WATR7002 - Water, sustainability and development (2 units)

Foundation module

Module description

This module introduces students to the current theory and practice of international development and poverty reduction, and its application to Integrated Water Management (IWM) in developing contexts. The module also presents some critical perspectives and current debates in the development field towards improved conceptualisation and practice of IWM. Issues such as poverty, livelihoods, power and participation, gender, and collaboration are analysed and explored in terms of their contributions to sustainable development. We also explore emerging frameworks such as adaptive practice and collective impact. Although the focus is on rural development in both international and Indigenous development settings, the skills and theory taught in this module can also be applied to more urban and developed contexts involving sustainability and communities.

Module introduction

This module introduces students to current theory and practice of sustainable development and poverty alleviation, and its application to Integrated Water Management. We maintain a strong emphasis on applying analytical frameworks to case studies of actual practice, including sustainable livelihoods framework, gender analysis frameworks, vulnerability and capacity analysis, complex adaptive systems, political economy analysis, and collective impact. By maintaining a case study and problem focus, we draw out the inherently political processes of community participation, deliberation, social learning, and stakeholder and conflict management. We take a participatory learning approach, which places a high value on the knowledge, experience, skills and attitudes that you bring, and tries to find ways to enable you to share them with others.

Module delivery

- **Full-time** (on-campus) students, including international students, are required to enrol in the internal offering in Semester 1. Semester 1 begins with a three-day field trip to North Stradbroke Island.
- **Part-time** (external) students are required to enrol in this module in Semester 3. They are required to attend a six-day intensive workshop at the beginning of the semester, where two and a half days of the module are taught face-to-face and the remainder is taught externally online.

Assumed background

This is a postgraduate module in general water science offered as part of the IWC Master of Integrated Water Management. Participants are expected to have basic background knowledge through undergraduate science or engineering programs, however this is not essential.

Learning objectives

On completing this module participants are able to apply a range of analytical and critical perspectives on water and sustainable development in developing countries, and understand and be able to implement a range of methods for community participation.

After successfully completing this module participants are able to:

- Explain the theoretical underpinnings and key principles of sustainable development and its application to water resource management.
- Employ a range of analytical frameworks to understand different contexts, including a critical appreciation of the links between poverty, gender, power and capability.
- Build governance capability in community-based organisations and broker complex collaborations across a range of stakeholders in different institutional positions.
- Utilise a range of methods for facilitating community participation and stakeholder collaboration, including community planning, mobilisation, networking, advocacy and conflict management.
- Critically analyse and respond innovatively to sustainable development challenges in different water resource contexts.
- Plan and facilitate a participatory workshop on IWM and community participation.

Teaching staff

Lead Lecturer: Prof Mark Moran (Institute of Social Science Research, The University of Queensland)

Problem-Based Learning (PBL) projects

PBL projects and field trips run through the semester, comprising roughly 50% of the assessment weight. These enable participants to develop skills that complement the content delivered in the four Foundation modules.

Full-time students complete two PBL projects per semester while part-time students complete one PBL per semester:

- **PBL1:** Situation analysis and critique of an existing water management project or program *(Group project)*
- **PBL2:** Design of a project proposal to address a real-world water management issue from an integrated water management perspective *(Individual project)*

A significant amount of project time is spent exploring the case study material with respect to the topic content of the 'Water, sustainability and development' module. Participants are provided with an introduction to the case study river-basin catchments from the sustainable development perspective.

Field trips

Participants begin the Foundation semester with a three-day field trip to North Stradbroke Island. The cost of the trip (including transport from Brisbane, accommodation and meals) is included in the tuition fees.

For a complete list of field trips that participants undertake during the Foundation semester, please refer back to "Field trips" on page 7 of this syllabus or visit the IWC website.

Florent Vetillart – France

When I go back to Europe, I want to apply my new understanding of the multi-dimensional nature of water challenges to the human and environmental crises that water issues are shaping.

Photos: students on a field trip to Brisbane River.