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IN THIS ISSUE



DIRECTOR'S COLUMN



Gender-water-food-energy nexus- A need for holistic Integration

Water is the elixir of life and is devoid of the discriminating ability amongst all entities of this wonderful nature. Water is not gender, food and energy neutral, but need to be judiciously integrated to ensure water, food and energy security. It was reported by National Family Health Survey (NFHS)-6 (2023-24) that women aged 15 and above manage water collection in about 71% of rural Indian homes and travel on an average 173 km and consume on an average 27 days per year in fetching water. However, as per the PIB report (26th October 2025), the Jal Jeevan Mission, MoJS, GoI launched during 2019 has performed remarkably

well by providing water access from 17% families during 2019 to 81% families by end of 2025 with a target of 100% by 2028. Besides this, efforts are being made through construction of diversion-based Irrigation (DBI) infrastructure in the Country which is assisting the families in hilly and spring fed regions to access water not only for household use but also for irrigation. Diversion-based irrigation (DBI) in India uses gravity and slopes to guide water from streams and springs to hilly farms, spanning traditional systems and modern community projects and reported to increase the household income of stakeholders by 20-50%. Such initiative does not need any energy source for the conveyance, reduces the women apathy in transport of water for domestic use, increase food production in areas which were without any irrigation facility and thereby add to green agriculture. Active involvement of women in water governance through water user associations or *pani panchayats* would ascertain judicious water allocation in both surface and groundwater irrigated regions, renovation and desilting of farm ponds, optimal use of the community tube wells, maintenance and upkeep of farm assets, capacity building and skilling of village youth, use of the Agri-PV systems in providing irrigation to different crops, employment and market linkages etc. Under such circumstances, the gender-water-food-energy nexus can be realized through active involvement of women in different activities leading to energy saving and enhanced food productivity. However, there are challenges pertaining to water scarcity, occurrence of drought and flood

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CONCEPT

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under changing climate scenarios, groundwater depletion, unequal access in remote and drought-prone regions, improper water budgeting and crop planning and increase in the cropped area of the Country. Therefore, to ensure holistic development of agriculture in the Country, there is a need for bridging the gap between gender inequalities in agriculture and empowering and ensuring their stake and voice in water user associations, sustainable water conservation and quality monitoring, water use in agriculture and market dynamics related decision-making etc. Our Country have taken various initiatives related to policies, innovations and Institutional support for empowering women farmers in agriculture (PIB; 23rd March 2026). Women farmers are playing an increasingly significant role in driving India's agricultural progress through various government initiatives that enhance their access to resources, technologies, and markets. Notable schemes viz. Agriculture Infrastructure Fund (AIF), Integrated Scheme for Agricultural Marketing (ISAM)/Agricultural Marketing Infrastructure (AMI), Mission for Integrated Development of Horticulture (MIDH), Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), and the Modified Interest Subvention Scheme (MISS) provide financial support and credit access to women farmers through subsidies, interest subvention, and direct income transfers. Additionally, initiatives such as the Namo Drone Didi Programme, National Beekeeping and Honey Mission (NBHM), and the *Deendayal Antyodaya Yojana*–National Rural Livelihoods Mission (DAY-NRLM) strengthen women's participation by promoting technology adoption, skill development, and livelihood diversification. Together, these initiatives strengthen women's participation in the agricultural value chain by improving infrastructure, enhancing market linkages, and supporting efficient post-harvest management. Moreover, the UN's

declaration of 2026 as the International Year of Women Farmers was marked through organization of a Global Conference on Women in Agri-Food Systems (GCWAS-2026) during 12-14 March, 2026 by Indian Council of Agricultural Research (ICAR) that underscores India's commitment to integrating women more effectively into agricultural development. Nonetheless, water security, gender equality, food and energy security are closely interconnected. Thus, continued investment in sustainable water management and women's leadership is essential for achieving the Sustainable Development Goals (SDGs) and inclusive development in India.

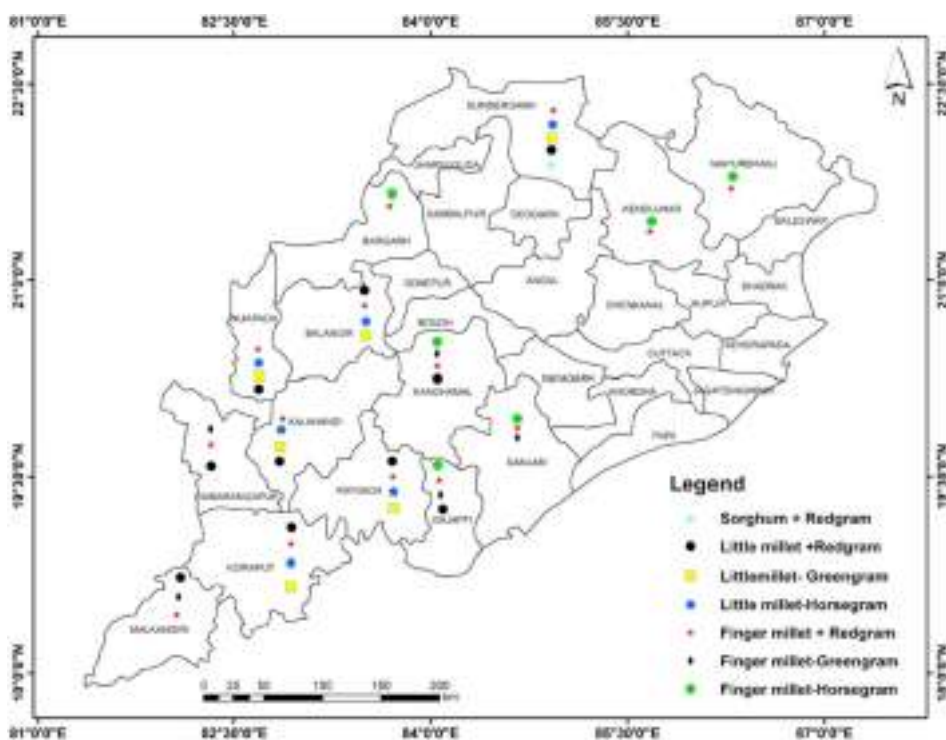
Attempts were made by the Institute during the period for January to June 2026 to disseminate different agricultural water management technologies to more than 6000 stakeholder including about 2400 women farmers. Moreover, 200 awareness programme on balanced use of fertilizer (BUF) and *Khet Bachao Abhiyan* was conducted by the *Mera Gaon Mera Gaurav* (MGMG) teams of scientists of the Institute and AICRP on IWM Centres pan India. The ground water recharge structures were implemented by IIWM and AICRP on IWM Centres. The Canal automation project was inaugurated on the world water day (22nd March 2026) at the DarpanarayanPur MI project in Nayagarh, Odisha. The foundation day of the Institute was celebrated on 12th May 2026 and a National Conference in collaboration with Indian Society of Agro-physics on "Innovations in Agrophysics for Green Agriculture" during 22–24 January 2026 was successfully organized. The 1st review meeting of 10th Research Advisory Committee of the Institute and the National Consultation meeting on Bharat Soil Health Policy for the Eastern and North-Eastern Region of India were also organized at the Institute. The consultancy project report of CWC, pilot project reports

of CAD-WM, GoO were submitted after their successful completion besides the formulation of competitive grant proposals pertaining to AI in Agricultural Water Management, which was submitted for possible funding. Scientists and staffs of the institute received awards and recognitions and the uploaded documents in Institute web site and social media handles were viewed by stakeholders to enhance the visibility of the Institute. Scientists and staff of the Institute were able to expand their knowledge and were encouraged by visit of eminent personalities and academicians including Honourable MP and MLA, Hon'ble Secretary DARE and DG, ICAR, DDG (NRM), ICAR, Hon'ble VC of OUAT and former VCs of SAUs and senior officers of line departments of GoO. Besides this, several programmes as desired by the Council and GoI in form of awareness initiatives were also organized.

RESEARCH ACHIEVEMENTS

Millet-based Cropping Systems for Higher Water Productivity and Farm Income

Millets are well fitted to diversified cropping and farming system including mixed cropping, intercropping and sequential cropping systems. A study was conducted to estimate the physical water productivity (PWP) and economic water productivity (EWP) under diverse millet-based cropping systems and crop establishment methods in Odisha. It was observed that cropping systems, establishment methods and growing season significantly influenced the yield and PWP of finger millet. The finger millet-fallow system showed the lowest PWP of 0.14–0.17 kgm⁻³ and EWP of 6.08–6.37 Rsm⁻³ during 2023–2024. However, horizontal intensification of finger millet with horse gram or green gram or black gram significantly enhanced the system PWP and income in both 2023 and 2024. Intensification of finger millet with horse gram in sequence in light soils enhanced system yield by 99–99.5 % compared with millet-fallow system during 2023–2024. Similarly, finger millet-green gram sequence in heavy soil recorded 140.4–



District wise suggested millet-based cropping systems in Odisha

146.4% higher system yield. The PWP under the finger millet-horse gram system was $0.25\text{--}0.31\text{ kg m}^{-3}$ during 2023-2024. The finger millet-green gram cropping system shows PWP of $0.31\text{--}0.39\text{ kg m}^{-3}$. The highest EWP ($13.15\text{--}15.20\text{ Rs m}^{-3}$) was observed in finger millet-green gram cropping system. The study reveals that millets are not only resilient but also characterized by higher water productivity when grown in a system mode integrated with green gram or horse gram or black gram. Based on sowing window, harvesting period, soil type, soil moisture holding capacity of the soil and winter rainfall, district wise profitable millet-based cropping system has been suggested for achieving higher rainfall use efficiency and sustainable productivity of millet-based production systems of Odisha. Inter cropping of finger millet, little millet and sorghum with red

gram may be encouraged in the districts like Ganjam, Gajapati, Koraput, Rayagada, Malkangiri and Sundargarh, whereas finger millet-horse gram/green gram/black gram cropping system should be encouraged in the districts like Ganjam, Gajapati, Kandhamal, Mayurbhanja and Keonjhar for higher water and system productivity. Similarly, little millet-horse gram/green gram should be encouraged in Nuapada, Kalahandi and Sundargarh. (Dr. B.S. Shatapathy, Dr. D.K. Panda and Dr. R.K. Jena)

Periphyton-based Carp-SIFS Polyculture System

A field study was conducted at ICAR-IIWM to investigate (i) the impact of artificial substrate-induced periphyton biomass on the consumptive and total water requirement in carp-SIS

polyculture system in zero-water exchange earthen ponds; (ii) effects of periphyton biomass on water quality, sediment load, water productivity, water footprint, zoo-technical and production performance of Indian major carps (IMCs) and Amblypharyngodon mola (Small Indigenous Fish Species, SIFS) in order to increase production and profit. After pre-stocking, pond preparation IMC fingerlings (*C. catla*, *L. rohita* and *C. mrigala*) were stocked @ 5000 ha^{-1} , while stocking of *A. mola* along with carps was carried out @ 15000 , 25000 and 35000 nos ha^{-1} in T1 (Zero-water exchange ponds without substrate), T2 (Zero-water exchange ponds with substrate; and T3 (Zero-water exchange ponds with substrate; aquamats $\approx 20\%$ water surface area only), respectively. The overall water quality parameters were within the optimum range. The fish pond's water quality suitability index (WQSI) that expresses the overall water quality in a given place and time infers that substrate induced periphyton biomass in zero-water exchange condition improved the overall suitability of water quality for fish culture. WQSI up to 210 DOC range between 7.5-9.0 (very good) and needs little management. Autotrophic Index (AI) is indicative of effective utilization of organic substances by heterotrophs which in turn helps autotrophic periphyton that rely largely on inorganic nutrients to increase their biomass. High AI value indicates heterotrophic association or poor water quality. However, AI in T2 ($224.3\text{--}307.7$) indicate no organically polluted conditions (<400). Substrate-induced periphyton biomass in T2 (Zero-water exchange ponds with substrate; aquamats $\approx 10\%$ water surface area only) gave significantly higher yield (4.99 t ha^{-1} 300d^{-1} , up by 10.4% against T1), economic benefit (Output Value: Cost of Cultivation,



2.24), nutritional water productivity of protein (NWPprotein, 0.058 kg m^{-3}), economic water productivity (INR 14.5 m^{-3}), minimal total water use (3.07 ha-m), lesser consumptive water use index ($4.89 \text{ m}^3 \text{ kg}^{-1} \text{ biomass}$), water footprint ($2906 \text{ m}^3 \text{ t}^{-1}$) and sediment load ($29.4 \text{ m}^3 \text{ t}^{-1} \text{ biomass}$). In this production system, 0.38 kg crude protein in feed is required to produce 1 kg fish (PCR), while 5.79 kg of dry matter in feed is required to produce 1 kg dry matter of fish (DMR). Similarly, 1.08 kg waste is produced per 1 kg fish production (WPR). The consumption periphyton present over submerged substrates enhances the growth of fish by providing natural food and minimized supplemental feed input by 21-23.6%.

Overall the study reveals that by using artificial substrates to grow periphyton as natural fish food, farmer can boost fish growth, improve water quality and cut supplemental costs. Periphyton-based zero-water exchange carp polyculture is sustainable, profitable and climate-smart. (Dr. Rajeeb K. Mohanty, Dr. Rabindra K. Panda, and Dr. Ankita Jha)

Water Management in Soil-substitute Media-based Dragon Fruit Cultivation

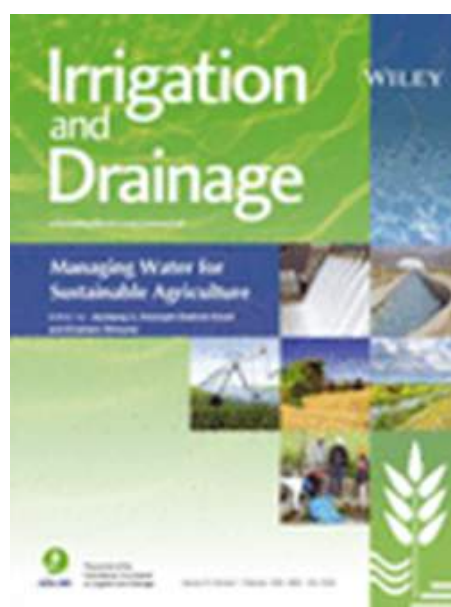
Soilless cultivation has gained recognition as an innovative agricultural approach which is capable of enhancing crop yield and quality while overcoming the constraints of traditional soil-based farming. In dragon fruit (*Hylocereus* spp.) production, soilless systems offer considerable scope for improving productivity, fruit quality and resource-use efficiency. A study was conducted at ICAR-IIWM during 2021–2025 to evaluate soilless-based dragon fruit cultivation under open-field conditions. In this backdrop, two varieties of dragon fruit (pink & white pulp type) were planted in HDPE pot (height: 448 mm , dia: 590 mm , weight: 4.7 kg) with four different growing media (Cocopeat, Coco fibre, Cocopeat + perlite & soil) in four planting systems (1, 2, 3 and 4 plants/pit) in CRD design with three replications. Among the treatments, cocopeat and its combinations, particularly cocopeat + perlite, significantly improved root-zone aeration while substantially reducing water consumption (168 L compared to 624 L under soil cultivation). The cocopeat + perlite medium recorded superior fruit quality parameters, including higher peel weight (121 g vs. 41 g), pulp weight



(283 g vs. 111 g), and total soluble solids (17.4° Brix vs. 16.85° Brix) compared to cultivation in soil. Average fruit weight was significantly higher in cocopeat (404 g) and coco fiber (368 g) compared with soil-grown plants (152 g). Cocopeat+perlite gave the highest yield (30.4 kg/pot), followed by cocopeat (21.6 kg/pot), coco fiber (14 kg/pot), and soil (12.5 kg/pot). Moreover, cocopeat generated the highest benefit–cost ratio (1:3.3), followed by cocopeat + perlite (1:2.2). Cocopeat + perlite achieved the highest water productivity (180.8 kg m^{-3}), followed by cocopeat (81.7 kg m^{-3}), coco fiber (37.8 kg m^{-3}), and soil (20.0 kg m^{-3}). Overall, soilless cultivation systems facilitate year-round production and efficient land utilization, making it suitable especially for urban agriculture. (Dr. Pratiba Sahu, Dr. Ajit K. Nayak and Dr. R.K. Jena)

SCIENCE

Research Papers



1. Enhancing the Irrigation Potential of the Kukadi Canal Command of Maharashtra, India

Improving water use efficiency (WUE) in canal irrigation systems is vital for increasing agricultural output and maintaining ecological sustainability. Studies carried out in the Sina and Kukadi Left Bank Canal (KLBC) networks of Maharashtra, India, revealed marked disparities in the efficiency of the economic use of irrigation water. Investigations undertaken using geospatial tools highlighted a larger water influence zone (WIZ) in these systems, a factor often overlooked in conventional irrigation management. This finding led to the possibility of increasing the WUE by 113%, land productivity by 90% and EWP by 26% in KLBC, demonstrating the potential for optimizing water resources and improving crop productivity. Additionally, the adoption of climate-resilient and water-efficient crop varieties resulted in a potential net value of output (NVOUP) increase of 80% in the KLBC irrigation system. These results emphasized the need for a comprehensive approach to irrigation water management that incorporates a detailed assessment of WIZ, conjunctive water use and sustainable cropping patterns. Such measures will not only improve water use efficiency but also contribute to a more sustainable and economically viable agricultural landscape in canal ecosystems

Adapted from Panda R.K., Amarasinghe, U.A., Sarangi, A., Sikka, A.K., Gorantiwar, S.D., Mandave, V. and Mahapatra, S. (2026). Scope and Feasibility of Enhancing the Irrigation Potential of the Kukadi Canal Command of Maharashtra, India. *Irrigation and Drainage*, 2026; 75:1225–1237. <https://doi.org/10.1002/ird.70102>.

2. Water quality index and TOPSIS for irrigation suitability assessment in eastern Odisha, India



Groundwater irrigation is increasingly practised in the eastern districts of Odisha, India, highlighting the need for systematic evaluation of irrigation water quality. Groundwater quality data (pH, EC, TDS, total hardness, major cations, and anions) were obtained from the Central Water Commission (CWC) and India-WRIS (2023) databases. The dataset includes 43 villages across eastern Odisha, mainly from the coastal districts of Balasore, Bhadrak, and Puri, with additional sites in Jajpur, Dhenkanal, and Mayurbhanj, representing both coastal and inland hydrogeological conditions. High values of sodium adsorption ratio (SAR), residual sodium carbonate (RSC), Kelly's ratio (KR), permeability index (PI), magnesium ratio (MAR), and per cent sodium (Na%) were observed in several locations, which may adversely affect soil permeability and crop productivity if irrigation practices are not properly managed. Entropy analysis further identified chloride, Kelly's ratio, and potential salinity as the most influential parameters controlling groundwater quality variability. An integrated approach combining the entropy-weighted water quality index (EWQI) and the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) was applied to evaluate irrigation water quality and rank sampling locations. The EWQI results indicate that most groundwater samples fall within the excellent to good quality categories, suggesting that the overall hydrochemical composition is generally suitable for irrigation. However, the

TOPSIS ranking reveals spatial variability, with approximately 94% of samples classified as moderate quality, 4% as poor quality, and only 2% as good quality, indicating localised salinity and sodicity risks. The TOPSIS analysis indicated that Bimbalabar and Ramchandrapur villages in Bhandaripokhari block exhibited the lowest closeness coefficient values, representing relatively better water quality, while other locations showed higher closeness coefficients, indicating moderate irrigation suitability. Most of the readings are ≤ 0.5 , as estimated by TOPSIS for most stations. The integrated EWQI-TOPSIS framework provides a robust decision-support approach for identifying priority areas for groundwater management and supporting sustainable irrigation planning in the eastern districts of Odisha.

Adapted from Sethi, R.R., Dandapat, A.K., Srivastava S.K., Sankalp, S., Ankhila R.H., Bal, J.S. and Jothimani, M. 2026. Entropy-weighted water quality index and TOPSIS for irrigation suitability assessment in eastern Odisha, India. *Water Science* (2026) 40:37. <https://doi.org/10.1007/s44533-026-00038-4>

Groundwater Irrigation in India for Attaining Sustainable Development Goals

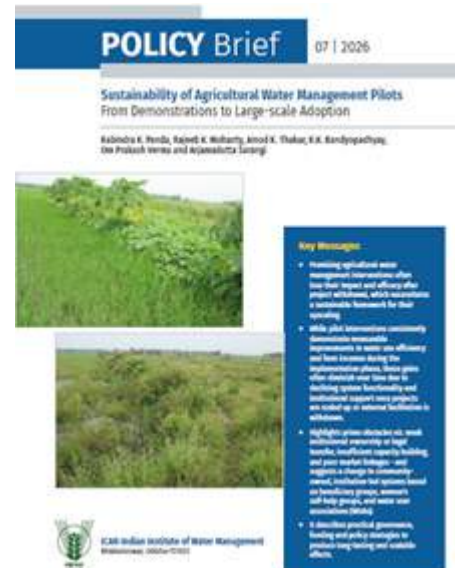


Groundwater irrigation plays a crucial role in sustaining India's food security and rural livelihood. However, the carbon footprint of its energy (72% coal-based) requirement is also equally alarming. Under such scenarios, the Farm Power Subsidy (FPS) policy for groundwater irrigation, one of India's costliest public support systems, needs a relook, keeping

in view the Sustainable Development Goals (SDGs). Although aimed at bridging social disparities, it is observed that FPS encourages simplification and intensification of the food production system, leading to inter-state and district scale inequality in income. States implementing FPS, even if experiencing physical water scarcity, are growing water guzzling crops for economic benefits. Conversely, without adequate access to energy, states reeling from economic water scarcity are witnessing low farm incomes. India consumes about a quarter of the world's groundwater for irrigation, and also leads the energy use. Notably, since the mid-2000s large-scale implementation of the FPS policy, the CO₂ emission (equivalent) has been rising by 5.77 million tons annually, now surpassing 100 million tons. These outcomes bear testimony to the globally accepted view that those least responsible for causing greenhouse gas emissions are the hardest hit. We suggest repurposing of agricultural policies, without compromising farmers' income, for efficient management of energy and water.

Adapted from Panda, D. K., Sarangi, A., Tiwari, V. M., Ambast, S. K., & Singh, R. (2026). Envisioning farm power subsidy for groundwater irrigation in India for attaining SDGs. *Earth's Future*, 14, e2025EF007132. <https://doi.org/10.1029/2025EF007132>.

POLICY Brief



- Promising agricultural water management interventions often lose their impact and efficacy after project withdrawal, which necessitates a sustainable framework for their upscaling.



- While pilot interventions consistently demonstrate measurable improvements in water use efficiency and farm incomes during the implementation phase, these gains often diminish over time due to declining system functionality and institutional support once projects are scaled up or external facilitation is withdrawn.
- Highlights prime obstacles viz. weak institutional ownership or legal transfer, insufficient capacity building, and poor market linkages – and suggests a change to community owned, institution-led systems based on beneficiary groups, women's self-help groups, and water user associations (WUAs).
- It describes practical governance funding and policy strategies to produce long-lasting and scalable effects.

Adated from Panda, R.K., Mohanty, R.K., Thakur, A.K., Bandyopadhyay, K.K., Verma, O.P. and Sarangi, A. 2026. Sustainability of Agricultural Water Management Pilots from Demonstrations to Large-scale Adoption. Policy brief 07/2026, Published by ICAR-IIWM, Bhubaneswar, pp8.

EVENTS, NEWS & CELEBRATIONS

Research Advisory Council (RAC) Meeting organized

The 1st Meeting of the 10th Research Advisory Committee (RAC) of ICAR-IIWM was convened during June 15-16, 2026 under the chairmanship of Dr. J.S. Samra, Former DDG (Natural Resource Management), ICAR, New Delhi and Former Chief Executive Officer, National Rainfed Area Authority (NRAA). The meeting was attended by the following RAC members and all the scientists of ICAR-IIWM, Bhubaneswar. The members of RAC who attended the meeting were

Dr. A. Velmurugan, ADG (SWM), ICAR (online), Dr. P.S. Brahmanand, PD, WTC, ICAR-IARI, New Delhi, Dr. K. Yella Reddy, Former Dean, ANGRAU, Hyderabad and Hon'ble Vice President, ICID, Dr. R Singh, Global Research Programme Director, ICRISAT, Hyderabad(online), Dr. C. Chatterjee, Professor, IIT, Kharagpur, Sh. Niranjan Mishra, Bhubaneswar, Dr. A. Sarangi, Director, ICAR-IIWM, and Dr. S.K. Jena, Pr. Scientist, ICAR-IIWM, as Member Secretary. The RAC suggested to take up different research issues such as study and quantification of water food energy nexus at different scale; promotion of canal automation by conducting training and field visits of different state government officials, field functionaries and other stake holders; undertake comprehensive water budgeting studies at a pan-India scale to assess regional and national water availability and utilization patterns; investigating the impacts of intensive agricultural practices on both surface water and groundwater quality, impact evaluation of Agri-Photo-Voltaic on water productivity and economics in

irrigated ecosystem; and Meta-analysis on "Agricultural transformation in India through advanced techniques of irrigation with special focus on micro irrigation" utilizing the long-term experimental data of AICRP on IWM. They suggested most of the research studies need to be undertaken in pan India scale within the mandate of the institute. Chairman and members of RAC visited the canal automation site at Darpanarayanpur MI, Nayagada, Odisha on June 16, 2026.

Hon'ble Secretary, DARE and DG, ICAR Visited ICAR - IIWM

Hon'ble Secretary, DARE and DG, ICAR Dr. Mangi Lal Jat visited ICAR-IIWM, Bhubaneswar on January 6, 2026. Dr. Jat interacted with the scientists and staff of ICAR-IIWM. The significant achievements of the institute on Agricultural Water Management were presented to him by Dr. A. Sarangi, Director of the Institute, Dr. Jat suggested for future line of work. He also visited the technology park and poly house of the Institute and appreciated the research work done by the Institute.





Rashtriya Karmayogi Large Scale Jan Seva Programme was organized at ICAR-IIWM

One-day training on Rashtriya Karmayogi Large Scale Jan Seva Programme was organized at ICAR-IIWM Bhubaneswar in two batches on 15th and 29th January 2026. There were 25 and 26 participants in the first and second batch, respectively. Both the training batches were effective and the participants appreciated the need of such a training for inculcating positive attitude in work environment. Dr S.K. Rautaray, Principal Scientist, ICAR-IIWM and Dr Biswanath Sahoo, Principal Scientist, ICAR-CIWA were Master Trainers for both the batches.

ICAR - IIWM Celebrated Watershed Mahotsav

ICAR- IIWM, Bhubaneswar organized *Watershed Mahotsav* at Chemedi gram panchayat in Odagaon block of Nayagarh District of Odisha under REWARD project in collaboration with DSCWD, Govt of Odisha on January 16, 2026. Dr.S.K. Jena, PI and Principal Scientist of the Institute coordinated this Program.

ICAR-IIWM, Bhubaneswar Organized a National Seminar

The Indian Society of Agrophysics, New Delhi in collaboration with ICAR-IIWM organized a National Seminar on “Innovations in Agrophysics for Green Agriculture” during 22–24 January 2026 at ICAR-IIWM, Bhubaneswar. The Seminar focused on core aspects of digitization of agriculture integrating cutting edge digital technology into the farm production system and natural resource management, including artificial intelligence, Big Data Analytics, drone, remote sensing, sensors, and communication networks.

The Chief guest of the inaugural session of the seminar was Dr. S.K. Chaudhari, DG, FAI, New Delhi. Dr. A. Sarangi, Director, ICAR-IIWM was the Chairman of Organizing Committee and Dr. K.K. Bandyopadhyay, Programme Leader (Canal Water Management) was the Organizing Secretary of the National Seminar. The inaugural program was followed by 12th Dr. B.P. Ghildyal Memorial Lecture delivered by Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi on the topic “Innovations for green farming”. The 12th Dr. B.P. Ghildyal Memorial Lecture was chaired by Dr. S K Chaudhari, DG, FAI, New Delhi. Several distinguished dignitaries like Dr. Pradip Day, Dr. Manoranjan Mohanty, Dr. A.K. Patra, Dr. Y S Shivay graced the Seminar. The lecture galvanized the participants towards the cutting-edge research on India's preparedness towards climate resilient agriculture. The seminar includes different technical sessions including oral and poster presentations divided into four themes viz., (i)

Artificial Intelligence/machine learning, robotics, big data analytics/Meteorology/ Remote Sensing/ GIS; (ii) Soil Science/ Soil Physics/Biophysics/Biosensors; (iii) Precision nutrient and water management, wireless sensors, smartphone application in agriculture and (iv) Soil and Water Conservation and Climate Risk Management, Conservation Agriculture and Organic Farming. The seminar was attended by about 200 delegates including Scientists, Research Associates, young professionals and students from different ICAR Research Institutes, SAUs, NGOs, Farmers and other different private sector companies from all over India. The chief guest of the valedictory ceremony of this seminar was Dr. K. Yella Reddy, Vice President, International Cooperation of Irrigation and Drainage. Dr. K.K. Rout, Dean, School of Agriculture, Driems University was the guest of honour on this occasion. The deliberations from this seminar highlighted the impact of different agrophysical technologies for bringing evergreen revolutions in agriculture



ICAR-IIWM Celebrated Republic Day

The 77th Republic Day of the country was celebrated on January 26, 2026 at the Institute. On this occasion, the national flag was hoisted by Dr. A. Sarangi, Director of the institute. He addressed the staff and family members of the Institute with encouraging words and urged upon the need for hard work and dedication by the staff for the welfare of the farming community, and to make the Institute as well as the country proud.

ICAR-IIWM Conducted a National Workshop

ICAR-IIWM, Bhubaneswar organized a National Workshop on “Next-Generation Farming: Vertical Hydroponic and Aquaponic Systems” on February 11, 2026 in hybrid mode. The workshop received an overwhelming response, with 382 participants registering from 21 states and 2 Union Territories. At the outset, Dr. A. Sarangi, Director, ICAR-IIWM, extended a warm welcome to the distinguished guests and participants and outlined the genesis, objectives, and vision of the national workshop. Dr. A. Velmurugan, ADG (S&WM), Natural Resource Management Division, ICAR, New Delhi, graced the occasion virtually as the Chief Guest. In his address, he emphasized the strategic importance of hydroponic and aquaponic systems in achieving Sustainable Development Goals (SDGs), strengthening food and nutritional security, and generating employment opportunities in urban and peri-urban horticulture through innovative next-generation farming approaches. The workshop featured four technical sessions and one practical session focusing on recent advancements in hydroponic systems. Eminent scientists from ICAR-IARI, New Delhi; ICAR-CIFE, Mumbai;



and ICAR-IIVR, Varanasi delivered expert lectures, sharing cutting-edge research insights and practical experiences. The event was sponsored by the Directorate of Horticulture, Government of Odisha. The workshop was convened by Dr. R.K. Panda, Principal Scientist, and was organised by Dr. Prativa Sahu, Scientist and Dr. A.K. Thakur, Principal Scientist of the Institute.

Live Webcast of ‘Bharat-VISTAAR’ National Launch Organized at ICAR-IIWM

Bharat-VISTAAR’ (Virtually Integrated System to Access Agricultural Resources) AI Tool was nationally launched by Sh. Shivraj Singh Chauhan, Hon’ble Union Minister of Agriculture & Farmers Welfare, Government of India in the presence of Sh. Bhajanlal Sharma, Hon’ble Chief Minister of Rajasthan on February 17, 2026 at Jaipur, Rajasthan. *Bharat-VISTAAR*’ is a single digital doorway for farmers and is an AI-powered unified digital system that gives farmers about scheme information, weather, mandi prices, crop advice, and grievance services

in farmers’ own language through mobile or a simple phone call. While addressing lakhs of farmers and other stakeholders across the country through hybrid mode, Hon’ble Union Agriculture Minister mentioned that ‘Bharat-VISTAAR’ would enhance farm productivity, lead to better farmer decision making and reduce risk through customized advisory support for the farmer. He added that with ‘Bharat-VISTAAR’, farmers need not depend on different offices, websites, apps, or middlemen to get all such information as it becomes the single source of all relevant information for farmers in their own language and through text and voice-based conversation. ICAR-IIWM, Bhubaneswar organized the Live Webcast of this National Launching program, followed by a Farmer-Scientist Interaction Meet and Farmers’ Exposure Visit, witnessed by over 110 participants including farmers, farm women, and scholars besides staff of the Institute. The event was organized and coordinated by Dr. S.K. Mishra, Convener and Dr. H.K. Dash, Co-convener. Principal Scientists of the Institute.





Training-cum-capacity Building Programme Conducted under the CAD&WM Funded Research Project by ICAR-IIWM

One Farmers' Training-cum-capacity building programme was conducted under the CAD&WM funded research project titled "Pilot field demonstration of digital water measuring and soil moisture sensing systems for enhancing agricultural water productivity of Canal Commands" at Usuma village, Phulnakhara on February 18, 2026. The program started with the recitation of Vandemataram and ICAR song followed by watering of plant ritual. Executive Engineer Mr. Dillip Pujari, CAD&WM, Ministry of Water Resources, Govt. of Odisha was the Chief guest in this programme. The programme was chaired by Dr. R.K. Panda, Principal Scientist and coordinated by Dr. K.K. Bandyopadhyay, Programme Leader, Canal Water Management and PI of the project. Mr. Ashok Kumar Das, President of Pallishree Panipanchayat and other members of the Panipanchayat actively participated in this program. About 80 number of farmers from Usuma and nearby villages participated in this program. Different aspects of efficient soil and water management in the canal commands to improve water productivity was discussed by different experts from CAD&WM and ICAR-IIWM viz., Drs. P. Panigrahi, S. Pradhan, D. Sethi, Ajit K. Nayak, P.K. Panda, R.K. Panda, S. Mohanty, S.K. Mishra, A K. Nayak, Dillip Pujari and K.K. Bandyopadhyay. Two Technical brochures titled "Piloting of digital water measuring and soil moisture sensing systems for enhancing agricultural water productivity" and "କୃଷି କ୍ଷେତ୍ରରେ ଜଳର ଉପାଦାନ ଶକ୍ତି ବୃଦ୍ଧି କରିବା ପାଇଁ ଡିଜିଟାଲ୍ ଜଳ ମାପ ଏବଂ ମୃତ୍ତିକା ଆର୍ଦ୍ରତା ଅନୁଭବ ପ୍ରଣାଳୀର ପରୀକ୍ଷାମୂଳକ ପ୍ରୟୋଗ" were released and distributed among the trainee farmers. Seven progressive farmers were felicitated during the training program.

ICAR - IIWM Conducted Post Budget Webinar on "Bharat VISTAAR: AI Powered Digital Public Infrastructure for Agriculture"

ICAR-IIWM, Bhubaneswar made an elaborate arrangement for direct telecast of the address of Hon'ble Prime Minister, Shri Narendra Modiji on 6th March, 2026 in the Post Budget webinar on "Bharat VISTAAR: AI Powered Digital Public Infrastructure for Agriculture and all the sessions of the webinar. Dr. R.K. Panda, Director (I/C), Program Leaders, Scientists, Technical staffs, other office personnels and a few progressive farmers participated in the Webinar. The salient findings of the budget provisions for promotion of agriculture were translated into Odia language and explained to the farmers. A total of 67 (52 males, 15 female) participants participated in the Webinar. The programme was organized and coordinated by Dr. S.K. Mishra, Principal Scientist as its Convener.

ICAR-IIWM Organized Live Streaming of PM Kisan Samman Nidhi Fund Release

ICAR-IIWM organized live streaming

of PM Kisan Nidhi fund release (22nd Instalment) listening to Hon'ble Prime Minister and Farmer-Scientist Interaction on March 13, 2026 at Pampalo, Balipatna, Khordha. All total 100 number of farmers were participated in the program. "Prospects of Natural Farming" was the theme for the Farmer-Scientist Interaction meeting. Director of the Institute and other Scientists of the Institute highlighted the importance of various schemes of Govt. of India. The event was organized by Dr. S.K. Mishra, Dr. H.K. Dash, Dr. B.K. Sethy and Dr. O.P. Verma, Principal Scientists of the Institute.

Canal Automation System of ICAR - IIWM Inaugurated by Hon'ble Speaker, Odisha Assembly

The canal automation facility was inaugurated on March 22, 2026 on the occasion of World Water Day by Smt. Surama Padhy, Hon'ble Speaker of Odisha Legislative Assembly, Govt. of Odisha in presence of Smt. Madhumita Rath, Collector & District Magistrate, Nayagarh, Odisha; Er. P.C. Rath, Chief Engineer, MI Project, Govt. of Odisha and Dr. A. Sarangi, Director of ICAR-IIWM, Bhubaneswar.



ICAR-IIWM Celebrated the 34th World Water Day

Celebrated the 34th World Water Day (WWD) at the canal automation site at Darpanarayanpur Minor Irrigation Project (MIP) in Nayagarh, Odisha on March 22, 2026. While inaugurating the canal automation system, the Chief Guest Smt. Surama Padhy, Hon'ble Speaker of Odisha Legislative Assembly mentioned that canal automation will save appreciable quantity of water which can be used for enhancing cropping intensity, uniform distribution of water in different reaches of the command and coverage of more cropped area during the *rabi* season. Such technologies will assist in judicious use of water for enhancing agricultural water productivity. Smt. Madhumita Rath, Collector and District Magistrate of Nayagarh district, Odisha graced the program as Guest of honour and highlighted the significance of world water day with mentioning about the theme "Water and Gender" and also the slogan "Where Water Flows the Equality Grows". Earlier Dr. A. Sarangi, Director of ICAR-IIWM welcomed all guests and briefed about canal automation project. Eight publications including the bulletins and leaflets on the canal automation were released by the guests and distributed to participants. The progressive farmers and beneficiaries of three villages under the MIP were also felicitated by the Chief Guest for their significant contribution in farming and enhancing agricultural water productivity. Dr. R.K. Panda, Pr. Scientist and Principal Investigator of the project proposed a vote of thanks. The event was attended by about 700 participants including scientists, technical staff, water resources department officials, media personnel besides farmers and beneficiaries of MI command.

Webinar Conducted by ICAR-IIWM

A webinar on "Realization of Precision Water Management for Green Agriculture – An holistic overview" was organized in hybrid mode at ICAR-IIWM, Bhubaneswar on April 7, 2026. Dr. S.K. Rautaray, Nodal Officer, HRD presented the objective of Seminar and its link with the Sadhana Saptah. Director of the Institute, Dr. A. Sarangi presented details on precession water management in agriculture. Dr. K. Yella Reddy, Vice President of ICID provided a detailed account of his experience on micro-irrigation, especially in Telengana and Andhra Pradesh. Er. B.P. Mishra, Chief Engineer Agriculture, Govt. of Odisha and Mr H.K. Mohapatra from the Foundation for Ecological Services provided their field experiences on precession water management in farmers' field.

World Intellectual Property Day Celebrated by ICAR-IIWM



ICAR-IIWM organized World Intellectual Property Day on the theme of "IP & Sports: Ready, Set, Innovate" on April 30, 2026. The Chairman of the event, Dr. A. Sarangi, delivered a presentation on the "Intellectual Property in Agricultural Water Management: An Overview." He briefly discussed about the types of intellectual property rights, which

includes copyrights, trademarks, patents, trade secrets, geographical indication, industrial designs and plant varieties. He also discussed the procedures involved in drafting and acquiring the intellectual property rights.

ICAR- IIWM Celebrated 39th Foundation Day

ICAR-IIWM celebrated its 39th Foundation Day on May 12, 2026. Inaugurating the event as Chief Guest, Prof. Pravat Kumar Roul, the Hon'ble Vice Chancellor, OUAT, Bhubaneswar highlighted that decline of groundwater level in the country including Odisha is a great challenge for all of us. Prof Roul also mentioned that water is the prime factor in deciding on the balanced use of fertilizer. He expressed that technology developed for groundwater recharge and canal automation by ICAR-IIWM should be adopted for large scale benefit. Dr. P.K. Sahoo, Director, ICAR-CIFA delivered the Foundation Day lecture and told that rainwater harvesting and its use for Agri-Horti crops along with pisciculture in harvested water under IFS module can enhance farmers' income. The Guest of Honour, Er. B.P. Mishra, Chief Engineer, Dept. of Agriculture, Govt. of Odisha in his address emphasized the need of adoption of water saving technologies developed by ICAR-IIWM for ensuring future water security. Earlier, Dr. A. Sarangi, Director, ICAR-IIWM welcomed the guests and described various technologies developed by scientists for different production ecologies. Dr. Sarangi mentioned that ICAR-IIWM is handholding the farmers on cutting edge technologies such as integrated sensing system and canal automation, groundwater recharge and ecosystem services etc. Eleven progressive farmers from different districts of Odisha, were felicitated. For outstanding



contribution, best employee of the Institute award were given in different categories. Seven publications including, policy brief, technical bulletins, news letter and success stories, published by the Institute were released on this occasion. Dr. R.K. Panda, Principal Scientist of the Institute proposed a vote of thanks. Scientists-farmer interaction meeting was organized in the afternoon. About 285 participants attended the programme.

ICAR-IIWM Celebrated International Women's Day

International Women Day 2026, on 8th March 2026, was celebrated at the Pradhanmantri Ideal village Berhampura of Narsinghpur block in Cuttack district of Odisha. As Chief Guest, Director ICAR-IIWM, along with other local guests, emphasised the significant role of women in agriculture. In the meeting, 100 farm-women participated and they were apprised of the technological advances in water management.



ICAR - IIWM Organized a Farmers' Training and Kisan Gosthi

ICAR-IIWM, Bhubaneswar organized a farmers' training and Kisan Gosthi on Advances in water management under changing climate at ICAR-IIWM, Bhubaneswar on May 17, 2026. The training program was chaired by Dr. Sambit Patra, Hon'ble Member of Parliament. Hon'ble MLA, Shri Ashrit Pattnaik and 50 progressive farmers and ATMA functionaries from Puri district participated in a high-level interactive session on strategies for facing the super El Niño predicted for 2026-27.

ICAR-IIWM Organized Plantation Drive for Greener Future

On the occasion of the birth anniversary of Sh. Shivraj Singh Chouhan, the Hon'ble Union Minister of Agriculture



& Farmers' Welfare, ICAR-Indian Institute of Water Management (IIWM), Bhubaneswar organized a plantation drive in its main campus. The initiative reflected the Institute's commitment to environmental sustainability, biodiversity conservation, and creating a greener future through collective participation.

for Advancement of Agricultural Sciences (TAAS), International Fertilizer Development Center (IFDC), Save Soil Group and other National stakeholders, is in the process of formulating the Bharat Soil Health Policy (BSHP) a comprehensive national policy framework to guide the improvement, monitoring, and sustainable management of soil health across India's diverse agro-ecological zones. In this connection a One-day Consultation Workshop on Bharat Soil Health Policy for the Eastern and North-Eastern Region of India was organized at ICAR-IIWM, Bhubaneswar, Odisha on June 6, 2026 in hybrid mode. This workshop was a part of the series of workshops planned for the Northern, Southern, Eastern and Central Zone of India. The program was conducted in four sessions covering different aspects of soil health management viz., (i) Soil Health Challenges, Traditional Knowledge, Incentive, Expectations, (ii) Alignment with Ongoing Schemes, Regulatory Gaps, Incentives, (iii) Scientific Priorities, Data Systems, Soil Taxonomy, SOM Thresholds and (iv) Solutions, Innovation Pipeline, Barriers to Scaling. Dr. A.K. Nayak, Hon'ble DDG (NRM), ICAR was the Chief

ICAR-IIWM Conducted Consultation Workshop on Bharat Soil Health Policy for the Eastern and North-Eastern Region of India

Indian Council of Agricultural Research (ICAR), in partnership with the Trust





guest on this occasion. Dr. M. Mohanty, Director, ICAR-IISS, Bhopal was the convener of this workshop. Dr. A.K. Singh, former VC, RVSKVV, Gwalior and Dr. B.S. Dwivedi, former Member of ASRB, New Delhi, the core committee members participated in the workshop. Scientists from CGIAR Institutes viz., Dr. Mahesh Gathala from CIMMYT, Dr. Abhiraj Datta from ICRISAT, Dr. Yashpal Sehrawat from IFDC and Dr. Gopal Kumar from IWMI participated in this workshop. From the Save soil group, Dr. Indu Madhavan and her team joined in this program physically. This was a unique workshop involving all the stakeholders related to soil viz., scientists, academicians, Govt. officials, Fertilizer companies, NGOs and Civil Society Members and also the farmers from the Eastern and North-Eastern states of India. In this workshop total there were 150 participants with 78 joined physically and 72 joined on line. The program started with the National song Bande Mataram and ICAR song followed by watering the plants. At the outset, Dr. A. Sarangi welcomed the guests and two leaflets titled “Balanced use of fertilizers for rice-based production systems for enhancing resource use efficiency and farm income” and “Harmful effects of imbalanced use of fertilizers” were released by the dignitaries on this occasion. Ten progressive farmers were felicitated on this occasion. In the inaugural session, Dr. Nayak said that we should understand the scientific and spiritual aspect of soil health. Dr. B.S. Dwivedi said that there is diversity of in our Country, which calls for region-specific soil health policy. Dr. A.K. Singh stressed that soil erosion is the biggest form of soil degradation especially in the NE region, which needs to be controlled. The agenda overview and context setting were presented by Ms.Indu Madhavan from

Save soil and Dr. Mahesh Gathala from CIMMYT. Subsequently, deliberations and interaction with stakeholders in different sessions were conducted as per the program schedule. There was active participation by all the stake holders including the farmers from the states of Odisha, Bihar, Chhatisgarh, Assam, Meghalaya in different sessions of the Workshop. Two fertilizer companies viz., IFFCO and International Zinc Association participated in this workshop besides progressive farmers, ATMA staff and civil society representatives. In the concluding session, Hon’ble DDG (NRM) stressed for proper documentation of the proceedings by different rapporteurs. The meeting ended with the vote of thanks by Dr. K.K. Bandyopadhyay, Organizing Secretary and Programme Leader, ICAR-IIWM followed by National Anthem.

ICAR-IIWM Conducted a Sensitization Workshop of Sarpanch and Other PRI Members

A Sensitization workshop of Sarpanch and other PRI members of Puri district was conducted by ICAR-IIWM on 12th June 2026 on the topic “*Khet Bachao Abhiyan* and “*Balanced Use of Fertilizers Awareness (BUFA) campaign*”. The program was attended by 76 participants of Puri district, out of which 10 were female. Speaking on the occasion, the chief guest, Sri Ashrit Pattanayak, Hon’ble MLA of Delanga- Pipili constituency addressed the gathering to spread the message of *Khet Bachao Abhiyan* and balanced use of fertilizers among farmers under their jurisdiction. The participants were trained on importance of *Khet bachao abhiyan* and different ways to improve physical, chemical and biological properties of soil. The participants were encouraged to use green manuring crops

like *Dhanicha* cultivation, use of bio fertilizers and bio stimulants to reduce dependency on chemical fertilizers. The program was conducted by Principal Scientists of the Institute Dr. R.K. Panda, Dr. S.K. Rautaray, Dr. S. Pradhan and Dr. D.Sethi.

ICAR - IIWM Organized a Program of Live Streaming for the 23rd Installment Disbursement of PM-KISAN Nidhi

ICAR-IIWM organized a program of Live streaming for the 23rd installment disbursement of PM-KISAN and a Scientist-Farmer Interaction meeting on June 20, 2026. It was viewed by more than 150 participants including about 120 farmers coming from about fifteen adopted villages of Cuttack, Puri and Khordha districts. Participants were made aware about the objectives of PM-KISAN in empowering farmers. Speaking on the occasion, Dr. R.K. Panda, Director (I/C) addressed the gathering and urged them to make best use of the PM-KISAN supported direct benefit transfer to purchase quality inputs for agriculture. Scientists of the Institute, Dr. S.K. Rautaray, Dr. K.K. Bandyopadhyay, Dr. S.K. Mishra, Dr. H.K. Dash, Dr. O.P. Verma, Dr. R.K. Mohanty, Dr. S. Pradhan, Dr. D. Sethi emphasized the government’s determination to extend financial support to the farming community three times every year. They also discussed the modalities for balanced use of fertilizers to address present scarcity of chemical fertilizers. The farmers were also made aware about the ‘*Khet Bachao Abhiyan*’. The problem faced by farmers were addressed by the scientists of the Institute during the farmer-scientist interaction. The Program was conducted by Dr. S.K. Mishra, Dr. H.K. Dash and Dr. O.P. Verma, Principal Scientists of the Institute.

ICAR-IIWM Celebrated 12th International Day of Yoga 2026

The 12th International Day of Yoga (IDY) was celebrated on June 21, 2026 at ICAR-IIWM under the theme of this year, 'Yoga for Healthy Ageing' (स्वस्थ आयु के लिए योग). Yoga teacher was invited to act as Instructor audience present. Then winded up with practical session on Yoga for all the office colleagues and educate the gathering on the importance of Yoga for healthy ageing. It was followed by the Director's address on the topic.

Rajbhasha Hindi Activities

ICAR-IIWM Organized Hindi Workshops and Quarterly Meetings

- A one-day Hindi Workshop was organized at the Committee Room of ICAR-IIWM on February 27, 2026. The theme of the workshop was "Working Efficiently in Indian Languages Using Artificial Intelligence Tools." Shri HariramPansari, Official Language Consultant, Software Technology Parks of India (STPI), Bhubaneswar, was invited as the resource person to deliver the keynote lecture. During his lecture, Shri Pansariji discussed various Artificial Intelligence (AI) tools and demonstrated their practical applications in official work, particularly for carrying out tasks efficiently in Hindi Language. The workshop was coordinated by Dr. O.P. Verma, Hindi Officer and Mr. K.K. Sharma, Senior Technical Assistant (Hindi Translator) of the Institute.
- With reference to the circular No. RaBha.7(1)/2017-Hindi dated 04.06.2026 issued by the Joint Director (Official Language), ICAR, New Delhi, an online Hindi Workshop was organized by IIWM on 09 June 2026. The theme of the workshop was "Official Language Policy, Rules and Annual Programme: Compliance, Implementation and Practical Aspects." The workshop was chaired

by the Deputy Director (Official Language), ICAR, New Delhi.

- The Quarterly Meeting of the Departmental Official Language Implementation Committee (OLIC) was held once every quarter, i.e., four times a year. The primary objective of these meetings is to review the progress of the implementation of the Official Language (Hindi) in the Institute and to provide necessary guidance for resolving issues related to the progressive use of Hindi in day-to-day official work. During the financial year 2026–27, the Quarterly Meetings of the Departmental Official Language Implementation Committee were held on, January, 27 2026 and April 10, 2026. These meetings reviewed the Institute's progress in implementing the Official Language Policy and identified measures to further promote the use of Hindi in official works.

Outreach and Extension Activities

Activities under SCSP Project



In order to increase the income of farmers, various activities have been conducted under SCSP project. The major activities taken up during the reporting period are as follows:

- Seeds of okra (60 pkts), cucumber (65 pkt), Dolichos (15pkts), Coriander (7kg), Dolichos (2.5 kg), Spinach (1kg), Yardlong bean (1kg), Sickle (60 nos), Sprinkler Nozzle (10 nos) & Marigold

(10pkts) were distributed to about 325 farm families of SCSP project villages in two blocks of Cuttack and Puri Districts of Odisha.

- Total 51 chicks were distributed in Nimapada Block of Puri District for development of Integrated Farming System.
- Vermi beds (8 no), Water Sprayer (30 nos), Fencing Hoe (40 nos), PVC Water pipe (8 bundles), Saw Cutter (4 nos), Battery Sprayers (37 nos), Manual sprayer (25 nos), Diesel sprayers (2 no), Shade net (100 sqft), Tarpaulin sheet (5 rolls) & Weighing Machines (3 no) were provided to SC community in Balipatna and Nimapada blocks of Khordha & Puri Districts of Odisha
- *Sesbania* (Dhaincha) seeds (9.75 Quintals) were provided to demonstrate the green manuring experiment to maintain soil health of farmers' fields under *Khet Bachao Abhiyan* in Salipur, Balipatana & Nimapada blocks of Cuttack, Khordha & Puri Districts of Odisha.



- Based on experience of last year (2025), around 49 Quintals of paddy seeds were distributed to 110 farm families of SC community during Kharif season, 2026 for improvement of their overall livelihood.

Activities under TSP (Now STC Component) Project

Sesbania Seeds (250 kg), Liquid biofertilizer (200 litres), compost (7 tonnes), Mushroom Bottles (800) and nursery plants (500) were distributed to the beneficiary Tribal farmers for enhancing livelihood at Khaira Village, Gunupur block, Rayagada Phatachanchada village in R.Udaygiri block, Gajapati and, Charagaon and Dakara Villages of Koraput Districts of Odisha. The awareness was spread among the Tribal Farmers about *Balanced Use of Fertilizers Campaign* and *Khet*

Bachao Abhiyan to improve their fields soil health for enhancing water productivity under Scheduled Tribe Component (STC) project during January to June, 2026.

Activities under Farmers' FIRST activities

Action research, extension, farmer-scientist interfaces, regular technical backstopping and performance evaluation activities were undertaken in the three adopted villages, namely Haridamada, Barapita and Jamujhari of Khordha district as one cluster under the Farmer FIRST Project for enhancing farm productivity, improving soil health, and strengthening livelihood security in the Rice-fallow production system. In order to demonstrate improved crop production and water management technologies

hybrid seeds of eight vegetable crops, namely okra, bitter gourd, ridge gourd, pumpkin, brinjal, tomato, cowpea, and cucumber benefiting sixty farmers, and climate resilient quality paddy seeds of five varieties namely, CR Dhan 803, Kalachampa, MTU 1061, Pooja, and RGL 2537 were distributed to 100 farmers covering about 40 ha area. In addition, bio-fertilizers such as nitrogen-fixing sesbania (dhaincha) seed for green manuring, bio-fungicide *Trichoderma viride*, Phosphate Solubilising Bacteria (PSB) and beneficial symbiotic fungus *Mycorrhiza* were provided to promote science-led balanced nutrient management and improve soil health reinforcing the 'Khet Bachao Abhiyan' of the Central Government. Capacity-building initiatives further strengthened farmers' knowledge and

skills through ten intensive awareness campaigns on 'Balanced Use of Fertilizers' under the 'National Mission on *Atmanir bharta in Fertilizers*' during April-June covering >500 family members in the cluster. One training-cum-demonstration programme on 'Enhancing vegetable productivity through bio-fertilizers and balanced fertilizer application' including a skill-based demonstration on preparation and application procedure of Jeevamrit, Ghanjeevamrit, Bhahmastra and Neemastra as per natural farming protocol directly benefited 72 participants. To diversify livelihood opportunities, 350 chicks of highly muscular, aggressive, resistant and game fowl breed 'Aseel' were distributed to 35 tribal households for promoting backyard poultry rearing.



Activities under *Balanced Use of Fertilizers Campaign* and *Khet Bachao Abhiyan* by ICAR-IIWM

To address the urgent deficiency of chemical fertilizers in the country, ICAR-IIWM spearheaded a comprehensive 'Balanced Use of Fertilizer Awareness

Campaign' (BUFA). This critical initiative seamlessly transitioned into the 'Khet Bachao Abhiyan', a visionary movement led by the Hon'ble Minister of Agriculture and Farmers' Welfare, Government of India, to ensure long-term soil health, resource self-reliance, and food security. ICAR-IIWM, Bhubaneswar organized

158 numbers of training cum awareness programmes under *Balanced Use of Fertilizers Campaign* and *Khet Bachao Abhiyan* in 9 districts (Angul, Cuttack, Dhenkanal, Gajapati, Jagatsinghpur, Khordha, Koraput, Puri and Rayagada) of Odisha and sensitized 6416 numbers of farmers (Male-4007& Female-2409).





ନାରଙ୍ଗପଡ଼ାରେ କୃଷକ ସଚେତନତା ଶିବିର

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ନିରନ୍ତର ହେଉଥିବା ଓ ବରଷା ସାଥୀ ପ୍ରଭୁଙ୍କ ଲେଖିବିଶ୍ୱାସରେ । ଏହି ରାଜ୍ୟକୁ ଚାଲିନି ପିଆଇବା ଶକ୍ତିର ଫେରିବ ଖର ପ୍ରଦାନ କରାଯାଇଥିଲା । ପାଟବାସ ବେହେରା, ଅରୋଳ ବେହେରା, ପ୍ରଦୀପ

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Student's and Officer's Exposure Visit Programs Organized by ICAR - IIWM, Bhubaneswar

1. Exposure visit was organized for 18 nos. of 4th year B.Sc. (Hons.) Horticulture students along with 02 faculties from UBKV, West Bengal, by the Institute on 4th February, 2026.
2. Under the All-India Study Tour, a group of 53 nos. 4th year B.Sc. (Hons.) Horticulture students from College of Horticulture & Forestry, Pasighat, Arunachal Pradesh (under CAU, Imphal) along with 02 faculties visited the Institute on 9th February, 2026.
3. All India Study Tour, a group of 62 nos. final year B.Sc. (Hons.) Horticulture students from ICAR-IARI, Assam visited the Institute on 26th March, 2026
4. Exposure visit was organized for 18 nos. of NGO Partners from all over India through World Wide Fund for Nature-India (WWF-India), New Delhi by the Institute on 6th February, 2026
5. Exposure visit was organized for 24 nos. of participants of the residential learning programme on "Academy of Ecology" was organised by the Institute on 26th March, 2026

ICAR-IIWM Participated in Agricultural Exhibitions

ICAR-IIWM participated and displayed the technologies of the Institute in the following exhibitions during the period of January to June, 2026.

Sl.No.	Event	Place	Date
1.	National Seminar on 'Innovations in Agro-physics for Green Agriculture'	ICAR-IIWM, Bhubaneswar	22-24 January, 2026
2.	State Workshop at the Water Resources Department, Govt. of Odisha	WR Department, Bhubaneswar	22 January, 2026
3.	State level Agriculture Fair: Krushi Odisha 2026	Bhubaneswar	22-24 February, 2026
4.	39 th Foundation Day of ICAR-IIWM	ICAR-IIWM, Bhubaneswar	12 May, 2026
5.	'17 th National Krishi Fair' organized by Shree Shrikhetra Soochana (SSS), Puri	Puri	1-5 June, 2026



CAPACITY BUILDING & TRAININGS

Training and Capacity Building of IIWM Employees

Official & Designation	Subject	Organization	Period
Dr. Mamta Bisht	Professional Attachment Training	IIT, Roorkee	January 12-April 10, 2026
Dr. Ranabir Chakraborty	Professional Attachment Training	NIH, Roorkee	January 12-April 10, 2026
Dr. Mohammed Shafiq PM	Professional Attachment Training	Indian Institute of Science, Bengaluru	January 12-April 10, 2026
Dr. R.R. Sethi Dr. Ankita Jha	Strengthening Agricultural Research with a Gender Perspective for Sustainable Agri-Food Systems.	ICAR-CIWA, Bhubaneswar	May 18-22, 2026
All Scientists	Sensitization workshop of Sarpanch and other PRI members	ICAR-IIWM, Bhubaneswar	June 12, 2026

Training / Demonstration Programs Organized for the Farmers by ICAR-IIWM (One Day)

Training cum Demonstration Programs	Place	Date	No. of Female Farmers	No. of Male Farmers
Enterprising Oyster and Paddy Straw Mushroom Cultivation for Higher Family Income and Nutritional Security	Chanrapada, Nimapada, Puri	January, 13 2026	27	30
Enterprising Oyster and Paddy Straw Mushroom Cultivation for Higher Family Income and Nutritional Security	Makundapur, Salipur, Cuttack	January, 15 2026	34	26
Enterprising Oyster and Paddy Straw Mushroom Cultivation for Higher Family Income and Nutritional Security” Total 34 numbers of farmers (19 Female + 15 Male) participated in the Training programme.	Kulantigram, Balipatana, Khordha	January, 20 2026	19	15
Soil and water conservation training through Paniki Pathasala in Watershed Mahotsav	Daspalla	January 21, 2026	-	1000
Drip Irrigation: Profit for Farmers and Protection for Groundwater	Bedaki, Khandapada, Nayagarh	January 30, 2026	36	116
Soil and water conservation training through Watershed Dharshan Programme	Daspalla	February 10-11, 2026	-	1000
Scientific Water and Crop Management Strategies for Enhancing Water Productivity and Farm Income” Total participated in the Training programme.	Belera, Salipur, Cuttack	February 20, 2026	43	44
An Interface Meeting of farmers.	Alipingala, Nimapada, Puri	February 20, 2026	29	31
Scientific Water and Crop Management Strategies for Enhancing Water Productivity and Farm Income	Makundapur, Salipur, Cuttack	February 20, 2026	29	33
Training cum farm implements distribution programme	Charagaon, Koraput	February 23, 2026	34	67
Mushroom farming and water management	Khaira & Phtachanchada (Rayagada & Gajapati)	March 11, 2026	-	249
Scientific Water and Crop Management Strategies for Enhancing Water Productivity and Farm Income	Pampalo, Balipatna, Khordha	March 13, 2026	56	71
Growing and Raising Together: Self-Sufficient Horticulture and Aquaculture System	Tinkipada, Balipatna, Khordha	March 18, 2026	26	43
Growing and Raising Together: Self-Sufficient Horticulture and Aquaculture System	Tinkipada, Balipatna, Khordha	March 19, 2026	26	43
Growing and Raising Together: Self-Sufficient Horticulture and Aquaculture System	Tinkipada, Balipatna, Khordha	March 20, 2026	39	47
Integrated mushroom cultivation in groundwater recharge areas	Sajanapada, Nayagarh	March 26, 2026	99	32
Mushroom farming with groundwater recharge management	Sajanapada & Sarapada	April 9, 2026	26	10
Training-cum-Demonstration Programme on “Balanced Use of Fertilizers (BUF) for sustainable Soil Health Management	Haridamada, Khordha	April 23, 2026	-	71
Balanced use of fertilizers and women empowerment	Dakara, Koraput	April 29, 2026	-	125
Training program cum input distribution on “Enhancing economic water productivity and balanced use of fertilizer with gender integration’	Achutdaspur, Jagatsinghpur	May 8, 2026	23	37

Advances in Water Management under Changing Climate” for ATMA farmers of Pipili and Delanga block, Puri, Odisha	ICAR-IIWM, Bhubaneswar	May 27, 2026	-	55
Training cum demonstration programme on “Enhancing Vegetable Crop Productivity through the Use of Bio fertilizers	Barapita&Jamujhari, Khordha	May 29, 2026	-	60
Balanced use of fertilizers with groundwater recharge-based irrigation	Sajanapada, Nayagarh	June 2, 2026	25	-
Training cum demonstration program	Khaira, Rayagada	June 4, 2026	-	51
Training cum demonstration program	Phatachanchada, Gajapati	June 5, 2026	-	56
Training cum demonstration on Sesbania and compost	Dakra, Koraput	June 9, 2026	-	35
Training cum Demonstration programme on “Enhancing water Productivity with balance fertilizer application	Charagaon, Koraput	June, 10, 2026	-	56
Balanced use of fertilizers for enhancing water productivity	Sunalati, Nayagarh	June, 24, 2026	-	50

Training / Programs Organized for the Farmers by ICAR-IIWM (Three Days)

Subject	Place	Period	Participants
Generating Employment through Hydroponic-Based Vertical Farming	Koraput, Odisha	February 24-26, 2026	
Growing and Raising Together: Self-Sufficient Horticulture and Aquaculture Systems	Balipatna, Khordha	March 18-20, 2026	



Webinar / Seminar/Programs / Virtual Meetings Attended by Employees of the Institute

Officials	Name of the Conference / Meeting / Workshop / Symposium / Seminar	Organized by	Period
All Staff	Hon'ble Secretary (DARE) & DG, ICAR, New Delhi Interaction meeting	ICAR-IIWM, Bhubaneswar	January 6, 2026
Dr. R.K. Panda	State Level Pani Panchayat Fortnight programme	Lokseva Bhawan, Bhubaneswar	January 21, 2026
All Scientists	Inovation in Agrophysics for Green Agriculture	ICAR-IIWM	January, 22-24, 2026
Dr. B.S. Satapathy Dr. PrativaSahu	8 th International Conference on Sustainable Agriculture for Food Security	ICAR-IIHR-CHES	January 28-30, 2026.
Dr. S.K. Rautaray Dr. Ashok K. Nayak	International Symposium on "Artificial Intelligence in shaping Agriculture and Allied Sectors for sustainable food security AIAAS, 2026	SOA University, Bhubaneswar	March 10-11,2026
All Scientists	Participated in the 'World Water Day' celebration at Darpanarayanpur, Nayagarh	ICAR-IIWM, Bhubaneswar	March 22, 2026
All Staff of Institute	Attended the 39 th Foundation Day Celebration of ICAR-IIWM, Bhubaneswar	ICAR-IIWM, Bhubaneswar	May 12, 2026
Dr. S.K. Mishra	Attended the Consultation Workshop on Bharat Soil Health Policy (Eastern & North Eastern Region)	ICAR-IIWM, Bhubaneswar	June 6, 2026
All Scientists	Attended the Research Advisory Committee (RAC) Meeting	ICAR-IIWM, Bhubaneswar	June 15, 2026
All Scientists	Celebration of World Water day	MIP, Darpanarayanpur, Nayagarh	March 22, 2026
All Scientist	Consultation Workshop on Bharat Soil Health Policy	ICAR-IIWM, Bhubaneswar	June 6, 2026
Dr. O.P. Verma Mr. Ankush Mishra Mr. K.K Sharma Ms. Deblina Chakraborty Mr. S.C. Das	Online Hindi Workshop	ICAR Headquarter, New Dellhi	June 9, 2026
All Scientists	10 th Research Advisory Council meeting	ICAR-IIWM, Bhubaneswar	15-16 June, 2026
All Scientist	PM-Kisan Samman Nidhi Program	ICAR-IIWM, Bhubaneswar	20 June, 2026

Awards, Honours and Recognitions

- Dr Arjamadutta Sarangi served as the Organizing Convenor of National Seminar on "Innovations in Agrophysics for Green Agriculture" during January 22-24, 2026 at ICAR-IIWM, Bhubaneswar, Odisha
- Dr Arjamadutta Sarangi received the 1st Sri Pabitrnanda Mohanty Memorial Research Excellence Award on 12th May 2026.
- Dr. R.R.Sethi, Principal Scientist received Outstanding Scientist Award-2026 of ICAR-IIWM, Bhubaneswar on 12th May 2026.
- Dr. R.K. Jena, Senior Scientist received Best Scientist Award-2026 of ICAR-IIWM, Bhubaneswar on 12th May 2026.
- Sh. T. Rout, Private Secretary received Best Employee Award of ICAR-IIWM, Bhubaneswar on May 12, 2026 in Administration Category.
- Sh. N.K. Mallick, Assistant received Best Employee Award of ICAR-IIWM, Bhubaneswar on May 12, 2026 in Administration Category.
- Sh. S. Lenka, Technical Officer received Best Employee Award of ICAR-IIWM, Bhubaneswar on May 12, 2026 in Technical Category.
- Sh. Sanatan Das, SSS received Best Employee Award of ICAR-IIWM, Bhubaneswar on May 12, 2026 in Skill Supporting Staff Category.
- Dr. S.K. Mishra participated as an External Expert in the Ph.D. Students' Research Progress Review Meeting at OUAT, Bhubaneswar on March 13, 2026
- Dr. S.K. Mishra chaired the 'Annual General Meeting (AGM) of the Association of Rice Research Workers (ARRW) in capacity as the Vice President of the Society at ICAR-CRRI, Cuttack on April 18, 2026.

- Ten adopted farmers and farmwomen were honoured with “Progressive Farmer Award-2026” at ICAR-IIWM, Bhubaneswar, during its 39th Foundation Day celebration on May12, 2026.
- Dr. Prativa Sahu, Scientist was invited as an expert to evaluate the project proposal under the PPPAVCD (Public-Private Partnership for Agriculture Value Chain Development) Scheme at Directorate of Horticulture, Krishi Bhawan, Bhubaneswar, Govt. of Odisha on January 7, 2026
- Dr. Prativa Sahu, Scientist served as core committee member, Technical Committee and rapporteur of 8th International Conference on Sustainable Agriculture for Food Security at ICAR-IIHR-CHES, Bhubaneswar during January 28-30, 2026
- Dr. Prativa Sahu, Scientist delivered an invited expert talk in the state-level agriculture fair “KRUSHI ODISHA” on “Hi-tech Horticulture, Technology adoption and precision farming” at Bhubaneswar on January 23, 2026.
- Dr. Ankhila R. Handral & Dr. S.K. Jena Invited as panelist and partner to participate in the “Policy workshop on Water Stewardship of Sustainable Agricultural Water Management in India” by ICAR-NIAP, New Delhi on March 19, 2026.
- Dr. S.K. Rautaray, Principal Scientist served as Co-Chairman for the Session 3 “Precession water and nutrient management, wireless sensors and smartphone application in agriculture” on January 23, 2026 in National Conference “Innovations in Agrophysics for Green Agriculture” held at IIWM Bhubaneswar.
- Dr. S.K. Rautaray, Principal Scientist served as Chairman for the Session 1 “Artificial Intelligence in Agriculture and Allied Sectors: Some Practical Insights” 10 AM to 11.30 AM on March11, 2026.
- Dr. D.C. Sahoo, Principal Scientist participated as resource person in the district level programme on Watershed Mahotsav-2026 held at Daspalla, Nayagarhorganised by DSC&WD, Govt. of Odisha on January 21, .2026
- Dr. D.C. Sahoo, Principal Scientist participated in Second National Level Consultation Meeting on the refinement of National Technical Guidelines on Watershed Development held at NASC Complex, New Delhi during June 17-18, 2026.
- Dr. K.K. Bandyopadhyay, Principal Scientist served as the Editor of the Journal of the Indian Society of Soil Science.
- Dr. K.K. Bandyopadhyay, Principal Scientist served as the Local Organizing Secretary of the National Seminar on “Innovations in Agrophysics for Green Agriculture” during 22-24 January 2026 at ICAR-IIWM, Bhubaneswar.

Radio/TV Talk

- Dr. Prativa Sahu delivered a talk on News Channel: Broadcast “Hydroponic based vertical farming” in the regional news channel (Argus) on February 11, 2026
- Dr. Prativa Sahu delivered a talk Radio talk on “*Udyana Krushi Dwara Mahila manankara Atmanijukti*” at AIR, Puri on June 9, 2026.
- Dr. P. K Panda, Principal Scientist delivered a talk on *Sustha Jibana Japana Pain Jala Jiban Mission* at AIR Cuttack on June 27, 2026.

Joining and Superannuation

- Dr. Sridhar Patra, Principal Scientist joined at the Institute on January 27, 2026 (FN)
- Mr. Ankush Mishra, joined as Administrative Office (AO) of the institute on January 29, 2026 (FN) in place of Mr S.K. Jena who was promoted and transferred to NIFMD as Sr. AO.
- Mr. Gourva Kumar Anga joined as Assistant of the Institute on February 6, 2026 (FN).
- Mr. R.K. Dalai, Assistant Administrative Officer (AAO) of the Institute retired on June 30, 2026 (AN).
- Mr. Alekh Parida, Senior Technician (T₂) of the Institute retired on June 30, 2026 (AN).



भाकृअनुप - भारतीय जल प्रबंधन संस्थान
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