



REVIEW OF RESEARCH

ISSN: 2249-894X

IMPACT FACTOR : 5.7631 (UIF)

VOLUME - 12 | ISSUE - 2 | NOVEMBER - 2022



PRADHAN MANTRI KRISHI SINCHAYEE YOJANA HAR KHET KO PANI "PRIME MINISTER KRISHI SINCHAYEE YOJANA"

Dr. D. C. Kurnal

**Assistant Professor, Department of Economics,
Maharani Women's Arts Commerce and Management College Bangalore,
Karnataka.**

ABSTRACT :

The national goal of the Pradhan Mantri Krishi Sinchai Yojana is to increase farm productivity and make better use of the country's resources. This plan has received a budget of 53 billion yen for the years 2015 to 2016 alone. The Indian government has pledged to place a high priority on water conservation and management. As a result, the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was created with the goal of broadening the scope of irrigation known as "HarKhetkopani" and increasing water use efficiency known as "More crop per drop" in a focused manner by providing an all-encompassing solution for the production, distribution, management, and application of sources as well as activities related to extension and field work. At its meeting on July 1, 2015, the Hon'ble Prime Minister's Cabinet Committee on Economic Affairs gave the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) its approval.



The PMKSY was created by combining two existing programs: On Farm Water Management (OFWM) of the Department of Agriculture and Cooperation (DAC), Integrated Watershed Management Program (IWMP) of the Department of Land Resources (DoLR), and Accelerated Irrigation Benefit Program (AIBP) of the Ministry of Water Resources, River Development, and Ganga Rejuvenation (MoWR, RD&GR). With a cost of Rs. 5300 crore, PMKSY has been approved for nationwide implementation. In just five years, 50,000 crore. There has been a spending of Rs. 5300 crore, which includes 1,000,000 for the DAC; Rs. 1.5 billion for DoLR; Rs. 2 billion for MoWR (Rs. \$1 million for AIBP; Rs. One thousand crores for PMKSY).

KEYWORDS : Pmksy, precision, irrigation, reusing, structures.

INTRODUCTION :

The primary objective of PMKSY is to investigate the possibility of reusing treated municipal waste water for peri-urban agriculture and to attract more private investment in precision irrigation system in order to achieve convergence of irrigation investments at the field level, increase cultivable area under assured irrigation, improve on-farm water use efficiency to reduce water waste (More crop per drop), increase recharge of aquifers, and introduce sustainable water conservation practices.

PMKSY was created by combining two existing schemes, namely On Farm Water Management (OFWM) of the Department of Agriculture and Cooperation (DAC), Integrated Watershed Management

Program (IWMP) of the Department of Land Resources (DoLR), and Accelerated Irrigation Benefit Program (AIBP) of the Ministry of Water Resources, River Development, and Ganga Rejuvenation (MoWR, RD&GR). The Ministries of Agriculture, Water Resources, and Rural Development will carry out the scheme. Rainwater conservation, farm pond construction, water harvesting structures, small check dams, contour bunding, and other projects will be the primary responsibilities of the Ministry of Rural Development. MoWR, RD, and GR will implement a variety of measures, including the development of water distribution systems, diversion canals, field channels, and the creation of an assured irrigation source. The Ministry of Agriculture will encourage the use of precise water application and efficient water conveyance devices like drips, sprinklers, pivots, and rain guns in the farm "Jal Sinchan," as well as the construction of micro-irrigation structures to supplement source creation activities and extension activities to promote scientific moisture conservation and agronomic measures. The PMKSY program architecture will adopt a "decentralized State level planning and projectised execution" structure, allowing States to create their own irrigation development plans based on the District I It will function as a convergence platform for all water sector activities, such as MGNREGA, application of science and technology, and drinking water and sanitation. by means of a comprehensive plan. The Chief Secretary of the State will serve as the chair of the State Level Sanctioning Committee (SLSC), which will have the authority to oversee its implementation and sanction projects.

An Inter-Ministerial National Steering Committee (NSC), comprised of Union Ministers from the relevant Ministries and headed by the Prime Minister, will oversee and monitor the program. Under the chairmanship of Vice Chairman, NITI Aayog, a National Executive Committee (NEC) will be established to oversee program implementation, resource allocation, interministerial coordination, performance monitoring, and administrative issues, among other things.

OBJECTIVES:

The main goals of PMKSY will be to:

- a) Converge irrigation investments at the field level (by developing water use plans at the district and, if necessary, sub-district levels).
- b) Increase the farm's physical water access and cultivable land under guaranteed irrigation (HarKhetkopani);
- c) Make use of the right technologies and approaches to integrate the source, distribution, and efficient use of water to get the most out of it.
- d) Increase the use of precision irrigation and other water-saving technologies, as well as increase the effectiveness of the use of on-farm water to extend availability and reduce waste.
- e) Using the watershed approach to NRM activities like soil and water conservation, ground water regeneration, stopping runoff, providing options for livelihood, and other aspects of integrated development in rainfed regions
- f) Increase aquifer recharge and implement water-saving strategies that are environmentally friendly.
- g) Inspire farmers and grass-roots field workers to take part in extension projects that emphasize crop alignment, water harvesting, and water management.
- h) Examine the possibility of utilizing treated municipal waste water for periurban agriculture.
- i) Obtain additional private funding for irrigation investments.

Strategy & Focus Areas:

- a) Converge irrigation investments at the field level (by developing water use plans at the district and, if necessary, sub-district levels).
- b) Increase the farm's physical water access and cultivable land under guaranteed irrigation (HarKhetkopani);
- c) Make use of the right technologies and approaches to integrate the source, distribution, and efficient use of water to get the most out of it.
- d) Increase the use of precision irrigation and other water-saving technologies, as well as increase the effectiveness of the use of on-farm water to extend availability and reduce waste.

- e) Using the watershed approach to NRM activities like soil and water conservation, ground water regeneration, stopping runoff, providing options for livelihood, and other aspects of integrated development in rainfed regions
- f) Increase aquifer recharge and implement water-saving strategies that are environmentally friendly.
- g) Inspire farmers and grass-roots field workers to take part in extension projects that emphasize crop alignment, water harvesting, and water management.
- h) Examine the possibility of utilizing treated municipal waste water for periurban agriculture, and i) Obtain additional private funding for irrigation investments.

PMKSY (HarKhetkoPani)

- a) Surface and groundwater-based new water sources are created by minor irrigation;
- b) Waterbodies are renovated, repaired, and restored; constructing structures for rainwater harvesting and expanding the capacity of conventional water sources (Jal Sanchay);
- c) Strengthening the area under command and establishing a distribution system that runs from the source to the farm;
- d) In areas with a lot of ground water, development creates a sink for storing runoff and flood water during the rainy season.
- e) Improving the water management and distribution system for water bodies so that the source that is not being utilized to its full potential can be utilized (reaping rewards from low-hanging fruit). At least 10% of the command area will be covered by micro- or precision irrigation.
- f) Regardless of irrigation command, lift irrigation from lower-elevation water bodies and rivers to supplement requirements beyond IWMP and MGNREGS by diverting water from a source in another location where it is abundant to nearby areas lacking in water.
- g) Bringing back traditional water storage structures like Gujarat's Jal Mandir; Khatri, Kuhl (H.P.); Zabo, Nagaland; Eri/Ooranis (T.N.); Dongs of Assam; Bandhas in various conceivable locations, including .

D. PMKSY (Watershed Development)

- a) Improved efforts to conserve soil and moisture, including the treatment of the ridge area, the treatment of drainage line 5, rainwater harvesting, in-situ moisture conservation, and other activities related to the watershed.
- b) Working with MGNREGS to fully develop a water source in the rainfed backward blocks that have been identified, which includes restoring traditional water bodies.

To guarantee or safeguard each farm's access to a water source, it will be necessary to conduct a demand and supply assessment of the crop water requirement, effective rainfall, and potential sources of existing and new water sources taking into account the geohydrological and agroecological scenario of the block. Information about all of the water that is available, the distribution network, old water bodies, new potential water sources, surface and subsurface systems, application and conveyance provisions, crops, and a cropping system that is appropriate for the local agro ecology and aligned with the quantity of water that is available or designed will be included in the master plan. This master plan will address water harvesting, water enhancement from surface and subsurface sources, water distribution, and water application, as well as water body repair, renovation, and restoration, major, medium, and minor irrigation projects, command area development, and other activities.

Prioritize the potential advantages of low-hanging fruit, such as reducing the gap between potential created and utilized by placing a greater emphasis on command area development and precision irrigation and expanding the reach and coverage of a water source through effective distribution and application mechanisms. The construction of sources like dams and water harvesting structures, distribution systems like canals, command area development projects, and precision farming all need to be properly integrated in order to make the most efficient use of water resources. Steps Creating access to water sources that is either assured or protective for each farm will require a demand and supply assessment of crop water requirement, effective rainfall, and potential sources of existing and new water sources taking into account the geohydrological and agroecological scenario of

the block. Information about all of the water that is available, the distribution network, old water bodies, new potential water sources, surface and subsurface systems, application and conveyance provisions, crops, and a cropping system that is appropriate for the local agro ecology and aligned with the quantity of water that is available or designed will be included in the master plan. This master plan will address water harvesting, water enhancement from surface and subsurface sources, water distribution, and water application, as well as water body repair, renovation, and restoration, major, medium, and minor irrigation projects, command area development, and other activities. Prioritize the potential advantages of low-hanging fruit, such as reducing the gap between potential created and utilized by placing a greater emphasis on command area development and precision irrigation and expanding the reach and coverage of a water source through effective distribution and application mechanisms. The construction of sources like dams and water harvesting structures, distribution systems like canals, command area development projects, and precision farming all need to be properly integrated in order to make the most efficient use of water resources.

Programme Architecture:

PMKSY will only be implemented in area development mode with the help of a structure known as "decentralized State level planning and projectised execution." States will be able to develop their own irrigation development plans based on DIPs and SIPs with a 5-7-year horizon thanks to this structure. The initial phase of implementation will be the remaining two years of the XII Plan. States will allocate approximately fifty percent of the PMKSY funds by prioritizing projects in districts with a greater proportion of unirrigated land, lower agricultural productivity than the state average, and a higher population of SC/ST and Small & Marginal Farmers (SMF). States will also prioritize villages identified under the SansadAdarsh Gram Yojana (SAGY) when implementing PMKSY. The remaining fifty percent could be used to operationalize or saturate projects in their final stages (development of water resources or watersheds). Through command area development and precision irrigation, it should also be prioritized to close the gap between the potential for irrigation and the amount actually used. Based on the comprehensive irrigation plan, which includes all essential components like feasibility studies, the competencies of the implementing agencies, anticipated benefits (outputs/outcomes) that will flow to farmers or the state, specific implementation timelines, and so on, Project Reports will need to be prepared for each PMKSY component. due to the fact that PMKSY will be a projectized area-based scheme. There will be four subprojects for each component in the detailed project report (DPR) for each cluster: PMKSY (More Crop Per Drop), AIBP (HarKhetKoPani), and PMKSY (Watershed Development) The activities covered by the respective components will be covered by these subprojects, which will require funding support. Each project's component-by-component physical and financial goals should be clearly stated, and it should be checked to make sure that there aren't any duplicates of funding or similar activities in the same areas under other government plan schemes. if a single major project activity with a price tag exceeding Rs. 25 crore, and a third party will conduct a "techno-financial evaluation" on it. By targeting crops and crop systems that are aligned with agro-ecological conditions and appropriate agronomic practices, extension services will concentrate on focusing on how to make the most of the water that is available. Farmers will be covered more broadly and treated fairly as a result of this. A small number of progressive farmers might be made aware of this issue and encouraged to experiment with various cropping patterns by making use of the irrigation facilities that are available in some areas. The farm school component of the ATMA program would work well for this activity. A group of eight to ten villages could be taken over in districts, according to the plan, to demonstrate how water can be used more efficiently and increased. The success of these clusters in promoting these kinds of activities may serve as a model for other districts. The scope of micro irrigation will be expanded by including precision irrigation-related businesses in awareness campaigns, demonstrations, capacity building training, maintenance services, technical support, and other activities. These companies will be given a larger role in the operational guidelines for this component. stories about the success of indigenous practices like Jal mandir; Khatri; Kuhl; ZabOoranis;

Dongs; Katas; New projects like bandhas and participatory management, for example, could be recorded and shared with other states and organizations for broader replication.

Nodal Department:

Because the ultimate objective of the program is to ensure that every farm has access to effective water delivery and application, thereby increasing agricultural production and productivity, the State Agriculture Department will act as the Nodal Department for the implementation of PMKSY. All communication between the State Government and the Ministry of Agriculture (MOA) would be handled by the nodal department. 10 On the other hand, the implementing departments for each of the four components—AIBP, PMKSY (HarKhetKoPani), PMKSY (Per drop more crop), and PMKSY (Watershed Development)—will be chosen by the respective program ministry or department. The state governments will use the RKVY structure and mechanism that is already in place in the state for overall supervision and coordination of the program. The state may also strengthen the existing State Level Agencies that are available for activities similar to PMKSY when entrusting the responsibility of coordinating those activities. State may also restructure the SAMETI or SLNA structures of the IWMP, adding more members to carry out the PMKSY mandate and working with the National Rainfed Area Authority (NRAA) to do so. Each proposal must first be reviewed by the State Level Coordinating agency before it can be presented to the Inter Departmental Working Group and the State Level Sanctioning Committee. PMKSY will have domain experts and a strong technical component for program management. The hiring of consultants and other professionals will be aided by the program's administrative resources. All cluster subprojects from various implementing departments and districts will be combined into a single DPR and presented to the Inter Departmental Working Group (IDWG) and State Level Sanctioning Committee (SLSC) for approval by state-identified nodal departments and agencies. The nodal department or agency will be in charge of monitoring and coordinating physical and financial progress with the implementing departments or agencies in addition to providing the government with consolidated Utilization Certificates (UC) and physical/financial progress reports. Indian origin

State Level Sanctioning Committee (SLSC):

The State Level Sanctioning Committee (SLSC), established under RKVY and headed by the Chief Secretary of the State, will be given the authority to approve specific projects suggested by the IDWG in a meeting attended by Indian government representatives. Additionally, SLSC will be responsible for, among other things:

- a) Accepting the District Irrigation Plan (DIP) and State Irrigation Plan (SIP); b) Approving and ranking PMKSY-funded projects in order of importance;
- c) Assessing the PMKSY implementation;
- d) Coordinating with other plans and avoiding duplication of effort and resources;
- e) ensuring that project funding and subsidies are distributed equally across districts;
- f) To select the agency or department responsible for implementing in the state for a particular project, depending on the nature of the project and the expertise of the agency or department.
- g) Ensuring that the program is carried out in accordance with the guidelines set by the program's relevant ministry or department;
- h) Initiating evaluation studies whenever necessary;
- i) Ensuring that the current procedures and instructions of the Indian government are followed so that the costs of implementing the projects are kept to a minimum while still adhering to financial propriety, transparency, and probity standards. This is done with an eye toward cutting costs.
- j) To ensure that Panchayati Raj Institutions (PRI) actively participate in the implementation of PMKSY, particularly in the selection of beneficiaries and social auditing, among other tasks.

Administrative Expenses & Contingencies:

Administrative expenses may be paid for on a pro-rata basis from the program, not to exceed 5% at each level, to improve coordination, scientific planning, and technical support for the successful implementation of PMKSY at the field level. For ongoing IWMP projects, administrative costs up to 10% of the budget for specific watershed projects may be admissible under common guidelines for watershed development projects. Examples of administrative expenses incurred by the Coordinating Agency/Institutions for the Implementation of PMKSY include payments to consultants, outsourcing specific tasks, recurring expenses of various kinds, staff costs, and other similar expenses. are permissible. However, neither vehicles nor permanent employment can be purchased. The state can pay for any administrative costs that go above the limit from their own budgets. Govt. India may keep 1.5% of the PMKSY allocation for IEC activities and another 1.5% for administrative, monitoring, and evaluation purposes, in addition to any contingencies that might occur as participating departments implement the scheme. Between the years 2015 and 2016, a total of Rs. 75 Cr will be allocated for DIP and SIP preparation, with DAC funds being used to pay for it.

PMKSY-WDC

The Department of Land Resources has taken on 6,382 projects under PMKSY-WDC. 5,243 of these projects, according to reports, have been completed. The Annexure contains the specifics of these projects as well as ongoing projects. In accordance with their own priorities and resources, the state governments themselves plan, fund, carry out, and maintain projects related to water resources. Through its current programs, the Indian government's role is limited to providing technical support and, in some instances, partial financial assistance. It is the state governments' responsibility to address the monitoring and redressal mechanisms in order to guarantee the upkeep and quality control of the irrigation projects they are implementing. In addition, the Central Water Commission and a Project Management Unit (PMU) within this Ministry have been given the duty of monitoring the projects that receive central assistance on a regular basis. The Ministry of Jal Shakti's Management Information System is used to support a dedicated dashboard that is used to track the physical and financial progress of these projects. In addition, the Ministry's highest level monitors the projects' progress and implementation. Project-by-project periodic reviews of the projects' physical and financial progress are conducted by the Secretary of the Ministry of Jal Shakti's Department of Water Resources, River Development, and Ganga Rejuvenation. The actions that will be taken by the various State Governments are finalized in order to resolve issues as soon as possible. Additionally, Hon'ble Minister Jal Shakti occasionally hosts review meetings.

PMKSY Components

Sl. No.	Components	Illustrative Activities
1.	AIBP by MoWR,RD&GR	<ul style="list-style-type: none"> To concentrate on completing major and medium irrigation projects, including national projects, more quickly.
2.	PMKSY (HarKhetkoPani) by MoWR,RD&GR	<ul style="list-style-type: none"> Minor irrigation results in the creation of new water sources—both surface and groundwater—and repairs, restoration, and renovation of water bodies; constructing rainwater harvesting structures and enhancing the carrying capacity of traditional water sources (Jal Sanchay); Establishing a distribution network from the source to the farm and expanding the command area; Enhancement of the water management and distribution system for bodies of water so that they can make use of the source that isn't being used to its full potential (getting benefits

		<p>from low-hanging fruit). Micro/precision irrigation will cover at least 10% of the command area.</p> <ul style="list-style-type: none"> • Lift irrigation from water bodies/rivers at lower elevations to supplement requirements beyond IWMP and MGNREGS, regardless of irrigation command. • Diversion of water from a source in another location where it is abundant to nearby water-scarce areas. • the development of traditional water storage systems like Jal Mandir (Gujarat) and their modernization; Kuhl, Khatri (H.P.); (Nagaland) Zabo; Ooranis, Eri (T.N.); Assam dongas; Bandhas among others in conceivable locations.
3.	PMKSY (Watershed) by Dept. of Land Resources, MoRD	<ul style="list-style-type: none"> • Water-retention devices like check dams, nala bunds, farm ponds, tanks, and others • Capacity building, activities at entry points, treatment of drainage lines and ridge areas, conservation of soil and moisture, nursery raising, afforestation, horticulture, pasture development, activities for people without assets to earn a living, production system and microbusinesses for small and marginal farmers, etc. • Effective rainwater management techniques like field bunding, contour bunding/trenching, staggered trenching, leveling the ground, mulching, and other similar techniques
4.	PMKSY (Per drop more crop) by Dept. of Agriculture & Cooperation, MoA	<ul style="list-style-type: none"> • Program management, state and district irrigation plans, annual action plans, monitoring, and other tasks • Promoting the farm's use of precise water application and efficient water conveyance tools like rain guns, pivots, and sprinklers (Jal Sinchan); • An increase in the input costs, particularly in civil construction, above the limit set by MGNREGS (40 percent) for activities like lining inlets and outlets, silt traps, distribution systems, and others • The construction of microirrigation structures, such as tube wells and dug wells—in areas where ground water is available and not under the semi-critical, critical, or over-exploited development category—to supplement source creation activities that are not supported by PMKSY (WR), PMKSY (Watershed), or MGNREGS. • Secondary storage structures at the system's tail end to store water when it's plentiful (rainy season) or from perennial sources like streams so it can be used when it's dry through efficient on-farm water management; • Water-lifting equipment like solar, diesel, and electric pump sets, as well as water carriage pipes. • Extension efforts to promote scientific moisture conservation and agronomic practices, such as cropping alignment to make the most of rainfall and minimize the need for irrigation (Jal sarankchan); • Technology, agronomic, and management practices, including

		<p>community irrigation, to encourage potential use of water sources, including capacity building and training.</p> <ul style="list-style-type: none"> • A promotion of technologies, practices, and programs that save water, organization of conferences, workshops, booklets, pamphlets, success stories, documentaries, advertisements, and other similar activities • A new or improved distribution system, such as a box and pipe system with a controlled outlet and other activities to improve water use efficiency.
--	--	--

CONCLUSION:

In order to achieve convergence of irrigation investments at the field level, increase cultivable area under assured irrigation, improve on-farm water use efficiency to reduce water waste , increase recharge of aquifers, and introduce sustainable water conservation practices, the primary goals of PMKSY are to investigate the possibility of reusing treated municipal waste water for peri-urban agriculture. The On Farm Water Management program of the Department of Agriculture and Cooperation , the Integrated Watershed Management Program program of the Department of Land Resources , and the Accelerated Irrigation Benefit Program program of the Ministry of Water Resources, River Development, and Ganga Rejuvenation were combined to form PMKSY. MoWR, RD &GR, is to undertake various measures for creation of assured irrigation source, construction of diversion canals, field channels, water diversion/lift irrigation, including development of water distribution systems. Ministry of Agriculture will promote efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm “ ” , construction of micro-irrigation structures to supplement source creation activities, extension activities for promotion of scientific moisture conservation and agronomic measures . Programme architecture of PMKSY will be to adopt a ‘decentralized State level planning and projectised execution’ structure that will allow States to draw up their own irrigation development plans based on District Irrigation Plan and State Irrigation Plan .

REFERENCES

1. Ayer N.P. (1969). Crop Regions of Madhya Pradesh. A study in Methodology Geographical Review of India.
2. Brunhes J (1957). Qater is every where sovereign rural of huan activity human Geography.
3. Bhat L.S (Et-al) (1976). Micro-level development planning Ruralgrowth centre strategy common wealth.
4. Chandra Shekhar, C.S (1972). Balanced Regional Development and Regions Census of India.
5. Ducon c-(1962). Resources utilization and the conservation concept economic Geography.