

## Institutional Impact Report: Pondicherry University

**Program Title:** *Urban Resilience and Adaptation for India and Mongolia: Curricula, Capacity, ICT, and Stakeholder Collaboration to Support Green & Blue Infrastructure and Nature-Based Solutions*

### 1. Curriculum Development

The Erasmus Plus program has had a transformative impact on the curriculum at Pondicherry University, particularly in the areas of Remote Sensing, GIS, Environmental Informatics, and Sustainable Development.

#### Revised Courses

The following courses were revised with input from esteemed partner institutions—University of Catania, Italy, and SKUAST-K, India:

- **Remote Sensing and GIS**
- **Environmental Informatics and Modeling**
- **Landscape Ecology and Planning**
- **Advanced Sustainable Development**

These revisions incorporated the latest research, methodologies, and technological advancements, ensuring that the curriculum remains cutting-edge and relevant to current environmental challenges.

#### Newly Developed Courses

Three new courses were introduced to address emerging needs in the field:

- **Geographical Information Systems**
- **Ecology of Urban Environments**
- **Digital Image Processing for Environmental Applications**

These courses were designed to equip students with the knowledge and skills necessary to tackle complex environmental issues using modern tools and approaches.

#### Student Participation and Future Projections

- **2022-23 Academic Year:** 139 students enrolled in these revised and new courses.
- **2023-24 Academic Year:** 183 students are currently benefiting from these courses.



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- **2024-25 Academic Year Projection:** More than 150 students are expected to enroll in these courses, reflecting the growing interest and demand for education in environmental and geospatial sciences.

## 2. Webinars and Special Lectures

Pondicherry University has successfully organized a series of webinars and special lectures under the Erasmus Plus program, significantly enriching the academic environment.

### Webinars

- **Total Webinars Organized:** 8
- **Participants:** Over 400 students and scholars
- **Topics Covered:** These webinars addressed critical topics related to urban resilience, sustainable development, and geospatial technologies, providing participants with insights from leading experts in the field.

### Special Lectures

- **Speakers:**
  - Prof. Kalev Sepp, Estonian University of Life Sciences
  - Prof. Daniele Rosa, University of Catania
  - Dr. Riccardo, University of Catania
- **Participants Benefited:** More than 200 students and scholars
- **Impact:** These lectures exposed participants to advanced concepts and practices in environmental science, further broadening their academic horizons and research capabilities.

## 3. Capacity Building

The Erasmus Plus program has been instrumental in enhancing the technical and practical skills of students and staff at Pondicherry University.

### Programs Organized:

- **Learning Management Systems (LMS)**
- **Global Positioning System (GPS)**
- **Differential Global Positioning System (DGPS)**
- **Drone Data Collection and Analysis**



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### Participants:

- **Students:** More than 75 students were trained in these cutting-edge technologies, preparing them for advanced research and professional opportunities.
- **Staff:** 12 staff members benefited from these capacity-building programs, enabling them to support and guide students more effectively.

## 4. Writeshop and International Summer School

The Erasmus Plus program also facilitated the organization of international academic events that fostered collaboration and knowledge exchange.

### International Writeshop on “Urgent Research Framework”

- **Participants:** Over 20 participants from India, Mongolia and Europe
- **Duration:** Three days
- **Objective:** The writeshop aimed to identify research gaps and develop a common research framework for Urban Resilience and Green & Blue Infrastructure.
- **Impact:** This event strengthened the research collaboration between Indian, Mongolian and European institutions, laying the foundation for future joint projects.

### International Summer School on “STEER - Spatial Technologies for Urban Resilience: Empowering India and Mongolia”

- **Duration:** 14 days
- **Participants:** 27 students, scholars, and staff from Mongolia, India, and Europe
- **Activities:** The summer school included workshops, lectures, and field visits focused on sustainable urban environments and resilience strategies.
- **Impact:** Participants gained practical knowledge and experience, which they can apply in their academic and professional careers.

## 5. Student Exchange and Collaborative Research

The Erasmus Plus program provided unique opportunities for students to gain international experience and engage in collaborative research.

### Student Exchange Programs

- **SKUAST-K, India:** 12 students from Pondicherry University participated in a 14-day exchange program, enhancing their understanding of sustainable agricultural practices and environmental management.
- **Estonian University of Life Sciences, Estonia:** Three students attended an International Summer School, where they learned about advanced environmental science topics.
- **University of Catania, Italy:** Three students participated in a 14-day collaborative research training for their Ph.D. programs, gaining valuable insights and exposure to international research standards.



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## 6. Contributions of International Experts

International collaboration has been a cornerstone of the Erasmus Plus program, significantly benefiting Pondicherry University.

- **Prof. Kalev Sepp (Estonian University of Life Sciences):** Played a key role in initiating curriculum development on Drone data collection and analysis, a field of growing importance in environmental monitoring and research.
- **Prof. Daniele Rosa and Dr. Riccardo (University of Catania):** Their ongoing collaboration in Ph.D. research guidance has enhanced the quality of research at Pondicherry University, providing students with access to international expertise and resources.
- **Dr. Anton Shkaruba, (Estonian University of Life Sciences),** has played a pivotal role in fostering research collaboration and academic development at Pondicherry University. His expertise was instrumental in the revision and enhancement of our curriculum, particularly in the areas of environmental science and urban resilience. Additionally, Dr. Shkaruba was key in developing Urban e-learning modules, significantly advancing our capacity to deliver high-quality, accessible education on urban environmental issues. His contributions have enriched our academic programs and strengthened our international partnerships.

The Erasmus Plus program has had a profound and lasting impact on Pondicherry University. Through curriculum development, capacity building, international collaboration, and research initiatives, the program has enhanced the university's academic and research capabilities. These activities not only benefit the students and staff but also contribute to the broader academic community and the sustainable development of the region. The continued engagement with international partners will ensure that the institutional impact of the Erasmus Plus program remains sustainable and continues to grow in the coming years.



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