



Society for Earth Observation and Conservation (SEOC) – IQAC
St. Xavier's College, Ranchi
(A society for Multi-disciplinary study and Research)

REPORT: ONE-DAY COMMUNITY OUTREACH PROGRAM ON FRESHWATER PEARL FARMING

Destination site: Kuju, Ramgarh District, Jharkhand | 5th July 2026

1. About the Program

The one-day Outreach Program on Freshwater Pearl Farming was an educational and awareness initiative organised to introduce farmers and rural communities to the techniques, benefits, and economic potential of freshwater pearl culture. The program aimed to promote pearl farming as an alternative livelihood, generate employment opportunities, and encourage sustainable utilisation of local freshwater resources.

Key Objectives of the program included:

- Creating general awareness about freshwater pearl farming
- Providing basic knowledge of pearl production techniques (theory and practical)
- Demonstrating pearl culture methods
- Explaining the economic importance and market potential of freshwater pearls
- Sharing information on relevant Government schemes and policies
- Serving as a motivational drive for adoption of pearl farming as a livelihood option



Departure from St. Xavier's College Ranchi for Outreach Program and Banner Display at the venue, Kuju, Ramgarh



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2. Organisers and Dignitaries

The program was organised through the joint collaboration of St. Xavier's College, Ranchi (through the Society for Earth Observation and Conservation, SEOC-IQAC) and the Directorate of Fisheries, Government of Jharkhand.

Directorate of Fisheries, Government of Jharkhand

- Shri Amrendra Kumar — Director Fisheries, Directorate of Fisheries, Government of Jharkhand
- Dr. Kiran Abdali, Fisheries Extension Officer, Directorate of Fisheries, Ranchi.
- Dr. Prashant Kumar Deepak — Chief Instructor, Fish Farmer Training Institute (FFTC), Directorate of Fisheries, Government of Jharkhand

St. Xavier's College, Ranchi

- Rev. Fr. Dr. Robert Pradeep Kujur, S.J. — Principal, St. Xavier's College, Ranchi
- Fr. Ajay Arun Minj — Vice Principal, St. Xavier's College, Ranchi
- Dr. Fr. Prabhat Kenedy Soreng, S.J. — Registrar, St. Xavier's College, Ranchi
- Dr. Shiv Kumar — IQAC Coordinator, St. Xavier's College, Ranchi
- Dr. Ritesh Kumar Shukla- Executive Secretary, SEOC; Assistant Professor, Department of Zoology; Program Coordinator for this outreach program and Committee Member Research & Development Cell, SXC, Ranchi.

Special Invitee

- Mr. Budhan Singh Purty, CEO Purty Agrotech — Master Trainer of Pearl Farming, and his team Ms. Sumitra and Ms. Sonia, invited as the special resource person and progressive farmer for the program

Local Facilitator

The program was also made possible through the efforts of Shri Sashikant Mahto, Secretary, Kuju Fishermen Cooperative Society, Ramgarh District, who mobilised the local community for the event.

3. Program Coordinator's Address — Summary

Dr. Ritesh Kumar Shukla, Program Coordinator, introduced the program to the gathering and outlined its purpose and scope. He explained that the initiative was designed as an educational and awareness exercise aimed at introducing local farmers and rural community members to freshwater pearl culture as a scientifically grounded, alternative source of livelihood.

In his address, he emphasised that the program combined both theoretical instruction and hands-on demonstration, so that participants could not only understand the biology of pearl formation but also see the practical steps of mussel handling, nucleus preparation, and surgery. He highlighted the economic potential of pearl farming, noting that it could supplement the income of fish farmers without requiring large additional investment and connected this to the broader goal of promoting sustainable use of local water bodies, including reclaimed water sources such as the coal-pit ponds around Kuju.



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Dr. Shukla, further briefed participants on relevant Government of Jharkhand schemes and policies supporting pearl and fish farming, and encouraged the farmers to consider training opportunities at the Fish Farmer Training Institute. He concluded by thanking the Directorate of Fisheries, the resource persons, the student volunteers, and the local cooperative society for making the program possible.

Dr. Prashant Kumar Deepak informed locals about government schemes related to pearl culture.

Master trainer Mr. Budhan Singh Purty, introduced farmers about use of fresh water mussel, its market value, products obtained from mussel, and his team Smt. Sumitra and Smt. Sonia explained about surgery of mussels



*Program Coordinators: Dr. Ritesh Kumar Shukla St.Xavier's College Ranchi, Dr. Prashant Kumar Deepak
Chief Instructor FFTC Shalimar Dhurwa, Budhan Singh Purty briefing the gathering at the venue*

4. Participants — Student Volunteers from the Add-On Certificate Course on Pearl Culture.

The following students of St. Xavier's College, Ranchi participated in and conducted the outreach program:

- Atiya Darakshan
- Aanchal Singh
- Abhishek Kumar Pathak
- Anjali Thakur
- Anupa Sonal
- Jyoti Tirkey
- Sakchi Tirkey
- Priti Bharti
- Md. Tauqir Zaya
- Vaishali Indwar



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5. Role and Contribution of Students

Priti Bharti — Explained mussel habitat and acclimatisation, covering ideal water parameters (pH 7–8, TDS 350–400, zero ammonia) and the 15-day acclimatisation protocol including antibiotic/vaccine dosing and stocking density.

Jyoti Tirkey — Covered mussel feed, explaining natural feed (phytoplankton, zooplankton, diatoms, algae) and artificial feed options, and demonstrated preparation of a phytoplankton culture.

Atiya Darakshan and Jyoti — Presented on nucleus preparation, demonstrating two methods — using Rapid Repair denture-base material and using shell powder mixed with Araldite and resin — to produce round and designer-shaped nuclei.

Sakchi Tirkey — Explained pre-operative care of mussels, including the 3-day starvation period before surgery and indicators used to judge a mussel's suitability for the procedure.

Aanchal Singh — Introduced the surgical tools used in pearl culture and demonstrated both designer pearl and round pearl culture surgery techniques.



Coordinators and Student volunteers demonstrating pearl culture to farmers

Vaishali Indwar and Abhishek Kumar Pathak — Covered post-operative care, describing the 15-day critical care/observation period, water quality monitoring, medication, and feeding schedule for operated mussels.

Anjali Thakur — Explained harvesting and grading of pearls, covering quality indicators (lustre, nacre thickness, shape, surface, colour) and the grading criteria used in the trade.

Anupa Sonal and Md. Tauqir Zaya — They both took responsibility to take pictures throughout the event and they maintained the details of the participants in register.

Md. Tauqir Zaya — Took responsibility to load and unload all the materials required for demonstration.



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6. Purpose of the Outreach Program

The program was held on 5th July 2026 at Kuju, Ramgarh District, Jharkhand. It was organised to create awareness among rural and farming communities about freshwater pearl farming as a viable, science-based livelihood option; to build practical skills through theory and demonstration; to inform farmers of applicable government schemes; and to encourage income generation and employment opportunities in an area where traditional livelihoods have been disrupted.

7. Why Ara Coal pit reservoir in Kuju Area was chosen?

Kuju, in Ramgarh district, was selected because of its unique local context: the area has a number of abandoned, water-filled coal pits left behind by mining activity. Shri Sashikant Mahto, Secretary of the Kuju Fishermen Cooperative Society, had already initiated the transformation of these disused coal pits in the Mandu block into productive fish farms, providing an alternative livelihood to communities displaced by mining. Freshwater pearl farming was introduced in this setting as a complementary, higher-value activity that these existing fish-farming water bodies could support, and Shri Mahto's community mobilisation ensured strong local participation and made the program's success possible.



Participants at the reclaimed coal-pit fish pond, Kuju

8. Outcome of the Program

Attendance

A total of 30 farmers from the Kuju area participated in the program.

Farmer Profile

A socio-economic survey conducted during the program revealed that fish farming is the primary source of livelihood for most participants, with average monthly incomes ranging from ₹10,000 to ₹30,000.



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Feedback

Only a few participants had prior knowledge of freshwater pearl farming before the program. Farmers showed considerable interest and enthusiasm throughout the sessions, actively interacting with the resource persons, asking questions, and expressing willingness to adopt freshwater pearl culture as an additional source of income.

During discussion, farmers pointed out that lack of accessible training is a major barrier to adoption. While the 5-day training programme at the Fish Farmer Training Institute (FFTC), Dhurwa, provides practical knowledge, its distance from their village's limits attendance. Participants suggested that similar training programmes be organised locally, in or near Kuju, so that more farmers could acquire practical skills and adopt freshwater pearl farming as a livelihood.

Overall Assessment

The program was successful in generating awareness and enthusiasm among the farming community, and provided valuable feedback for planning future, more accessible, localised training initiatives in freshwater pearl farming.



Feedback taken from locals and doubts regarding pearl farming

Dr. Robert P. Kujur, SJ
Principal, SXC, Ranchi

Dr. Ajay A. Minj, SJ
Vice-Principal, SXC, Ranchi

Dr. Prabhat K. Soreng, SJ
Registrar, SXC, Ranchi

Dr. Shiv Kumar
IQAC Coordinator

Dr. Ritesh Kr. Shukla
Program Coordinator



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अपने युवा

मीठे पानी की मोती खेती से किसान बनेंगे आत्मनिर्भर

बोले प्रो. शुक्ला

रांची, विशेष संवाददाता। झारखंड सरकार के मत्स्य निदेशालय और संत जेवियर्स कॉलेज, रांची (एसईओसी-आईक्यूएसी) की ओर से रविवार को जन-जागरुकता सह सामुदायिक आउटरीच कार्यक्रम का आयोजन किया गया। कार्यक्रम का आयोजन मत्स्य निदेशक अमेंद्र कुमार और संत जेवियर्स कॉलेज के प्राचार्य फादर डॉ. रॉबर्ट प्रदीप कुजूर के मार्गदर्शन में हुआ। कार्यक्रम में 30 स्थानीय किसान, मत्स्य पालक व ग्रामीणों ने भाग लिया। इस दौरान कॉलेज के ऐड-ऑन पाठ्यक्रम के विद्यार्थियों ने किसानों के साथ संवाद स्थापित करते हुए प्रत्यक्ष प्रदर्शन के माध्यम से मीठे पानी की मोती खेती की वैज्ञानिक

- झारखंड सरकार के मत्स्य निदेशालय और संत जेवियर्स कॉलेज की ओर से कार्यक्रम
- प्रतिभागियों को व्यावहारिक प्रक्रिया के साथ आधुनिक तकनीक की मिली जानकारी

30 स्थानीय किसान, मत्स्य पालक और ग्रामीणों ने कार्यक्रम में भाग लिया

मत्स्य निदेशालय और संत जेवियर्स कॉलेज की ओर से रविवार को जनजागरुकता कार्यक्रम हुआ।



तकनीकों व व्यावहारिक प्रक्रियाओं की जानकारी दी। समन्वयन कार्यक्रम समन्वयक प्रो. रितेश कुमार शुक्ला ने किया। उन्होंने प्रतिभागियों को मीठे पानी की मोती खेती की वैज्ञानिक विधियों, तकनीकी प्रक्रियाओं तथा

इसकी आर्थिक संभावनाओं से अवगत कराया। साथ ही, सैद्धांतिक व व्यावहारिक प्रशिक्षण के माध्यम से आधुनिक मोती उत्पादन तकनीकों का प्रदर्शन भी किया गया। प्रगतिशील मोती किसान व पुर्तू एग्रीटेक के

निदेशक इंजीनियर बुधन सिंह पुर्तू ने मास्टर ट्रेनर के रूप में अपने अनुभव साझा किए। वक्ताओं ने कहा कि झारखंड के परित्यक्त कोल पीट का उपयोग मछली पालन व मीठे पानी की मोती खेती जैसी जलकृषि गतिविधियों

के लिए प्रभावी ढंग से किया जा सकता है। सीमित जल संसाधनों का बेहतर उपयोग होने के साथ-साथ स्थानीय व विस्थापित लोगों के लिए स्वरोजगार और आजीविका के नए अवसर भी सृजित हो रहे हैं।



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दैनिक भास्कर

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न्यूज ब्रीफ

सेंट जेवियर्स के विद्यार्थियों ने किसानों को सिखाई मीठे पानी में मोती की खेती



रांची। सेंट जेवियर्स कॉलेज, रांची के एसईओसी-आईक्यूएसी व मत्स्य निदेशालय, झारखंड के तत्वावधान में रविवार को जन-जागरूकता व सामुदायिक आउटरीच कार्यक्रम हुआ, इसमें लगभग 30 स्थानीय किसान, मत्स्य पालकों ने हिस्सा लिया। कॉलेज के ऐड-ऑन कोर्स के विद्यार्थियों ने किसानों को लाइव डेमोंस्ट्रेशन के जरिए मीठे पानी में मोती खेती की वैज्ञानिक तकनीकों की जानकारी दी। कार्यक्रम का समन्वयन प्रो. डॉ. रितेश कुमार शुक्ला ने किया। प्रगतिशील मोती कृषक एवं पूर्ति एग्रीगेट के निदेशक इंजीनियर बुधन सिंह पूर्ति ने मास्टर ट्रेनर की सहभागिता निभाई। कार्यक्रम में आरा कोल पीट मत्स्यजीवी सहयोग समिति के सचिव शशिकांत महतो, सोनिया व सुमित्रा का योगदान रहा।

मीठे पानी में मोती की खेती की वैज्ञानिक विधियों की दी जानकारी



रांची. मत्स्य निदेशालय, झारखंड सरकार व सेंट जेवियर्स कॉलेज रांची की ओर से एक दिवसीय जन-जागरूकता व सामुदायिक आउटरीच कार्यक्रम किया गया। इसका आयोजन मत्स्य निदेशक आमेन्द्र कुमार व सेंट जेवियर्स कॉलेज, रांची के प्राचार्य फादर डॉ रॉबर्ट प्रदीप कुजूर के मार्गदर्शन में किया गया। इसमें लगभग 30 स्थानीय किसान, मत्स्य पालक व ग्रामीणों ने भाग लिया। सेंट जेवियर्स कॉलेज के ऐड-ऑन पाठ्यक्रम के विद्यार्थियों ने किसानों के साथ संवाद किया। लाइव डेमोंस्ट्रेशन के माध्यम से उन्हें मीठे पानी की मोती खेती की वैज्ञानिक तकनीकों व व्यावहारिक प्रक्रियाओं से अवगत कराया। कार्यक्रम का समन्वयन प्रो डॉ रितेश कुमार शुक्ला द्वारा किया गया।

PRABHAT KANABAR 06 JULY 26