

# Co-Learning Methodologies and Tools

*Exploring its application in the Asia Pacific and Africa IWRM context and needs*

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**CERIS** | Civil Engineering Research  
and Innovation for  
Sustainability





# ACKNOWLEDGEMENTS

- ▶ The information presented in this communication reports to 7 years of experience in delivering courses in Water Governance and IWRM to more than 200 participants from more than 50 countries, in Australia and Europe, including a special course from Pakistan. To all of those co-learners I would like to dedicate this presentation, with deep thanks for all the wisdom I gained from them.
- ▶ The co-learning methodology used was developed and applied with Jeff Camkin, my constant partner in this journey of water education.

# COURSES DELIVERED

- Delivered 16 master and trade certificate courses to 200 students from 60 countries.
- Annual delivery of the Water and Agricultural Landscapes module of the MSc in Integrated Water Management for the International Water Centre (2012 to present).
- Annual deliver of the Water Governance and IWRM module in the MSc in Tropical Hydrogeology and Environmental Engineering at the Technical University of Darmstadt, Germany (2016 to present).
- Annual delivery of the Global Water Issues and IWRM module of the MSc in Coastal Ecohydrology at the University of Algarve, Portugal (2010-2014).
- Delivery of Australia Pakistan Agricultural Scholarships course in Irrigation and IWRM for 24 participants for Pakistan for Australian Aid (2013-2014).

# PRESENTATION CONTENTS

- 1. LEARNING PHILOSOPHY AND METHODOLOGY
- 2. MAIN OBJECTIVES
- 3. LEARNING DIAGRAM
- 4. TOOLS
- 4. RESULTS
- 5. IDEAS FOR DISCUSSION

# LEARNING PHILOSOPHY AND METHODOLOGY

- Approach based on co-learning processes
- Building a learning process that departs from the experience and expectations of the participants
- Substantial contribution from the participants, with own experiences to support peer learning
- Lectures and workshops used to introduce fundamental information, tools and methodologies
- Emphasis on active learning by drawing on the full range of knowledge, skills and experiences provided by peers, presenters and course coordinators
- Facilitator role of the course coordinators.



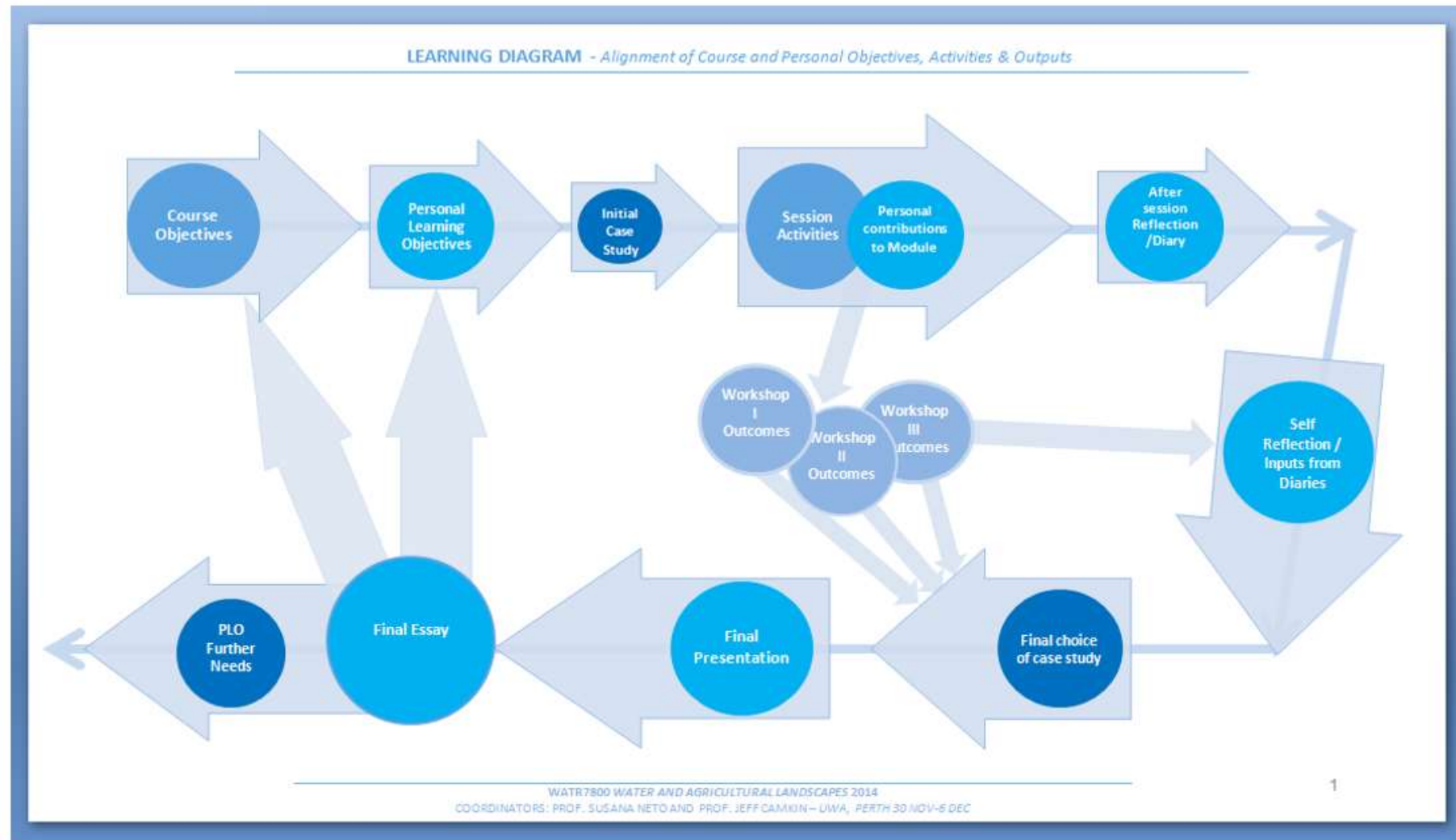
# LEARNING PROCESS AND MAIN OBJECTIVES

- To support the participants in 'back-casting' from their individual targets/objectives and to build a learning process that will support them to understand, filter and incorporate each session (inputs from lessons, class discussions or other improved knowledge originated by exposure to the sessions) into his/her own learning objectives.
- Through this process of 'filtering' through the different learning activities and by using an individual register of what is more relevant from her/his own perspective and future objectives, each student is invited to participate in some kind of group daily reflective exercise and to pursue this further through individual consolidation.
- This process aims to effectively support progress along the course sessions with a critical personal view that will reinforce the capacity of each participant to improve their knowledge towards their personal learning objective and future professional / career development.

# LEARNING DIAGRAM

## Example: Learning Diagram of the IWC WATR780 Module 'Water Management and Agricultural Landscapes'

The Learning Diagram shows the flow of learning and its relationship to course and personal learning objectives, learning activities and course outputs and outcomes.



# TOOLS

## Personal Details Sheet

*International Water Centre MSc in Integrated Water Management*  
**WATR7800 Water and Agricultural Landscapes 2017**

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**PERSONAL DETAILS SHEET**

Date / Method: To be filled and sent to Coordinators asap attending the course and presented on Day 1

Objective: Preliminary identification of your Personal Learning Objectives (PLO) to support the progress and critical learning through this Module towards your Final Essay and future career goals

**Name:**

**Education:**

*(Your degrees and other training courses you consider relevant to this module)*

**Background and professional experience:**

*(Where you come from, and previous experience you consider relevant to your learning process)*

**Current Place of Work:**

**Areas of particular interest in Water and Agricultural Landscapes:**

*(What aspects of Water and Agricultural Landscapes would you like to know more about through this module)*

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**Personal Learning Objectives (PLO):**

*(Besides those above, what are your personal learning objectives related to your academic path, current work, or other perspectives you have for your future career goals, in general)*

**Water and Agricultural Landscape Case Study:**

*(In 1 or 2 paragraphs briefly introduce either a current situation you are working in and would like to explore, or a topic of your interest in the near future related with Water and Agriculture)*

THANK YOU!

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# TOOLS

## Individual Learning Activity Diary

**WATR7800 Water and Agricultural Landscapes 2017**

**PERSONAL LEARNING ACTIVITY DIARY**

**Use / Method:** to be filled-in by students daily and after each session (lecture, workshop, field trip etc)  
**Objective:** To help participants integrate learning across sessions and capture impacts relevant to their own personal interests and learning objectives for discussion and preparation of their final Presentations

SESSION (TOPIC, TYPE, DATE): \_\_\_\_\_

Main learning relevant to personal interests and learning objectives

\_\_\_\_\_

Key personal contributions to session:

\_\_\_\_\_

List of topics needing further information:

\_\_\_\_\_

Participant Name: \_\_\_\_\_

# TOOLS

## Individual Learning Activity Diary

**WATR7800 Water and Agricultural Landscapes 2017**

**PERSONAL LEARNING ACTIVITY DIARY**

Use / Intended to be filled in by students daily and after each session (lecture, workshop, field trip etc)  
Purpose: To help participants integrate learning across sessions and capture outputs relevant to their core personal interests and learning objectives for discussion and preparation of their final presentations

SESSION (TOPIC, TYPE, DATE): \_\_\_\_\_

Main learning relevant to personal interests and learning objectives:

Key personal contributions to session:

List of topics needing further information:

Participant Name: \_\_\_\_\_

# TOOLS

## Workshop Output Summaries

*WATER2000 Water and Agricultural Landscapes 2017*

**PERSONAL LEARNING OBJECTIVES**  
(SUMMARY OF DAY 1, INTRODUCTION)

Name	Background	Organisational Context, Region	Theme: Topic of research area / Case study	Expectations of Learning from the Module

WATER2000 Water and Agricultural Landscapes 2017 - UNIVERSITY OF WESTERN AUSTRALIA, PERTH 6 | F-060 | COORDINATORS: PROF. IFFY CHAMBER AND PROF. FULADIA NETO

*WATER2000 Water and Agricultural Landscapes 2017*

**MAJOR CHALLENGES FOR WATER AND AGRICULTURAL LANDSCAPES**  
(COLLECTIVE SUMMARY OF WORKSHOP 1, DAY 2)

In this workshop participants will discuss the challenges identified by participant's case studies and their relationships to global issues

Major Challenge (I, II, III, IV, ...)	Alignment with Participants Personal Learning Objectives	Identification of work or research theme - Case Study	Future Objectives / Master and Career
<p style="font-size: x-small;">EX: (transverse) growth - climate change and water; impacts of climate change and extreme water scarcity - food security, water knowledge / policy, transboundary / trade and participation, global / 4th world (poor), freshwater shortage (human right to water), etc.</p>			

WATER2000 Water and Agricultural Landscapes 2017 - UNIVERSITY OF WESTERN AUSTRALIA, PERTH 5 | F-060 | COORDINATORS: PROF. IFFY CHAMBER AND PROF. FULADIA NETO

*WATER2000 Water and Agricultural Landscapes 2017*

**INTEGRATION AND HARMONISATION IN AGRICULTURAL LANDSCAPES**  
(COLLECTIVE SUMMARY OF WORKSHOP 2, DAY 4)

In a world café exercise, participants will draw from their own experiences and countries to discuss the problems, current approaches and gaps in addressing challenges and opportunities in water and agricultural landscapes to help inform their case study progress and final Essay

Major challenge (I, II, III, IV, ...)	Current approaches / Gaps in addressing challenges	Challenges and opportunities / New actions needed	Conditions for implementation	Main enabling and blocking factors	Ad. notes

WATER2000 Water and Agricultural Landscapes 2017 - UNIVERSITY OF WESTERN AUSTRALIA, PERTH 4 | F-060 | COORDINATORS: PROF. IFFY CHAMBER AND PROF. FULADIA NETO

*WATER2000 Water and Agricultural Landscapes 2017*

**VISIONS OF THE FUTURE FOR WATER AND AGRICULTURAL LANDSCAPES**  
(INDIVIDUAL SUMMARY OF WORKSHOP 2, DAY 4)

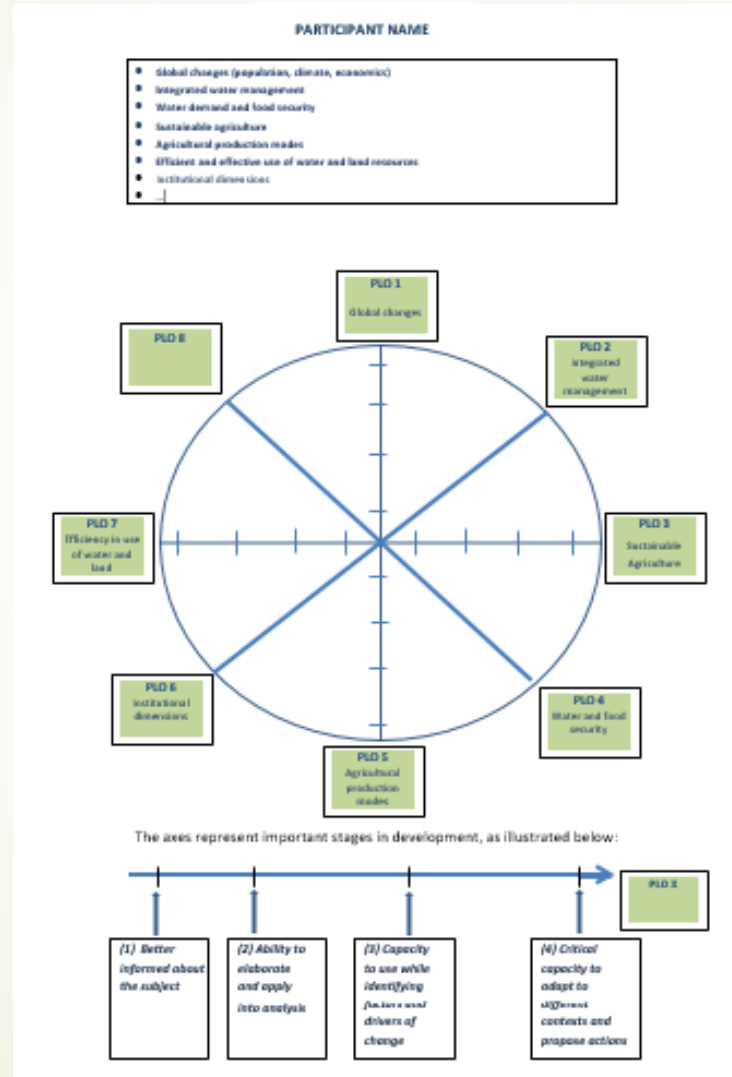
In this workshop we reflect on the local and global problems, personal vision for improving on current approaches and discuss the case studies to be presented in the participants final essays

Case study / Major challenge (local focus)	Context (with water, political and institutional priorities etc)		Actions needed / Conditions for implementation (local / context focused)	Learning challenges / New knowledge needs (local / case study focused)
	Enabling factors	Blocking factors		

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# TOOLS

## Self assessment diagram

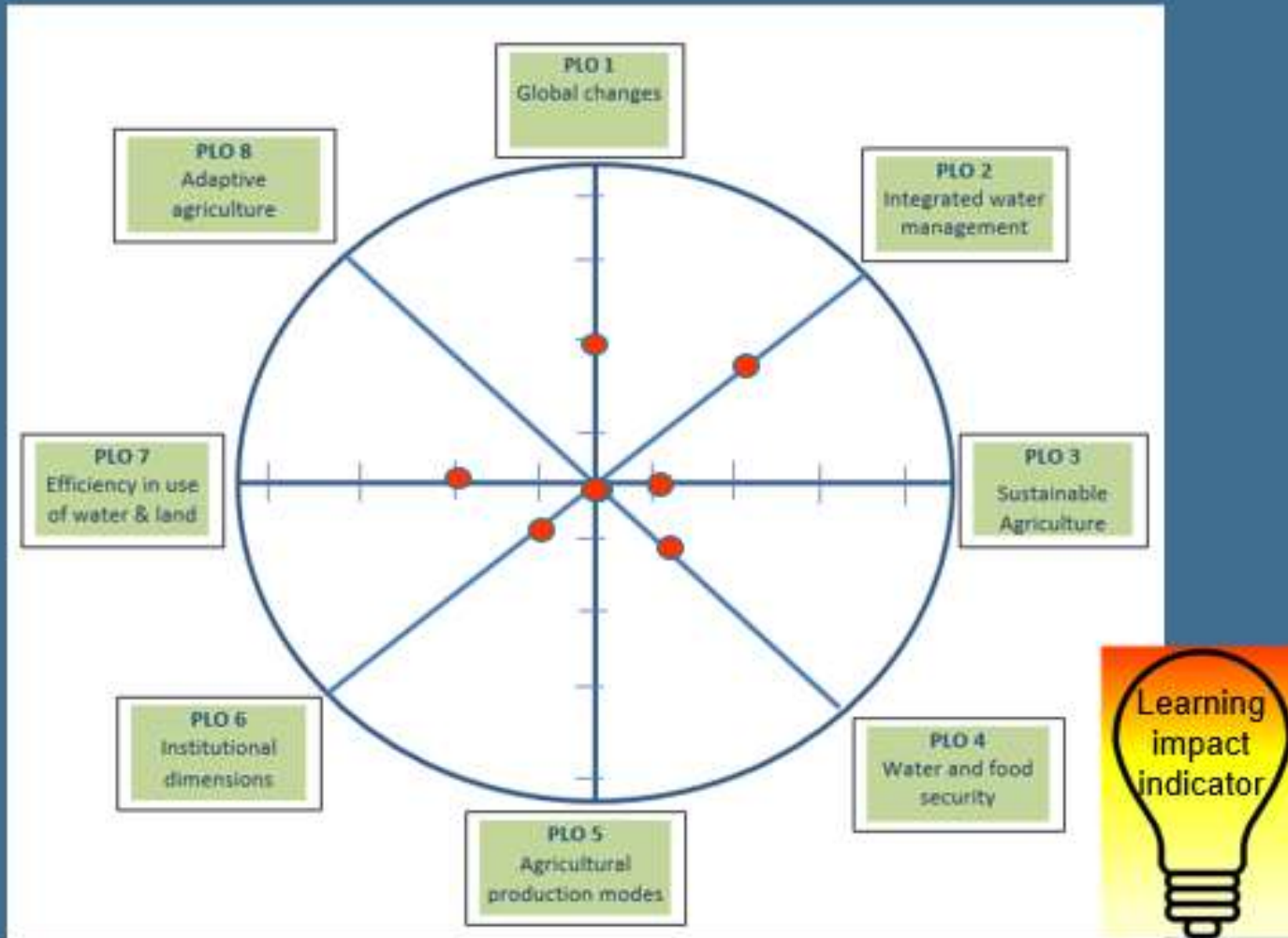


## Journey

## Personal Learning Objectives

## Learning impacts

- Participant Presentations





# RESULTS

- ▶ Capacity building of the participants in their work places with increased critical view and practice related to IWRM
- ▶ Increased capability of understanding complex problems within a broader IWRM framework
- ▶ Higher capability of diagnosing and undertaking situational analysis
- ▶ Better understanding of local contextual factors, and drivers for change
- ▶ Increased networking between students / participants and lecturers or other experts that contributed to courses (learning community - community of practice)
- ▶ Constant feedback from students / participants regarding their progress both in academic and professional careers
- ▶ More publication of both academic articles and practical experience reports



# IDEAS FOR DISCUSSION

- ▶ Applicability of the methodology to different contexts is a major condition of success; including adapting to individual expectations of learning
- ▶ Background of the participants – diversity favors more comprehensive approaches and better understanding of local contextual factors
- ▶ Re the trainers: capability to readapt and rearrange topics and contents as the courses go, adjusting to students / participants learning expectations
- ▶ Re the students / participants: increased self-confidence and critical view, reinforce capacity to address complex problems, adopt holistic approaches, embrace interdisciplinary and inclusive knowledge (also from informal sources)
- ▶ Become agents for change, influence the ‘institutional learning’ processes
- ▶ Reinforcing the Learning Cycle: establishing ‘Communities of Practice’
- ▶ Follow up of results (e.g. *Return-to-work plans*) and ‘agency’ role of participants in their work places
- ▶ Closing the Learning Cycle: Include further experience in new courses (close the cycle)
- ▶ Include new approaches in Curricula; influence political decision level



# THANK YOU!

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