10	Data Transmission with CAP & SAP	Will be done through web services.

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Alert and Advisory System (for Soil related Issues)

AS-IS
1. **Kisan Knowledge Management System** (KKMS) of MOA
2.
3.

To-Be
1. Work flow system (subject based)
2.
3.

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Public Grievances and Management

(through SMS, e-Mail, IVRS, Kisan Call Centre, CSCs, Service Portal, e-Post , PIFCs, Farmers Training Centes, Farmers Club, etc)
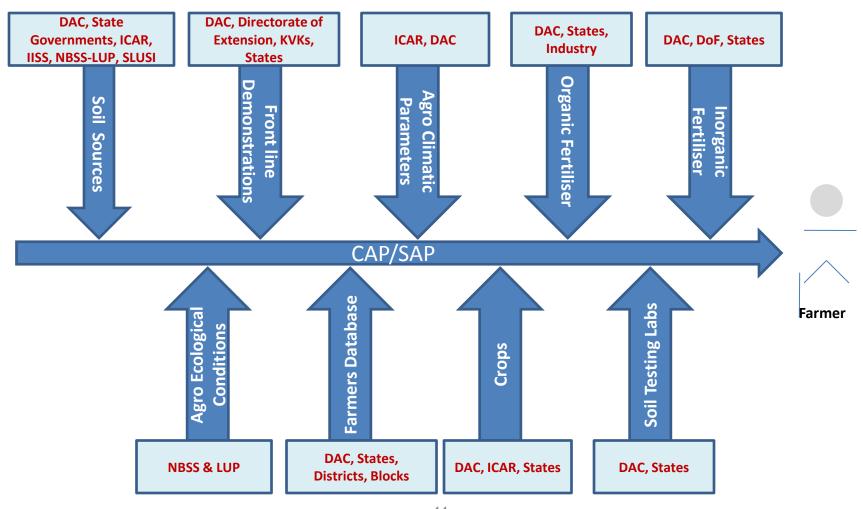
AS-IS

1. **No appreciable Computerised System available**
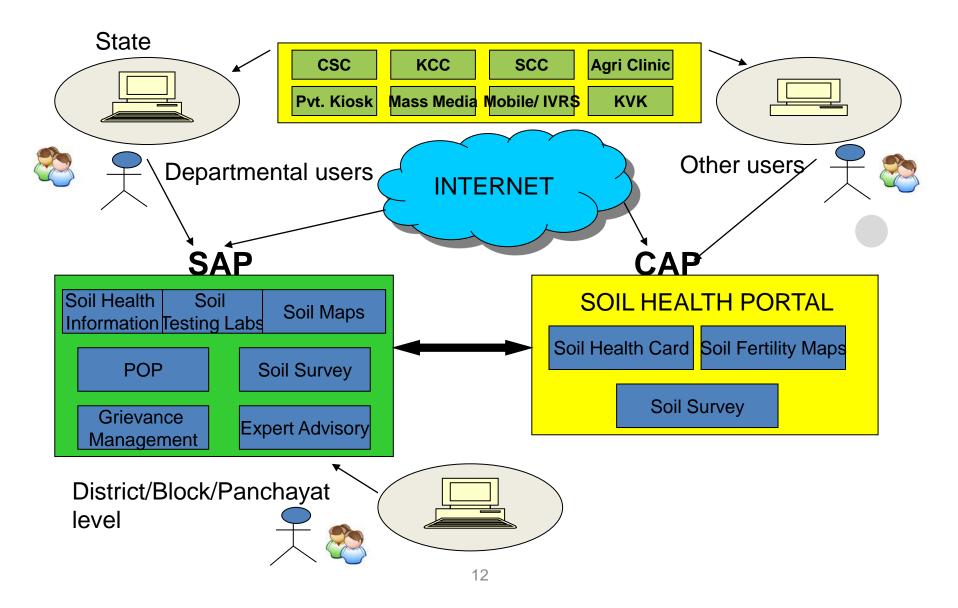2. **Manual process – paper based**
3.

To-Be

1. **Portal with Work flow system (subject based)**
2.
3.

Service to Farmer Linkage

11

Service to Farmer Linkage

State

| CSC | KCC | SCC | Agri Clinic |
| Pvt. Kiosk | Mass Media | Mobile/ IVRS | KVK |

Departmental users

INTERNET

Other users

SAP

Soil Health Information | Soil Testing Labs | Soil Maps
POP | Soil Survey
Grievance Management | Expert Advisory

CAP

SOIL HEALTH PORTAL

Soil Health Card | Soil Fertility Maps
Soil Survey

District/Block/Panchayat level

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1. Indian Institute of Soil Science, Bhopal (IISS), ICAR
2. Central / State Agricultural Universities (SAUs) / Agricultural Colleges
3. National Bureau of Soil Survey and Land Use Planning (NBSS & LUP), ICAR Institutions, Deemed Universities, Project Directorates
4. Fertilizer Manufacturers
5. Krishi Vigyan Kendra (KVK) (results of front line demonstrations)
6. Soil Testing Laboratories
7. Soil and Land Use Survey of India, Ministry of Agriculture
8. Commodities Directorates/Board (i.e. Rubber Board, Spices Board, Coffee Board, Tea Board etc)
9. Public Sector Banks dealing with agricultural credit & subsidy
10. State Agriculture / Horticulture / Engineering Department
    1. ATMA (District Level)
    2. SAMETI (State level)
    3. Block Agriculture Officer / Village Agriculture Officer
11. Non Government Organisations
    1. Farmers Training Centres (established by NABARD through Public Sector Banks)
    2. Farmers Clubs of NABARD
    3. Farmers Field Schools
    4. NGOs / Self Help Groups (i.e. Akshaya, NYK, Farm Clubs, Kudumbashre, etc)
    5. Private Sector Companies

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The following deliverables will be envisaged during the life cycle of the project:

- **Detailed SRS Document**
- **Detailed Technical Requirements Specifications**
-     **Document**
-   **Systems Design Document (SDD)**
- **Software Test Plan Document**
- **Software Acceptance Plan Document**
- **Project Reviews and Progress Reporting**
- **Manuals (Operations, User, System Administration)**
- **Training Plan**
- **Training**
-   **Software on CD with Manuals**
- **Warranty Support for Six months**
- **Change Management Documents**

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1.
2.
3.

Questions & Answers

A. SRS Document available at http://dacnet.nic.in/AMMP/Service2/SRS Service_2 Ver 1.1.docx
B. Presentation slides at http://dacnet.nic.in/AMMP/SRS.ppt

Service Project Team :-
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3. Shri Gyan Prakash Singh, Principal Systems Analyst (Service Coordinator)

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Thank You