2.16 National Initiative for Climate Resilience Agriculture (NICRA)

NICRA is an ICAR initiative that covers: cropping systems, water management, weather-based agro-advisories, risk management and enhanced extension efforts. These climate smart initiatives are implemented through selected KVKs, wherein Village Climate Management Committees are promoted. Learnings from NICRA villages could be captured by watershed teams and up-scaled if found advantageous. These KVKs and WCDCs could take a call on mutual advantage. KVKs could be requested to adopt some villages in IWMP watersheds to demonstrate these initiatives.

ANIMAL HUSBANDRY, DAIRY & FISHERIES

2.17 National Dairy Plan (NDP)

NDP is under implementation through National Dairy Development Board (NDDB) with World Bank assistance since 2012 with an objective to meet the projected national demand of 150 million tonnes of milk by 2016-17. The scheme has focused components of increasing productivity of milch animals and providing greater access to the rural milk producers with organized milk processing sector. Also, it has a focus on promoting Dairy Farmer Producing Companies and Dairy Farmer Producer Organizations. These could be taken up in watersheds having such potential. WCDCs and District level Milk Unions may collaborate on use of primary milk cooperatives in watershed areas for programme delivery. SHGs, CIGs in a given watershed can be part of this process. Further, SHGs could also be milk collection agents. State Animal Husbandry Department in the project states may provide necessary instructions to their district level formations for convergence of schemes/activities related to livestock development in a given potential watershed.
2.18 Livestock Health and Disease Control Programmes

This is one of the major schemes of the Department of Animal Husbandry. Animal Health Camps could be organized in collaboration with the departmental functionaries in the watershed areas. Watershed development teams may focus on small ruminants and backyard poultry depending on the potential. Para vets/Barefoot vets and Non-Government Organizations (NGOs) trained through the programme, could play an important role in preventive and primary health care of animals. Network of Gopals and Pranibandhus promoted by various States specially in rainfed areas may need to be adequately trained and their capacities built for addressing feed fodder and cattle health care including of small ruminants in given watershed.

2.19 National Fisheries Development Board (NFDB) Programmes

NFDB programmes are available both for inland and marine fishery initiatives. Water availability in perennial surface water bodies may be promoted through watershed programmes and fish seeds in such bodies may come from the Fisheries Department. NFDB’s scheme of Aquaculture in Ponds and Tanks could be extended for this purpose. Community participation for water management, fish seed production and auction may be promoted through village level PRIs. Training of fish farmers may be taken up through KVKs/ATMAs and outlets of State Agricultural Universities (SAUs) and ICAR institutes. Further, involvement of the Department of Fisheries is necessary for providing fingerlings to farm ponds with lining developed under watershed programme.
CREDIT AND INSURANCE SUPPORT

2.20 Crop Insurance for Risk Coverage in Rainfed Areas

Small and marginal farmers in rainfed areas face partial or total crop loss due to risks associated with weather fluctuation. While crop diversification and supplemental irrigation measures help in coping with risks to a large extent, rainfed farming would still be vulnerable to longer drought spells. Crop insurance is an important tool for risk mitigation for small and marginal farmers. The principle crop insurance scheme — National Agricultural Insurance Scheme presently covers less than 10% of farmers. Climate risks are often highly spatially correlated and therefore call for expansion of Weather Based Insurance Scheme. Crop insurance as a risk mitigation measure is effective only in combination with risk reduction measures like soil and water conservation, adoption of sustainable practices, inter-cropping and diversification, use of appropriate seed varieties, etc. Hence, rainfed agriculture needs: location specific insurance products for crops and livestock, insurance education of small and marginal farmers and adoption of comprehensive risk reduction agricultural packages. The WDTs may arrange interface between watershed committees and concerned field functionaries of Agriculture Department for educating the farmers on the risks and insurance. Agriculture Department in collaboration with insurance companies may hold such awareness camps in watershed areas.

2.21 National Bank for Agriculture and Rural Development (NABARD)

NABARD has a dedicated district level functionary, District Development Manager (DDM) who could be associated with watershed programmes especially for providing credit support linkages. The much required farming systems- input support and credit linkages equilibrium could be obtained in this manner. WCDCs / WDTs may look into Potential Linked Credit Plans (PLPs) as one of the instruments of convergence. NABARD/ Bank linkages would help in mobilizing credit support for SHGs/entrepreneurs in watershed areas. Further, issues like financial inclusion, sensitization of the bankers, activating priority sector lending, providing credit on lower interest rates to the watershed farmers and linkages with the SHGs would also be undertaken by the Agriculture Department in collaboration with project level watershed functionaries and WCs. DDM could play an important role in this process. Besides credit, the NABARD also supports watershed programmes primarily promoted through NGOs. Successful watershed programmes can be used for exposure visits of the field functionaries of the IWMP and other related departments and farmers.
TECHNOLOGY VALIDATION AND DISSEMINATION IN AGRICULTURE & ALLIED AREAS

2.22  Krishi Vigyan Kendras (KVKs) Programme of ICAR

Krishi Vigyan Kendras are constituted as front line extension institutions and activities focus on technology validation and refinement at the local level. In the process, KVKs are involved in technology demonstrations and training of farmers/field extension personnel. Other extension activities taken up by the KVKs include: organizing technology weeks, production of information material and their dissemination, farmer-scientist interactions, Kisan Melas, Mobile Advisory Services and providing technological backstopping to the field programmes of the agriculture and line departments. KVK – IWMP linkages could be improved further by: (i) having Memorandum of Understanding (MOU) based linkages between KVKs & WCDC for technology testing and training,(ii) involving KVK Subject Matter Specialists (SMSs) for technology backstopping,(iii) drawing learnings from micro level farming situation reports of KVKs. The process of convergence could be strengthened by having jointly developed training modules as per specific training requirement of a particular watershed and developing joint strategies for dissemination of watershed technologies. Every KVK is headed by the Programme Coordinator who in turn is assisted by six Subject Matter Specialists covering various disciplines such as agronomy, plant protection, soil science, home science, agricultural extension, etc. Most State Agricultural Universities(SAUs) have outreach programmes and field specialists in position in the districts(like Districts Agriculture Technology &Training Centres of Andhra Pradesh University, Extension Agronomist in Maharashtra Universities, District SMSs of Dharwad University, Farm Advisory Services of Punjab Agriculture University ,etc). They are involved in dissemination of farm advisories. What really matters is the linkage of these SMSs with the field extension functionaries. There is a strong possibility of collaboration of these SMSs with WDTs in the given watershed.

2.23  Agricultural Technology Management Agency (ATMA) as a part of NMAET

The ATMA concept focuses on extension reforms and programme delivery. There is a broad menu of extension reforms for State and district levels. The extension reforms are centered around training, demonstrations,
exposure visits, farmer empowerment, farmer field schools and field extension activities. Farmer Interest Groups and Commodity Interest Groups that are formed at the field level may converge with User Groups. These could be promoted in watersheds. WCDCs need to be suitably represented on the Governing Board of ATMA to achieve synergy between the watershed and extension interventions. Further synergy could be obtained through: (i) ATMA field programmes are jointly organized in the watersheds by the WDTs and Block Technology Teams of ATMA, (ii) WCDCs and WDTs to look into the Strategic Research and Extension Plans (SREP) and Block Action Plans(BAPs) of ATMA for convergence modalities, (iii) the Farmer Friends(FFs), Village Extension Workers(VEWs) and SMSs of KVKs and ATMAs be oriented on watershed project requirements, and (iv) ATMA/KVK training strategy may be sharply focused on IWMP requirements. The SLNA could train a few faculty members of State Agricultural Management and Extension Training Institutes(SAMETIs) as master trainers. The subject matter areas that would need to be stressed in these model training programmes may include: Watershed Planning & Phasing, Watershed implementation, Watershed & Evaluation (M&E), Application of Remote Sensing (RS)&Geographical Information System (GIS), Sustainability of Watersheds, Convergence of other programmes with IWMP, Benchmarking of Watershed Outputs, Hydrological parameters in watershed Management, etc. These master trainers in turn may develop suitable training modules for IWMP requirements and conduct such training programmes inviting watershed functionaries. SLNA may consider working out similar arrangements with other state/district level training centres of other departments to promote watershed management training down the line for block and cluster level functionaries of all the converging departments. Also, there should be interface between SLNA and Inter-Departmental Working Group(IDWG) of ATMA on pre-seasonal basis for obtaining policy level interventions on convergence modalities.

ENVIRONMENT AND FORESTS

2.24 Programmes of Forest Department

Convergence with Forest Department programmes could be worked out at the State level between the two departments. In Reserved Forest areas joint planning for the treatment of the upper reaches/ridge areas needs to be promoted. Forest Department should treat upper reaches so as to ensure comprehensive treatment of the entire watershed with adequate soil, water conservation and afforestation measures. As no other department is permitted to work in the reserved forest areas the inadequate treatment of the upper areas defeats the purpose
of watershed treatment or at best offers only fractional benefits. For Community and Social forestry in rainfed commons the planting material may come from the Forest Department. Accordingly, there is need for a joint capacity building strategy. Convergence between IWMP with Agro-Forestry and Non Timber Forest Produce (NTFP) collection can be facilitated through WDTs or micro watershed committees. This will ensure better integration of activities of Joint Forest Management Committee (JFMCs) and micro watershed committees. Convergence of specific NRM activities would need to be identified for forest and non-forest lands.

2.25 Green India Mission

The Mission is focused on enhancing eco-system services through afforestation on degraded lands. Possibility of massive plantation drives may be considered in watersheds, especially wastelands. Agro/Farm forestry linkages need to be strengthened with watershed programmes, especially for providing good quality seedlings from accredited nurseries.

III. THE WAY AHEAD—ACTION POINTS

3.1 Orientation of Decision-makers at State/National level

State SLNAs should hold initial discussions with state level decision-makers from converging departments to create awareness regarding the opportunities and benefits of such convergence at the state, district and project level. DoLR may have Inter-Ministerial discussion to highlight the convergence opportunities that IWMP provides for.

3.2 Documentation of existing good practices

Some good examples already exist in States. These may be documented and explored further to better understand processes and modalities for upscaling or customization as per needs.

3.3 Convergence Arrangements & Issue of Necessary Instructions

SLNAs are required to interface with other Departments at the State level to work out suitable convergence arrangements with the State and District level agencies of various Departments. Convergence would be effective if concerned Government departments at the State level issue necessary instructions to their respective implementing agencies.
3.4 MoU-based Convergence Arrangements

DoLR will provide SLNAs with draft MoUs that can be customized to State and project specific requirements. The task specific convergence MoUs may be considered with ICAR institutes, SAUs, National Institute of Hydrology (NIH), CGWB, NIRD, SIRD, SAMAEI, ATMA, KVKs and other related institutes in converging Departments. These if need be, may be endorsed by the respective Departments at appropriate levels. The MoUs so agreed upon should specifically highlight technological support and participation.

3.5 Addressing the Convergence Matrix in the DPR

3.5.1 Every DPR should mandatorily include a filled in Convergence Matrix indicating resource inputs and roles of the converging partners (ANNEX-I, II&III).

3.5.2 Convergence modalities could be initially piloted in a couple of districts where DPR formulation is under process or in those which have also just entered the works phase. There appears to be a great scope for convergence under Entry Point Activities (EPA), sharing of Human Resources (HR), capacity building and techno-managerial services of line departments. The Convergence Matrix could be an addendum to the DPR.

3.5.3 Existing Convergence instruments like C-DAPs of RKVY, SREPs of ATMA, PLPs of NABARD, Micro Agro-Eco Situation Analysis Reports of KVKs, DPRs of Watershed programmes, schemes under RD and Forest Departments, etc. should be intensively reviewed / used in formulating convergence matrix and priority setting by the SLNAs.

3.5.4 Activities felt necessary for integrated and comprehensive treatment of the watershed area, that are reflected in the DPRs, but not covered through IWMP funding, may be supported through MGNREGA, BRF/G, Integrated Action Plan (IAP), Special Component Plan (SCP), Tribal Sub Plan (TSP), DPC and other State sponsored schemes.

3.6 Proposal for Line Department Support

3.6.1 Each SLNA would develop broad outlines for converging departments for each agro-climatic zone in the State, indicating scope and opportunities that IWMP can offer them and how they could make best use of it.

3.6.2 Further, location specific convergence support would be worked out by the WCDCs in collaboration with the district and block level functionaries of the line departments.

3.6.3 As a strong convergence requirement the WCDCs and WDTs may be represented on the district level structures of the other important programmes such as ATMA governing board and ATMA Management Committees, District Horticulture Mission, District NFSM mechanism, Scientific Advisory Committee of KVKs, and on district and block level formations of other converging core departments like Rural Development, Panchayati Raj, Forestry, Water Resources, Ground Water, Minor Irrigation, Marketing, Animal Husbandry/Dairy, Fisheries, Tribal Development, etc.

3.7 Training Strategies Supportive to Convergence

3.7.1 Each SLNA would develop a broad training strategy in collaboration with SAMETI, SIRD, Rural Development & Self Employment Training Institutes (RUDSETIs), Skill and Entrepreneurial Development Institutes and training establishments of other Departments for need based involvement of line departments.

3.7.2 Further, location specific training modalities would be worked out by an inter-disciplinary expert group under the guidance of SLNA/WCDCs in collaboration with the training institutes at the district/ block level like KVKs/ATMAs/NGOs/Farmer Organizations (FOs) and training establishments & field formations of various schemes in converging sectors.

3.7.3 The field agencies like KVKs, ATMAs and WDTs would need to be geared up accordingly for training and