ACTION TAKEN REPORT

Salient Recommendations of QRT, NBSS&LUP, Nagpur (2002-2006) and Comments of Director and the Council

Sr. No.	QRT Recommendations	Director's comments	Council's comments	Action Taken Report
1.	No serious efforts have been taken to clear a huge backlog in the respect of soil correlation	The soil correlation work has suffered due to absence of support from the soil survey agencies in respective states. However, Bureau has already initiated to sensitize each regional centre and respective state soil survey agencies / State Agricultural Universities for local and regional soil correlation. In this regard the Bureau has constituted a committee to take care of soil correlation activities on top priority. Some established soil series will be finalized within six months' time frame to include those soil series in National Soil Series Register.	The whole pending work of correlation of soil series be finished by the end of this year and identified benchmark soil series be entered into the National Register of Soil Series being maintained by the Bureau.	The soil correlation towards establishment of benchmark soil series and its entering into National Register has been taken up on top priority. Till date 95 soil series covering all the 25 states has been finalized and entered into national register. About 25 soil series from different states are in process of finalization. The programme on soil correlation will continue and an active plan has been drawn to include atleast 10 soil series in each year into National Register.
2.	Soil Survey Manual needs a drastic revision in view of developments in field methodology, soil profile description, horizon nomenclature, land capability and irrigability classification and soil survey interpretation that have taken place worldwide.	The work to revise Soil Survey Manual is taken up on top priority and will be published within the month of Dec. 2008.	May be agreed.	Soil Survey Manual has been revised with 24 chapters of recent importance and published in the year 2009. The Manual includes subsections like background of soil survey, methodologies, laboratory analysis, processing of soil series data, interpretation, usefulness of soil survey data and soil survey report and its evaluation.
3.	Salt affected soils and paddy growing soils of certain parts of the country are not adequately addressed in USDA Soil Taxonomy. The Bureau should strengthen its efforts in this	The work is in progress and will be geared up through regional centres as suggested	The gap may be filled-up taking into cognizance the work accomplished by AICRP on Salt Affected Soils,	Salt-affected soils occupy 6.65 m ha of which 36% occur in IGP. These soils irrespective of containing water soluble salts are classified as Aquepts and Ustepts in Soil Taxonomy which may not serve the purpose of differentiating non-saline/non-sodic soils with saline/sodic

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	regard.		CSSRI, Karnal	soils. We proposed these soils with ESP > 15 as sodic to depict the actual soil properties. Similarly for salt-affected soils of active alluvial plains there is a need to introduce salic and sodic intergrades to subgroup level for their meaningful interpretation for management purposes.
4.	The Bureau should develop GIS based decision support systems for land use planning for different soil series and agro climatic situations. The findings can be taken up in the farmers' field for validation.	This will be taken up on Top Priority. The Bureau will be concentrating on formulating some LUP models on some of the agro-eco systems using the resource data already generated and supported by additional data on bio-physical and socio-economic profile of the land users	May be agreed	To develop GIS based Decision Support System (DSS) for Land Use Planning and policy issues a Brainstorming Session has been arranged under the chairmanship of Hon'ble Director General, ICAR at NBSS&LUP, Nagpur with active participation from the Planning Commission and other stakeholders of land. As a sequel, NBSS&LUP has taken initiative to develop methodology to standardize land use planning at district level under a National network project on district level land use planning under different agro-eco-systems. Six districts has been identified and the work is in progress. A model district land use planning of Mysore district has been finalized with 12 Land Management Units (LMU) by taking into consideration of soil properties and dominant cropping system prevailing in the area. These 12 LMUs were evaluated for identifying economically viable and bio-physically suitable crops and cropping systems.
5.	Incorporation of soil pollution aspects (ensuing from both geogenic and anthropogenic sources) is essential in the soil-	Soil pollution aspects are essential to be included in the soil-site suitability criteria for various crops in contrasting agro-eco system.	Soil site suitability criteria for different contaminants including arsenic and	Assessment of soils of heavy metal pollution in Morigoan, Dibrugarh and Tinsukia district of Assam were mapped and correlated with soil properties. It was observed that coal

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	site suitability criteria. This is particularly true in view of the current contaminant burden in the agricultural production system from various sources, especially irrigation with contaminated groundwater, industrial effluents (without pre-treatment) and sewage/sludge, the latter primarily in peri-urban agriculture.		selenium may be developed.	mine sites were prone to these heavy metals. However, studies are required to confirm contamination of the heavy metals in the food chain of humans and animals. Soil pollution aspect will be included in the soil-site suitability criteria.
6.	The NBSS&LUP may adopt one/ two villages/blocks for undertaking overall survey in (1:4000/5000) scale for micro-level LUP in an attempt to reach the ultimate users.	The Bureau is developing a micro-level demonstration model on LUP involving experts from various disciplines and involving State Land Use Boards, Line Departments and SAUs	May be agreed.	Bureau has adopted some villages in each regional centre for undertaking detailed soil survey on 1:5000 scale for micro level land use planning. The resource characterization of all the area has been completed in consultation with line departments and it will be handed over to the departments for the development of the village/watersheds.
7.	Emphasis should be given to document the success stories on Land Use Planning and its impact on productivity	One success story on IVLP programme has been processed and printing of the document is in pipeline	In fact, every project should have mandatory component of monitoring in terms of evaluation and impact assessment to capture real outputs/outcomes.	Bureau has taken up a project on enhancement of rural livelihood under NAIP – Comp. 3 and interventions were made to enhance the livelihood of the villages.
8.	Soil survey being the most important work at NBSS&LUP, it should be adequately represented at the H.Qrs., through a full-fledged division and proposes that a division of Soil	The proposal for converting the Soil Survey Unit at Nagpur as full-fledged division is highly justified as the whole soil resource mapping and generation of database for formulation of land use plan at various levels for these states is	The regional Station of the Bureau at Nagpur was merged with the HQ. (with the existing staff redeployed to ICAR-	The erstwhile Soil Survey Unit has been merged with the Soil Resource Studies (SRS) Division of the Institute. Soil survey and mapping of the states of Maharashtra, Madhya Pradesh, Chhattisgarh and Dadra and Nagar Haveli is being carried out with the

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	Survey be set up at the H.Qrs. to conduct research and fine-tune the technological applications in the field of soil survey and mapping. The closure of Regional Centre, Nagpur has also created a vacuum in Soil Survey and Mapping in the areas of Maharashtra, Madhya Pradesh, Chhattisgarh and Dadra and Nagar Haveli.	looked after by this unit. We may provide one Principal Scientist from the Institute to act as Head, Soil Survey Division, Nagpur	RCER, Patna) to avoid duplication of administrative and technical functions by the Council. The Soil Survey Unit may be merged with Soil Resource Studies Division of the Bureau at HQ for proper functioning of soil survey related activities.	allotted staff of SRS division along with the other mandated activity of the Division.
9.	Bureau should take the advantage of the use of high resolution satellite data and to join hands with other organizations when needed to complete the task of preparing the Soil Map on 1:50,000 scale. Besides the above mapping, the Bureau should continue to do the detailed maping (e.g. 1:4,000/ 1:5,000 scale) as and when needed by the user agencies. The Bureau should make use of microwave/hyper-spectral remote sensing data for soil moisture studies in different agro-climatic zones.	Soil Resource Mapping on 1:50,000 scale i.e. district level soil mapping has been taken up on top priority by the Regional Centres and Soil Survey Unit of the Headquarters, with the help of latest Remote Sensing data coupled with GIS techniques and ground truth check. The use of microwave/hyper-spectral remote sensing data for soil moisture studies in different agro-climatic zones will be taken up with the help of Remote Sensing Applications (RSA) and Soil Resource Studies (SRS) division, Headquarters, and also involving the Regional Centres.	May be agreed	Use of microwave / hyperion data. Application of hyperion data in soil variability mapping was undertaken in collaboration with Space Application Centre (SAC) and a methodology has been developed for quantum assessment of soil properties from hyperion data. A pilot study indicates that hyperion data in the month of June is better for soil variability mapping. Spectral library has also being developed for different regions of the country.
10.	Bureau has taken much longer time than the specified time for the completion of some projects. This trend should be avoided.	The project monitoring mechanism will be strengthened at the Headquarters as well as at the Regional Centres. The PME Cell has been constituted and	May be agreed.	

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		strict research project monitoring is initiated.		
	Administrative and Financial Issues			
11.	Printing Section at Delhi is underutilized, as most of the work is done outside from the market. It would be in fitness of things if the administrative control of this section were handed over to the Head, Regional Centre, Delhi. The ICAR may also consider closing this unit and handing it over to IARI or placing it under ICAR for overall printing work of the Council	The printing Section at New Delhi is catering to the needs of publications of the Institute taking help from outside only for the coloured plates. The black and white part is printed at our own press. The press is not well equipped for colour printing. Technical Officer In-charge of the Section is quite knowledgeable and competent. The Printing Section is a part of the Bureau's HQ and under the control of the Director and the section is to be maintained as such.	The status quo may be maintained as printing section is rendering good service in printing of black & white publications (with no facilities for colour printing) of Bureau. The sale of publications amounts to good resource generation.	
12.	Investment in purchasing equipment during the period 2002-2006 reveals that 78.8% of the total expenditure was made at the H.Qrs. leaving little above 20% only for meeting the requirements of the five Regional Centres.	The expenditure at the Headquarters was higher because of specialized and centralized facilities created to serve the Headquarters, including Section/Unit/Division as well as Regional Centre requirements. The Regional Centres are adequately looked after in terms of staff strength, equipment and other infrastructural facilities.	May be agreed.	
13.	Absence of a trained Computer Engineer is adversely affecting the working of ARIS Cell.	The position may be created and filled up for efficient management of ARIS Cell.*	May not be agreed.	

***** Council's policy decision