OPERATIONAL GUIDELINES OF PRADHAN MANTRI KRISHI SINCHAYEE YOJANA (PMKSY)

1.0 Introduction:

Hon'ble President in his address to the joint Session of the Parliament of 16th Lok Sabha indicated that "Each drop of water is precious. Government is committed to giving high priority to water security. It will complete the long pending irrigation projects on priority and launch the 'Pradhan Mantri Krishi Sinchayee Yojana' with the motto of 'Har Khet Ko Paani'. There is a need for seriously considering all options including linking of rivers, where feasible; for ensuring optimal use of our water resources to prevent the recurrence of floods and drought. By harnessing rain water through 'Jal Sanchay' and 'Jal Sinchan', we will nurture water conservation and ground water recharge. Micro irrigation will be popularised to ensure 'Per drop-More crop' **.**

Out of about 141 m.Ha of net area sown in the country, about 65 million hectare (or 45%) is presently covered under irrigation. Substantial dependency on rainfall makes cultivation in unirrigated areas a high risk, less productive profession. Empirical evidences suggest that assured or protective irrigation encourages farmers to invest more in farming technology and inputs leading to productivity enhancement and increased farm income.

The overreaching vision of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) will be to ensure access to some means of protective irrigation to all agricultural farms in the country, to produce 'per drop more crop', thus bringing much desired rural prosperity.

2.0 Objectives:

The broad objectives of PMKSY will be:-

a) Achieve convergence of investments in irrigation at the field level (preparation of district level and, if required, sub district level water use plans).
b) Enhance the physical access of water on the farm and expand cultivable area under assured irrigation (Har Khet ko pani),
c) Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
d) Improve on-farm water use efficiency to reduce wastage and increase availability both in duration and extent,
e) Enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).

f) Enhance recharge of aquifers and introduce sustainable water conservation practices
g) Ensure the integrated development of rainfed areas using the watershed approach towards soil and water conservation, regeneration of ground water, arresting runoff, providing livelihood options and other NRM activities.
h) Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.
i) Explore the feasibility of reusing treated municipal waste water for peri-urban agriculture, and
j) Attract greater private investments in irrigation.

This will in turn increase agricultural production and productivity and enhance farm income.

3.0 Strategy & Focus Areas:

To achieve above objectives, PMKSY will strategize by focussing on end-to end solution in irrigation supply chain, viz. water sources, distribution network, efficient farm level applications, extension services on new technologies & information etc. Broadly, PMKSY will focus on:-

a) Creation of new water sources; repair, restoration and renovation of defunct water sources; construction of water harvesting structures, secondary & micro storage, groundwater development, enhancing potentials of traditional water bodies at village level like Jal Mandir (Gujarat); Khatri, Kuhl (H.P.); Zabo (Nagaland); Eri, Ooranis (T.N.); Dongs (Assam); Katas, Bandhas (Odisha and M.P.) etc.
b) Developing/augmenting distribution network where irrigation sources (both assured and protective) are available or created;
c) Promotion of scientific moisture conservation and run off control measures to improve ground water recharge so as to create opportunities for farmer to access recharged water through shallow tube/dug wells;
d) Promoting efficient water conveyance and field application devices within the farm viz, underground piping system, Drip & Sprinklers, pivots, rain-guns and other application devices etc.;
e) Encouraging community irrigation through registered user groups/farmer producers' organisations/NGOs; and
f) Farmer oriented activities like capacity building, training and exposure visits, demonstrations, farm schools, skill development in efficient water and crop management practices (crop alignment) including large scale awareness on

more crop per drop of water through mass media campaign, exhibitions, field days, and extension activities through short animation films etc.

The aforesaid areas only outline the broad contours of PMKSY; combination of interventions may be required depending on location specific conditions and requirements, which will be identified through District and State Irrigation Plans. More focus on irrigation development will be given to deficient states in terms of irrigation coverage. The state wise matrix showing State wise rainfed and irrigated area is given at **Appendix-a.**

4.0 Programme Components

PMKSY will have following programme components:

A. Accelerated Irrigation Benefit Programme(AIBP)

a) To focus on faster completion of ongoing Major and Medium Irrigation including National Projects.

B. PMKSY (Har Khet ko Pani)

a) Creation of new water sources through Minor Irrigation (both surface and ground water)
b) Repair, restoration and renovation of water bodies; strengthening carrying capacity of traditional water sources, construction rain water harvesting structures (Jal Sanchay);
c) Command area development, strengthening and creation of distribution network from source to the farm;
d) Ground water development in the areas where it is abundant, so that sink is created to store runoff/ flood water during peak rainy season.
e) Improvement in water management and distribution system for water bodies to take advantage of the available source which is not tapped to its fullest capacity (deriving benefits from low hanging fruits). At least 10% of the command area to be covered under micro/precision irrigation.
f) Diversion of water from source of different location where it is plenty to nearby water scarce areas, lift irrigation from water bodies/rivers at lower elevation to supplement requirements beyond IWMP and MGNREGS irrespective of irrigation command.
g) Creating and rejuvenating traditional water storage systems like Jal Mandir (Gujarat); Khatri, Kuhl (H.P.); Zabo (Nagaland); Eri, Ooranis (T.N.); Dongs (Assam); Katas, Bandhas (Odisha and M.P.) etc. at feasible locations.

C. PMKSY (Per Drop More Crop)

a) Programme management, preparation of State/District Irrigation Plan,

approval of annual action plan, Monitoring etc.

b) Promoting efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm (Jal Sinchan);
c) Topping up of input cost particularly under civil construction beyond permissible limit (40%), under MGNREGS for activities like lining inlet, outlet, silt traps, distribution system etc.
d) Construction of micro irrigation structures to supplement source creation activities including tube wells and dug wells (in areas where ground water is available and not under semi critical /critical /over exploited category of development) which are not supported under AIBP, PMKSY (Har Khet ko Pani), PMKSY (Watershed) and MGNREGS as per block/district irrigation plan.
e) Secondary storage structures at tail end of canal system to store water when available in abundance (rainy season) or from perennial sources like streams for use during dry periods through effective on-farm water management;
f) Water lifting devices like diesel/ electric/ solar pumpsets including water carriage pipes, underground piping system.
g) Extension activities for promotion of scientific moisture conservation and agronomic measures including cropping alignment to maximise use of available water including rainfall and minimise irrigation requirement (Jal sarankchan);
h) Capacity building, training and awareness campaign including low cost publications, use of pico projectors and low cost films for encouraging potential use water source through technological, agronomic and management practices including community irrigation.
i) The extension workers will be empowered to disseminate relevant technologies under PMKSY only after requisite training is provided to them especially in the area of promotion of scientific moisture conservation and agronomic measures, improved/ innovative distribution system like pipe and box outlet system, etc. Appropriate Domain Experts will act as Master Trainers.
j) Information Communication Technology (ICT) interventions through NeGP-A to be made use in the field of water use efficiency, precision irrigation technologies, on farm water management, crop alignment etc. and also to do intensive monitoring of the Scheme.

D. PMKSY (Watershed Development)

a) Effective management of runoff water and improved soil & moisture conservation activities such as ridge area treatment, drainage line

treatment, rain water harvesting, in-situ moisture conservation and other allied activities on watershed basis.

b) Converging with MGNREGS for creation of water source to full potential in identified backward rainfed blocks including renovation of traditional water bodies

Eligible activities under these components are at **Appendix-b**.

5.0 District and State Irrigation Plans

District Irrigation Plans (DIPs) shall be the cornerstone for planning and implementation of PMKSY. DIPs will identify the gaps in irrigation infrastructure after taking into consideration the District Agriculture Plans (DAPs) already prepared for Rashtriya Krishi Vikas Yojana (RKVY) vis-à-vis irrigation infrastructure currently available and resources that would be added during XII Plan from other ongoing schemes (both State and Central), like Mahatma Gandhi National Rural Employment Guarantee Scheme(MGNREGS), Rashtriya Krishi Vikash Yojana (RKVY), Rural Infrastructure Development Fund (RIDF), Member of Parliament Local Area Development (MPLAD) Scheme, Member of Legislative Assembly Local Area Development (MLALAD) Scheme, Local body funds etc. The gaps indentified under Strategic Research & Extension Plan (SREGP) will be made use in preparation of DIP.

DIPs will present holistic irrigation development perspective of the district outlining medium to long term development plans integrating three components viz. water sources, distribution network and water use applications incorporating all usage of water like drinking & domestic use, irrigation and industry. Preparation of DIP will be taken up as joint exercise of all participating departments. DIP will form the compendium of all existing and proposed water resource network system in the district.

The DIPs may be prepared at two levels, the block and the district. Keeping in view the convenience of map preparation and data collection, the work would be primarily done at block level. Block wise irrigation plan is to be prepared depending on the available and potential water resources and water requirement for agriculture sector prioritising the activities based on socio-economic and location specific requirement. In case of planning is made based on basin/sub basin level, the comprehensive irrigation plan may cover more than one district. The activities identified in the basin/sub-basin plan can be further segregated into district/block level action plans. Use of satellite imagery, topo sheets and available database may be appropriately utilised for developing irrigation plans at least on pilot basis to begin with and subsequently may be extended to all projects. DPRs of watershed projects should be taken into account while preparation of DIPs. The

block wise master plan is to be approved by inter-mediate level block panchayat and to be forwarded to the district planning committee for inclusion in the district master plan i.e., DIP. Agriculture Universities in the State May also be closely involved with the formulation and implementation of the Detailed Project Report and the District Level Plans.Technical, financial and human resources available for this sector with departments of rural development, urban development, drinking water, environment & forest, science & technology, Industrial policy etc. to be leveraged for comprehensive development of water sector. The DIPs are to be vetted by the Governing body of Zila Panchayat and subsequently be incorporated in the State Irrigation Plan (SIP).

Creating access to water source either assured or protective to each farm will require a demand and supply assessment of crop water requirement, effective rainfall and potential source of existing & new water sources considering geo-hydrological and agro ecological scenario of the block. The master plan will include information on all sources of available water, distribution network, defunct water bodies, new potential water sources both surface and sub- surface systems, application & conveyance provisions, crops and cropping system aligned to available/designed quantity of water and suitable to local agro ecology. All activities pertaining water harvesting, water augmentation from surface/sub surface sources, distribution and application of water including repair renovation and restoration of water bodies, major medium and minor irrigation works, command area development etc. are to be taken up within the frame work of this master plan. Emphasis is to be given for deriving potential benefit from low hanging fruits like extending the reach/coverage of water source through effective distribution and application mechanism, reducing the gap between potential created and utilized through more focus on command area development and precision irrigation. Proper integration of creation of source like dams and water harvesting structures, distribution system like canals and command area development works and precision farming to be made for deriving best possible use of water resources. Steps may also be taken for use of urban treated waste water for irrigation purpose. For respective cities a command area may be identified for this purpose in and around the adjoining agricultural land of urban habitation. However, the recommended norms (given **Appendix-C**) of treated sewage quality for specified activities at point of use be ensured during use of recycled water.

SIP will not only consolidate the DIPs and correlate with State Agriculture Plan (SAP), already available for RKVY, but also prioritize resources and outline definite annual action plan with a medium to long term horizon. The plan would also enumerate on extension & ICT related activities to be undertaken under supervision of Agriculture Technology Management Agency (ATMA).

DIPs and SIP will provide requisite emphasis on convergence by eliminating overlap of resources & efforts and ensuring optimal utilization of funds available through various Centrally Sponsored/State Plan Schemes.

Each District will be provided one time financial support to prepare District Irrigation Plan. DIPs and SIP are to be finalised within a period of three months from launching of PMKSY. National Rainfed Area Authority (NRAA) will be associated in preparation of SIP and providing advisories to State Governments for comprehensive irrigation development.

While formulating District Irrigation Plans (DIPs), suggestions of Hon'ble Member's of Parliament and Member's of Legislative Assembly of that is to be invited and will be included in DIPs after due technical consideration. Highest priority is to be given on valuable suggestions/recommendations of Member of Parliament of that particular district subject to technical/financial viability.

6.0 Cost Norm & Pattern of Assistance:

Technical requirements / standards, pattern of assistance etc. for activities of respective components like AIBP, PMKSY (Har Khet Ko Pani), PMKSY (Per drop more crop) and PMKSY (Watershed Development) will be as per the existing guidelines of the respective Ministries/Departments or as per revised norms including that of additional activities introduced, to be issued by the respective ministries/departments with the approval of concerned Union Minister.

In the absence of equivalent Central Plan Scheme, norms and conditions prescribed by respective State Governments for their schemes may be applied.

In cases where no Central / State Govt. norms are available, a certificate of reasonableness of proposed project cost along with reasons thereof will invariably be given by State Level Project Screening Committee (SLPSC) in each such case.

States should adhere to Govt. approved rate e.g. Schedule of rate of CPWD/PWD/Irrigation Dept or similar Govt. agencies working in rural areas, for creation of irrigation infrastructure.

7.0 Eligibility criteria:

Instead of incremental budgeting, PMKSY will adopt a dynamic annual fund allocation methodology that mandates States to allocate more funds to irrigation sectors for becoming eligible to access PMKSY funds. For this purpose:

a) A State will become eligible to access PMKSY fund only if it has prepared the District Irrigation Plans (DIP) and State Irrigation Plan (SIP), excepting for the initial year, and the expenditure in water resource development for agriculture sector in the year under consideration is not less than baseline

expenditure. The baseline expenditure will be the average of expenditure in irrigation sector irrespective of state departments (i.e. creation of water source, distribution, management and application from State plan schemes) in State Plan in three years prior to the year under consideration.

b) *States will be given additional weightage for levying charges on water and electricity for irrigation purpose, so as to ensure sustainability of the programme.*

c) *Inter State allocation of PMKSY fund will be decided based on (i) share of percentage of unirrigated area in the State vis-à-vis National average including prominence of areas classified under Dessert Development Programme (DDP) and Drought Prone Area Development Programme (DPAP) and (ii) increase in percentage share of expenditure on water resource development for agriculture sector in State Plan expenditure in the previous year over three years prior to it (iv) improvement in irrigation efficiency in the state.*

8.0 Funding Pattern

PMKSY funds will be provided to the State Governments as per the pattern of assistance of Centrally Sponsored Schemes decided by Ministry of Finance and NITI Aayog. During 2015-16, existing pattern of assistance of ongoing schemes will be continued.

9.0 Programme Architecture:

PMKSY will be implemented in area development mode only by adopting a 'decentralized State level planning and projectised execution' structure that will allow States to draw up their own irrigation development plans based on DIPs and SIPs with a horizon of 5-7 years. Initial phase of implementation will be the remaining two years of XII Plan.

States will allocate about 50% of the PMKSY funds by prioritizing projects among those districts having larger share of unirrigated areas, lesser agriculture productivity vis-à-vis State's average and higher population of SC/ST and Small & Marginal Farmers (SMF). States will also give priority to villages identified under Sansad Adarsh Gram Yojana (SAGY) while implementing PMKSY. The remaining 50% may be prioritised for operationalising /saturating projects which are under terminal stage of completion (water resource development/watershed). Priority to also be given for reducing the gap between irrigation potential created and actually utilised through command area development and precision irrigation.

As PMKSY will be a area-based scheme with projectised approach, Project Reports will have to be prepared for each of the PMKSY component based on the comprehensive irrigation plan incorporating all essential ingredients i.e. feasibility

studies, competencies of the implementing agencies, anticipated benefits (outputs/outcomes) that will flow to the farmers/ State, definite time-lines for implementation etc.

Detailed Project Report (DPR) of each cluster will have four sub projects catering to respective components i.e., AIBP, PMKSY(Har Khet Ko Pani), PMKSY (More Crop Per Drop), PMKSY(Watershed Development) depending on the activities covered under the respective components with funding support required. It should be ensured that there is no duplication of funding and/or undertaking similar activities in the same areas under other Plan schemes of Central/State Government and clearly indicate the year-wise physical & financial targets proposed under each project component wise.

In case of large individual project activity costing more than Rs. 25 crore, it will be subjected to third party 'techno-financial evaluation'.

In order to ensure efficient use of water, extension services will focus at targeting in how to make best use of available water through crops/cropping system aligned to agro-ecological conditions and suitable agronomic practices to ensure larger coverage and equity to farmers. In selected areas, few progressive farmers may be sensitised towards this subject and incentivised to experiment with changes in cropping pattern with available irrigation facilities. Farm school component of ATMA scheme would be suitably used to take up this activity. Cluster of 8 to 10 villages may be taken up in districts for saturating those as per the plan for showcasing potential augmentation of water and its efficient use. The success of these clusters in promoting such activities may be replicated in other parts of the district.

Extending the reach of micro irrigation to a larger coverage will be ensured involving companies associated with precision irrigation for awareness campaign, demonstration, capacity building training, providing maintenance service, technical support etc. A greater role of these companies will be specified in the operational guidelines of this component.

The success stories of indigenous practices like Jal mandir; Khatri; Kuhl; Zabo Ooranis; Dongs; Katas; Bandhas etc., innovative projects, participatory management etc. may be captured and documented for sharing with other states and agencies for wider replication.

10.0 Nodal Department:

Since, the final outcome of PMKSY is to ensure access to efficient delivery and application of water at every farm thereby enhancing agricultural production & productivity, State Agriculture Department will be the Nodal Department for

implementation of PMKSY. All communication between Ministry of Agriculture (MOA) and State Government would be with and through the nodal department. However, the implementing departments for the four components like AIBP, PMKSY(Har Khet Ko Pani), PMKSY (Per drop more crop) and PMKSY(Watershed Development) will be decided by the respective programme Ministry/Department.

State Governments will utilize the existing mechanism and structure available under RKVY in the state for overall supervision and coordination of the programme. State may also strengthen the existing State Level Agencies available for similar activities for entrusting the responsibility of coordinating the works of PMKSY. State may also restructure the existing SAMETI or SLNA setup of IWMP with inclusion of additional members to address the mandate of PMKSY and function under supervision of National Rainfed Area Authority (NRAA) for implementation of PMKSY. All the proposals need to be vetted by the State Level Coordinating agency before it is put up to Inter Departmental Working Group and State Level Sanctioning Committee. PMKSY will have a strong technical component and domain experts for management of the programme. Engagement of consultants, professionals will be supported from the administrative provisions available to the State under the programme.

Nodal Department/Agency identified by State will collate all the sub projects of each cluster received from different implementing departments/districts as one DPR and place before the Inter Departmental Working Group (IDWG) for scrutiny and State Level Sanctioning Committee (SLSC) for sanction.

Nodal department/agency will also be responsible for monitoring, coordinating physical & financial progress with implementing departments/agencies and furnishing consolidated Utilisation Certificates (UC) and physical/financial progress reports to Govt. of India.

In addition, nodal department/agency will also be responsible for the following:-

(i) Coordinating preparation of DIPs and SIP;
(ii) Coordinating preparation and appraisal of projects, implementing, monitoring, and evaluation with various Departments and implementing Agencies.
(iii) Management of funds received from the Central, and State Governments and disbursement of the funds to the implementing agencies.
(iv) Furnishing of quarterly physical & financial progress reports to the Department of Agriculture and Cooperation.
(v) Effectively utilizing and regularly updating web enabled IT based PMKSY Management Information System (PMKSY-MIS).

(vi) To convene meeting of SLSPC and IDWG. The meeting notice along with sufficient number of copies (not less than 20) of agenda and project details be sent to DAC so as to reach at least 15 days before the meeting of SLSC to enable Government of India's representatives to come prepared and to participate meaningfully in the SLSC meeting.

11.0 State Level Sanctioning Committee (SLSC):

State Level Sanctioning Committee (SLSC), already constituted under RKVY and chaired by the Chief Secretary of the State, will be vested with the authority to sanction specific projects recommended by the IDWG in a meeting attended by representatives of Government of India.

SLSC will, inter alia, also be responsible for:

a) *Approving the State Irrigation Plan(SIP) and District Irrigation Plan (DIP)*
b) *Sanctioning and prioritizing funding of projects under PMKSY;*
c) *Monitoring and reviewing implementation of PMKSY;*
d) *Ensuring convergence with other schemes and that no duplication of efforts or resources takes place;*
e) *Ensuring that there are no inter-district disparities with respect to the financial patterns/subsidy assistance in the projects;*
f) *To decide the implementing agency/dept. in the state for particular project depending on the nature of the project and expertise available with the agency/dept.*
g) *Ensuring that the programme implementation in accordance with guidelines laid down by the concerned programme component Ministry/Department*
h) *Initiating evaluation studies from time to time, as may be required;*
i) *Ensuring that all extant procedures and instructions of Govt. of India are followed so that the expenditure incurred on implementation of the projects is barest minimum with due concern for economy in expenditure and also in conformity with the cannons of financial propriety, transparency and probity.*
j) *To ensure that Panchayati Raj Institutions (PRI) areactively involved in implementation of PMKSY, especially in selection of beneficiaries, conducting social audit etc.*

SLSC's may approve PMKSY projects upto twice the amount of State's annual allocation under PMKSY to cater to multi-year duration projects and prioritizing funding based on physical progress.

Existing SLSC shall be strengthened by including members from relevant Departments e.g. Irrigation/water resources and Soil conservation, Watershed, Rural Development/Rural Works, Forest and State Level Nodal Agency (SLNA) under IWMP.

SLSC may also co-opt members from experts in water sector, public/private agencies working in irrigation sector, reputed NGOs working in the field of irrigation, research institutions, leading farmers etc.

Beside Ministry of Agriculture, SLSC will also have Govt. of India's representatives from Ministry of Water Resources, Dept. of Land Resources and Ministry of Rural Development. The quorum for SLSC meetings would not be complete without the presence of at least two representatives from the Government of India.

The SLSC will be supported by the Inter Department Working Group (IDWG), comprising of Secretaries of the line Departments of Horticulture, Agriculture, Rural Development, Irrigation, Surface and Ground Water Resources.

State Nodal Cell/Coordinating Agency will ensure timely receipt of District Irrigation Plans (DIPs), formulation of State Irrigation Plan and its approval by the SLSC. The SNC will then convey the approval and monitor implementation of the work plans by the line Departments.

12. Inter Departmental Working Group (IDWG):

Inter Department Working Group (IDWG), comprising of Secretaries of the line Departments of Agriculture, Horticulture, Rural Development, Water Resources/Irrigation, Command Area Development, Watershed Development, Soil Conservation, Environment & Forest, Departments dealing with Ground Water Resources, drinking water, town planning, industrial policy, science & technology and all concerned departments associated with water sector. The IDWG will be chaired by the Agriculture Production Commissioner/Development Commissioner. In departments, where separate secretaries are not there, Directors will act as Members of IDWG. Director(Agriculture)/ Engineer in Chief (water Resources/Irrigation) will work as co-convenors of IDWG. The IDWG will be responsible for day to day coordination and management of the Scheme activities within the State. IDWG will be the coordinating agency among all the ministries/ departments/ agencies/ research/ financial institutions engaged in creation/ use/ recycling/ conservation of water to bring them together under a single platform to take a comprehensive and holistic view of the entire water cycle so as to ensure that each drop of water is put to the best possible use. It will scrutinise /prioritise the project proposals/DPRs in conformity with the guidelines and that they emanate from SIP/DIPs, besides being consistent with technical standards & financial norms. IDWG will further examine and ensure that:

a) Funds available under other schemes of the State Government and /or Govt. of India for the proposed projects have been accessed and utilized/planned for utilization before they are brought under the PMKSY ambit;

b) PMKSY projects/activities should not create any duplication or overlapping of assistance /area coverage vis-à-vis other schemes/programmes of State/Central Government;

c) PMKSY funds are not being proposed as additional or 'top-up' subsidy to other ongoing schemes/programmes of State/Central Government excepting for topping up of material cost beyond the approved limit of the respective schemes like programmes (material component is restricted of the 40% of the exact cost under MGNREGS .

d) DPRs have included provision for monitoring and evaluation;

e) Convergence with other State/Central Schemes has been attempted

13. The District Level Implementation Committee (DLIC):

DLIC will form the third tier of the PMKSY. The DLIC will be chaired by the Collector/District Magistrate and will comprise of CEO Zila Parishad/PD DRDA, Joint Director/Deputy director of Departments of Horticulture, Agriculture, Rural Development, Surface and Ground Water Resources, Irrigation and any other line Departments in the district, District Forest Officer, Lead bank officer of the District.

The Project Director, Agricultural Technology Management Agency (ATMA) will be the Member Secretary of DLIC. In addition, DLIC may have two progressive farmers, and a leading NGO working in the District, if any. The farmers will be nominated for one year from District Farmers Advisory Committee under ATMA. The NGO representative will be nominated by the Collector/District Magistrate.

The DLIC will oversee the implementation and inter-departmental coordination at district level and will have following role:

a. To act as the field level coordinator between the various implementation agencies/line departments in the District and to ensure that the agreed District Irrigation Plan/ Annual Irrigation Plan is successfully implemented
b. To prepare the District Irrigation Plan (DIP), showing the contribution of various funding streams and programmes towards specific outputs and outcomes and seek approval of the SLSC for the same.
c. To prepare Annual Irrigation Plans (AIPs) arising out of the DIPs and to forward them to the SLSC for approval.
d. To monitor the progress of various components of the AIPs, to remove implementation hurdles and make periodic reports to SLSC.
e. To undertake public awareness and publicity efforts for engaging farmers, PRIs, media and other local stakeholders to build support for the implementation of the DIPs.

The Project Director, Agricultural Technology Management Agency (ATMA) will make use of the existing infrastructure and staff under ATMA in districts and blocks for discharging duties under PMKSY.

The DLIC will prepare the District Irrigation Plan (DIP) for the district which will include mapping existing water resource of the district created by various sources of irrigation, measures to identify the water risk status of the district, to identify the new source of water to enhance physical water availability at the farm level, measures to improve water use efficiency and water distribution. The DIP should taken into account the outcomes of studies conducted by ICAR on existing and traditional cropping patterns especially in the context of optimal use of water resources. In addition, the traditional water management system of that particular area has to be taken into account, while formulating the DIP. MoWR,RD & GR should consult the State Governments for studying the traditional water management system within a month and provide the information to all the States for incorporation in DIP.

Ministry of Urban Development will incorporate compulsory water harvesting system in their model regulations being framed for Building Construction, and State Governments shall take into consideration these model regulations while formulating their building regulations. District Irrigation Plan will be prepared by IAS and IFS(Forest) officers of three junior most batches. Training modules for formulation of DIP shall be prepared by ICAR institutes in consultation with other relevant institutions and training on model for DIP formulation will be imparted to them by the end of September, 2015 and officers will be completed this task by end of December, 2015. ATMA Management Committee will assist DLIC in coordinating and executing extension related activities under PMKSY.

14.0 National Steering Committee (NSC):

An Inter-Ministerial National Steering Committee (NSC) will be constituted under the Chairmanship of Prime Minister with Union Ministers from concerned Ministries like Water Resources, River Development & Ganga Rejuvenation; Rural Development; Land Resources; Urban Development; Drinking Water & Sanitation; Financial Services; Tribal Affairs; Expenditure; Panchayati Raj; Science & Technology; Environment, Forest & Climate Change; Industrial Policy, Development of North Eastern Region (DONER); Vice Chairman, NITI Aayog; as members with Secretary(A&C) as Member Secretary to provide general policy strategic directions/advisories for programme implementation, protect interstate issues, and provide overall supervision addressing national priorities etc. The NSC will adopt its own working procedure and delegate such powers as it considers fit to the National Executive Committee.

15.0 National Executive Committee (NEC):

A National Executive Committee (NEC) will be constituted under the Chairmanship of Vice Chairman, Niti Ayog with Secretaries of concerned Ministries/Departments and Chief Secretaries of selected States on rotation basis, representatives from professional institutes like NABARD & other financial institutions engaged in creation/use/recycling of water, SAC, MNCFC, ISRO, IMD, ICAR; Additional Secretary & FA of DAC, DoLR, MoWR; CEO of NRAA; Selected Experts as members with Joint Secretary (DAC) in charge of PMKSY as Member Secretary to oversee programme implementation, allocation of resources, inter ministerial coordination, monitoring & performance assessment, addressing administrative issues etc.

16.0 Release of Funds:

60% of the PMKSY annual allocation will be released as first instalment to the State, upon the receipt of the minutes of SLSC approving implementation of new projects and/or continuation of ongoing projects during the financial year alongwith lists of projects approved. Release of funds will be made by the respective Ministry/department for the specific component. The concerned implementing ministries /department will be responsible to ensure receipt of utilisation certificate and corresponding physical and financial progress while releasing the funds for the specific component. The utilisation certificate is to be submitted by the respective implementing department/agency in the State.

In case, total cost of approved project is less than annual outlay, funds to the tune of 60% of approved project cost will be released.

Release of the second and final instalment would be considered on receipt of the following:

a) *More than 90% Utilization Certificates (UCs) for the funds released upto previous financial year;*
b) *Utilisation Certificates (UCs) of at least 50% of funds released in first instalment during current year; and*
c) *Performance report in terms of physical and financial achievements as well as outcomes, within the stipulated time frame in specified format.*

If a State fails to submit these documents within reasonable period of time, balance funds may be re-allocated to better performing States.

Monitorable targets against funds released will be fixed for all critical sub-components and any achievements in a given timeframe will be reported for each activity with respect to baseline/historic data. This may include increase in production area, productivity, use of micro irrigation facilities etc. In this process,

the focus should also be on to fix accountability and use technology.

Nodal department shall ensure that Project-wise accounts are maintained by the Implementing Agencies and are subjected to the normal process of Statutory Audit. The assets so created and expenditure made there on may be provided to concerned Gram Sabha for the purpose of social audit. Likewise, an inventory of the assets created under PMKSY Projects except for those for individual farmers etc. should be carefully preserved and assets that are no longer required should be transferred to the Nodal Department or as per the guidelines of the respective programme components, for its use and redeployment where possible.

Central assistance under PMKSY will be released as per extant guidelines of the Ministry of Finance, Govt. of India.

17.0 Administrative Expenses & Contingencies:

Administrative expenses may be met on pro-rata basis from the programme, not exceeding 5 percent, at each level to strengthen coordination, scientific planning and technical support for effective implementation of PMKSY at the field level. Aadministrative expenditure for functioning of Coordinating agency/institutions responsible for implementing PMKSY, payments to consultants, outsourcing of specific activities, recurring expenses of various kinds, staff costs etc. are admissible. However, no permanent employment can be created, nor can vehicles be purchased. States may supplement any administrative expenditure in excess of the 5% limit, from their own resources. Govt. of India may retain 1.5% of the PMKSY provision for IEC activities and another 1.5% of the allocations for administrative, monitoring, evaluation and any contingencies that may arise during the implementation of the scheme by each participating departments. In the first year (2015-16), an amount to the tune of Rs. 75 Cr will be set aside for preparing DIP and SIP, which will be met out of the funds earmarked for DAC.

DAC may set up a technical support group by assigning dedicated officers and staff from its existing strength and engaging consultants, experts. DAC may outsource some technical assignments to specific agencies including studies, training programmes relating to PMKSY activities. Workshops, conferences, awareness campaign, publicity, documentation etc.

18.0 Monitoring & Evaluation:

A web-based Management Information System for PMKSY (PMKSY-MIS) will be developed to collect essential information related to each project. States will be responsible for timely submission/updating project data online in the system (preferably on a fortnightly basis), which will provide current and authenticated data on outputs, outcome and contribution of PMKSY projects in the public

domain. Monitorable targets against each component will be fixed by concerned Ministry/department of GOI such as Department of Agriculture & Cooperation, Ministry of Water Resources, RD& GR, Department of Land Resources and Ministry of Rural Development for all sub-components (MoRD will enter the information only for creation of water sources in the identified rainfed and backward blocks for special focus by MGNREGA funds where DoLR to complete their ongoing watershed programmes). Any achievements in a given timeframe will be reported for each activity with respect to baseline/historic data. This may include increase in production area, productivity, use of precision facilities etc. In this process, the focus should also be on to fix accountability and use technology for not meeting the targets and time frame of implementation.

PMKSY-MIS reports shall be the basis of 'on line monitoring' and judging 'Inter-State performance'; States may establish a dedicated PMKSY-MIS cell for this purpose.

The assets created under "Pradhan Mantri Gramin Sinchai Yojana" will be geo-tagged and mapped on to location maps using Bhuvan application developed by Indian Space Research Organisation (ISRO). This activity will be dovetailed with the new Innovative Technology Dissemination component of hand held devices under NAMET. The extension workers or other verification authorities will fill in details of the asset being created or completed under the Scheme by completing online form as an Android application. Asset details of each irrigation source and distribution channel with digitized satellite imagery with necessary information on capacity, sources, inlets, outlets etc. to be uploaded using geo-tagging feature of a GPS enabled smart phone. In order to fine-tune this activity, village boundaries as per Survey of India (having latitude/longitude details) will be used in conjunction with District/Block codes strictly in keeping with the Farmer's Portal so as to avoid any duplication or contradiction. Each structure will have a unique ID no. with "first two letters of state/abbreviated scheme name/ first three letters of district/year of operationalization/ longitude/latitude". Services of MNCFC will be utilised for such activities.

Twenty five percent (25%) of the projects sanctioned by the State shall have to be compulsorily taken up for third party monitoring and evaluation by the implementing States. Besides, the accounts of all this assets created will have to be put before the Gram Sabha for social audit.

Action plan for monitoring and evaluation will be chosen by SLSC every year in its first meeting based on project cost, importance of the project etc. preferably covering all sectors. The State Government will be free to choose any reputed agencies for conducting the monitoring and evaluation work in their States. Requisite fees/cost towards monitoring & evaluation will be met by the State Government from the 5% allocation retained by them for administrative

expenses.DAC will evolve suitable mechanism for concurrent evaluation of implementation of PMKSY. DAC may also engage suitable agency for conducting State specific/Pan India periodic implementation monitoring and/or mid-term/end-term evaluation of the scheme. NRAA will be involved in the process of mid- term /end term evaluation of PMKSY programme.

The performance of the States will be reflected in the Outcome Budget document of the respective Ministry/Department.

19.0 Convergence:

PMKSY will ensure convergence with all rural assets/infrastructure based programmes related to water conservation and management programmes/schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Rashtriya Krishi Vikash Yojana (RKVY), Jawaharlal Nehru National Solar Mission and Rural Electrification programmes, Rural Infrastructure Development Fund (RIDF), Member of Parliament Local Area Development (MPLAD) Scheme, Member of Legislative Assembly Local Area Development (MLALAD) Scheme, Local body funds, Working Plan of State Forest Department etc. The inputs from the Intensive Participatory Planning Exercise (IPPE) already conducted under MGNREGA in 2,500 backward Blocks may be used in preparing the DIP. In most cases the labour intensive works like earth works for source creation may be taken up under MGNREGA. Emphasis be given for utilising MGNREGA fund for de-silting of ponds, canals, defunct water bodies like old ponds, Jal Mandir, khul, Tanka etc. to improve storage capacity and creating scopes for water availability for irrigation purposes. PMKSY(Per Drop More Crop) fund may also be used for topping up of material cost beyond the specified limit, i.e., 40% in the MGNERGA for lining, inlet, outlet, silt trap, adjustable gates etc. All stake holders viz farmers, Panchayat and grass route level functionaries be made aware of scientific/technical processes of cleaning canals, de-siltation, construction of water harvesting structures etc., through extension activities including use of IEC, short animation films etc. to get maximum benefit of MGNREGA for these works. Other works can be taken up from PMKSY(Har Khet Ko Pani), PMKSY(Watershed) etc. depending on the type and nature of works. Where irrigation source is created, the PMKSY(Per drop more crop) component be potentially made use to improve irrigation efficiency and extend larger coverage from the same source. Department of Land Resources is in the process of starting the World Bank assisted "Neeranchal" project. Neeranchal is proposed to focus on better scientific basin level planning, new technologies for efficient water management, community level hydrology, enhanced production and yields, linkages with markets, real time monitoring systems using state of the art technologies and urban watersheds. Neeranchal will support PMKSY with proper synergy between the two programmes.

Where more than one department has to converge to implement a single scheme, each department may take up a separate component for implementation. Wherever irrigation potential has been created, but is lying unutilised for want of field channels, works for creating such supporting infrastructure shall be taken up under MGNREGA on priority and such works should also be part of the District Irrigation Plan. In respect of the irrigation works to be taken up under MGNREGA, technical support of other line departments would be provided. In fact, such support will enable scientific plans and execution of such works as part of PMKSY.

Ministry of Panchayati Raj shall also be appropriately consulted for ensuring that local/Panchayat level requirements are adequately addressed in DIPs and SIP. PMKSY will also accord priorities to villages identified under Sansad Adarsh Garm Yojana (SAGY).

20.0 Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India may affect changes in the PMKSY operational guidelines, other than those affecting the financing pattern as the scheme evolves, whenever such changes are considered necessary with the approval of NEC.

21.0 These guidelines are applicable to all the States and Union Territories.

Appendix-a

State-wise Extent of Net Sown, Irrigated and Rainfed Area (2011-12)				
			(in thousand hectaters)	
Sl	**States**	**Net Sown Area**	**Net irrigated area**	**Rainfed area**
1	Andhra Pradesh	11161	5090	6071
2	Arunachal Pradesh	215	57	158
3	Assam	2811	161	2650
4	Bihar	5396	3052	2344
5	Chattisgarh	4677	1415	3262
6	Goa	132	41	91
7	Gujarat	10302	4233	6069
8	Haryana	3513	3073	440
9	Himachal Pradesh	538	106	432
10	Jammu & Kashmir	746	319	427
11	Jharkhand	1085	125	960
12	Karnataka	9941	3440	6501
13	Kerala	2040	409	1631
14	Madhya Pradesh	15237	7887	7350
15	Maharashtra	17386	3252	14134
16	Manipur	365	69	296
17	Meghalaya	285	65	220
18	Mizoram	97	13	84
19	Nagaland	379	84	295
20	Orissa	4394	1259	3135
21	Punjab	4134	4086	48
22	Rajasthan	18034	7122	10912
23	Sikkim	77	14	63
24	Tamil Nadu	4986	2964	2022
25	Tripura	256	60	196
26	Uttarakhand	714	339	375
27	Uttar Pradesh	16623	13411	3212
28	West Bengal	5198	3078	2120
29	A & N Island	15	0	15
30	Chandigarh	1	1	0
31	D&N Haveli	17	4	13
32	Daman & Diu	3	0	3
33	Delhi	22	22	0
34	Lakshadweep	2	0	2
35	Pondicherry	18	15	3
	Total	**140800**	**65266**	**75534**

Source: Agriculture Statistics at a Glance June, 2014, Directorate of Economics & Statistic, Ministry of Agriculture

Appendix-b

Illustrative Activities under PMKSY (Refer to Para 4.0 of the Guidelines)

Sl . No.	Programme Components	Illustrative Activities
1	AIBP	• To focus on faster completion of ongoing Major and Medium Irrigation including National Projects
2.	PMKSY (Har Khet ko Pani)	• Creation of new water sources through Minor Irrigation (both surface and ground water) • Repair, restoration and renovation of water bodies; strengthening carrying capacity of traditional water sources, construction rain water harvesting structures (Jal Sanchay); • Command area development, strengthening and creation of distribution network from source to the farm; • Improvement in water management and distribution system for water bodies to take advantage of the available source which is not tapped to its fullest capacity (deriving benefits from low hanging fruits). At least 10% of the command area to be covered under micro/precision irrigation. • Diversion of water from source of different location where it is plenty to nearby water scarce areas, lift irrigation from water bodies/rivers at lower elevation to supplement requirements beyond IWMP and MGNREGS irrespective of irrigation command. • Creation and rejuvenation of traditional water storage systems like Jal Mandir (Gujarat); Khatri, Kuhl (H.P.); Zabo (Nagaland); Eri, Ooranis (T.N.); Dongs (Assam); Katas, Bandhas (Odisha and M.P.) etc. at feasible locations.
3	PMKSY (Watershed)	• Water harvesting structures such as check dams, nala bund, farm ponds, tanks etc. • Capacity building, entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, nursery raising, afforestation, horticulture, pasture development, livelihood activities for the asset-less persons

		and production system & micro enterprises for small and marginal farmers etc. • Effective rainfall management like field bunding, contour bunding/trenching, staggered trenching, land levelling, mulching etc.
4	PMKSY(Per drop more crop)	• Programme management, preparation of State/District Irrigation Plan, approval of annual action plan, Monitoring etc. • Promoting efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm (Jal Sinchan); • Topping up of input cost particularly under civil construction beyond permissible limit (40%), under MGNREGS for activities like lining inlet, outlet, silt traps, distribution system etc. • Construction of micro irrigation structures to supplement source creation activities including tube wells and dug wells (in areas where ground water is available and not under semi critical /critical /over exploited category of development) which are not supported under PMKSY (WR), PMKSY (Watershed) and MGNREGS. • Secondary storage structures at tail end of canal system to store water when available in abundance (rainy season) or from perennial sources like streams for use during dry periods through effective on-farm water management; • Water lifting devices like diesel/ electric/ solar pumpsets including water carriage pipes. • Extension activities for promotion of scientific moisture conservation and agronomic measures including cropping alignment to maximise use of available water including rainfall and minimise irrigation requirement (Jal sarankchan); • Capacity building, training for encouraging potential use water source through technological, agronomic and management practices including community irrigation. • Awareness campaign on water saving technologies, practices, programmes etc.,

		organisation of workshops, conferences, publication of booklets, pamphlets, success stories, documentary, advertisements etc. • Improved/innovative distribution system like pipe and box outlet system with controlled outlet and other activities of enhancing water use efficiency
5	MGNREGA	• Water harvesting structures on individual lands of vulnerable sections, creation of new irrigation sources, upgradation/desilting of traditional water bodies, water conservation works etc. • Supplementing soil and water conservation works in the identified back ward rainfed blocks by overlaying of the plans with that of watershed projects for development to full potential • Desiltation of canal & distribution system, Deepening and desiltation of existing water bodies, strengthening of bunds/embankments etc. • Restoring the potential of traditional water storage systems like Jal Mandir; Khatri, Kuhl, Zabo, Ooranis ,Dongs , Katas, Bandhas etc. through disiltation and deepening activities

Table 7.19 Recommended norms of treated sewage quality for specified activities at point of use

	Parameter	Toilet flushing	Fire protection	Vehicle Exterior washing	Non-contact impoundments	Landscaping, Horticulture & Agriculture			
						Horticulture, Golf course	crops		
							Non edible crops	Crops which are eaten	
								raw	cooked
1	Turbidity (NTU)	<2	<2	<2	<2	< 2	AA	< 2	AA
2	SS	nil	nil	nil	nil	nil	30	nil	30
3	TDS	2100							
4	pH	6.5 to 8.3							
5	Temperature °C	Ambient							
6	Oil & Grease	10	nil	nil	nil	10	10	nil	Nil
7	Minimum Residual Chlorine	1	1	1	0.5	1	nil	nil	nil
8	Total Kjeldahl Nitrogen as N	10	10	10	10	10	10	10	10
9	BOD	10	10	10	10	10	20	10	20
10	COD	AA	AA	AA	AA	AA	30	AA	30
11	Dissolved Phosphorous as P	1	1	1	1	2	5	2	5
12	Nitrate Nitrogen as N	10	10	10	5	10	10	10	10
13	Faecal Coliform in 100 ml	Nil	Nil	Nil	Nil	Nil	230	Nil	230
14	Helminthic Eggs / litre	AA	AA	AA	AA	AA	<1	<1	<1
15	Colour	Colourless	Colourless	Colourless	Colourless	Colourless	AA	Colourless	Colourless
16	Odour	Aseptic which means not septic and no foul odour							

All units in mg/l unless specified; AA-as arising when other parameters are satisfied;
A tolerance of plus 5% is allowable when yearly average values are considered.