# Approach to institutionalization of lowland development in education at different levels based on past experiences, successes and failures

By Paolo Paron, PhD
Senior Lecture in Earth Science and Remote Sensing
Department of Water Resources and Ecosystems, IHE Delft















### Content

- Introduction to IHE
- IHE approach to institutionalization
- Examples from the Region
- Lessons' learnt
- Innovation and way forward



















### IHE Delft and the UN

IHE Delft is a member of both the **UN Water** and the **UNESCO Water** family. IHE Delft is the only education institute within UNESCO focused on water.

The Institute works closely with other UNESCO water related organizations, particularly International Hydrological Programme (IHP) and the World Water Assessment Programme (WWAP). We also work with the World Meteorological Organization(WMO), the Food and Agriculture Organization (FAO) and several other UN organizations.

IHE Delft is leading an initiative with UNESCO IHP to establish an education indicator for SDG6.















### Partnerships with institutions and individuals

Operating from a water perspective, IHE Delft focuses on regional challenges, such as droughts, floods and deteriorating water quality, and global challenges, such as climate change, ecosystem degradation, land loss, urbanization, sanitation, poverty, hunger, and migration. We embrace clear, integrated approaches and holistic solutions.

- Institutional partnerships working with our partners towards co-creation of knowledge and its applications.
- Individual partnerships for lifelong learning, enabling staff, students and alumni to engage better in a mutual exchange of knowledge and skills, across generations.

To increase our impact on the water sector, we will enhance our flexibility by offering tailored, high-quality education and research in Delft and overseas, through strong partnerships especially in the Global South.



### IHE in the region

- ➤IHE Delft, is been present in the region for several decades and has a network of >900 Alumni in Ethiopia alone
- ➤ A similar approach to this GIZ project was developed during the A4Labs project (<a href="https://a4labs.un-ihe.org/">https://a4labs.un-ihe.org/</a>) with case studies in Ethiopia
- Another very successful presence in the region has been the GroundTruth (<a href="https://gt20.eu/">https://gt20.eu/</a>) citizen science project with input from individual citizens and civil organizations
- ➤ We have conducted large (>2 M Eur) collaborative projects combining research and capacity building in partnership with civil society in the Region. Examples: WaPOR with FAO, and IWMI and MoA of Ethiopia



### IHE approach to institutionalization in the region

#### Three Specific objectives

- Establishing a network of Educational/Academic Institution and Development Partners for Institutionalization of the DVRPU Approach
- Developing knowledge multipliers, course modules and exchange opportunities for the institutionalization and training of the DVRPU Approach.
- 3) Dissemination of knowledge content and materials are through appropriate channels and processes



## Establishing A network of Educational/Academic Institution and Development Partners



The **revision of the DVRPU** approach will form the **basis for discussion** with the educational institutions and partners at the
Ethiopian Ministry of Agriculture (MoA), the Ministry of Education (MoE).

The **DREAM conference** events **create links** among the stakeholders and create awareness and understanding of the DVRPU course modules that will be developed.

**WG during DREAM II** in September 2021 to elaborate on the methods and materials for developing curricula for training and education.

# Development of Knowledge multipliers, course modules and exchange opportunities

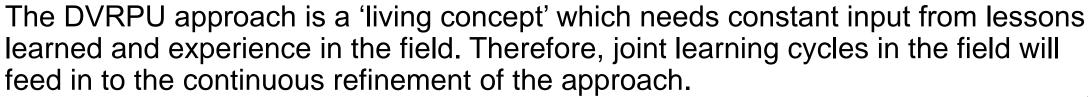
#### **Training needs assessment**

**Development of curricula** for a suite of courses, for these four main target groups:

- 1. BSc & Master students at partner Universities: more academic curricula.
- 2. Students at TVETs': vocational training modules in technical skills.











# Knowledge Content and Materials are Disseminated through Appropriate Channels and Processes

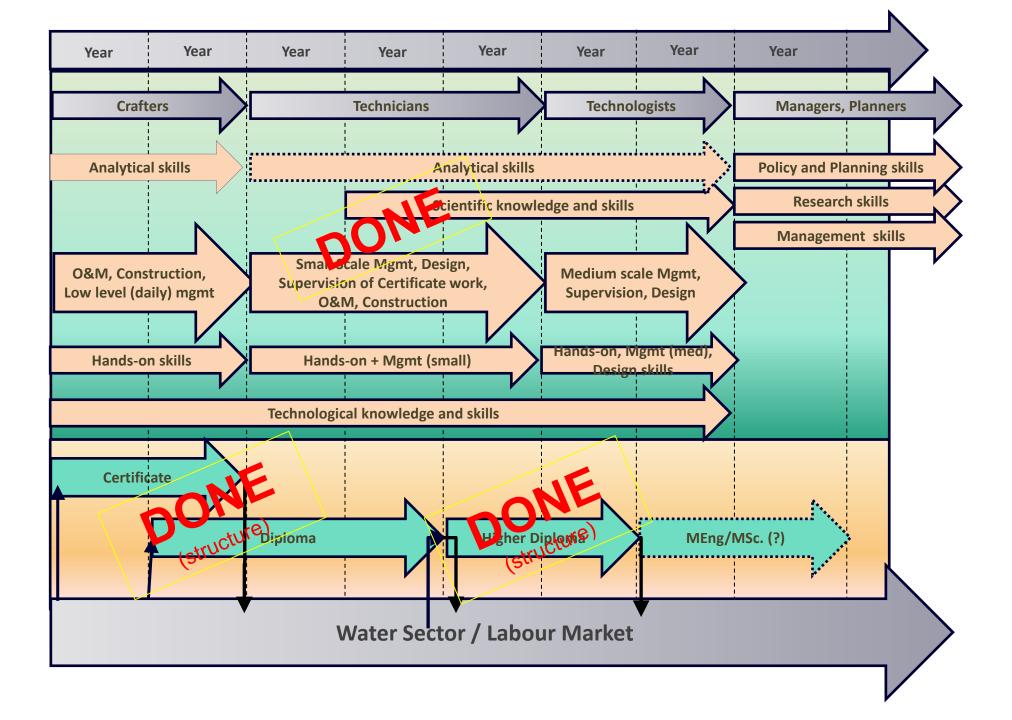
- Rolling out of the curriculum plans and delivering the courses.
- Development of policy briefs and design manuals to ensure that lessons learned reach the right government institutions, civil society and NGOs → these will be incorporated in rural development programmes and projects.
- Dissemination in all the languages of the project (Amharic, Afar, Somali, English), with documentation of supporting materials



### Kenya – Two technical universities







#### **Active Learning**

Learning takes place through the active behaviour of the student: it is what she/he does that she/he learns, not what the teacher does.



(Tyler, **1949**: 63)

	Cone of Learning						
	After 2 weeks we tend to remember		No	ature of Involvement		<b>Active Learning</b>	
		Doing the Real Thing		Laboratory	,		
90% of who		Simulating the Real Experience		Eugraina b			
say and	and do	Doing a Dramatic Presentation		Exercise based on real-world case			
<b>70%</b> of w	hat	Giving a Talk		Explaining	to peers		
we say	re say	Participating in a Discussion					
	<b>50%</b> of what	Seeing it Done on Location		Demonstra	tion done b	by the instructor	
<b>50%</b> of w		Watching a Demonstration		Demonstra	tion done b	by the instructor	
we hear and say		Locking at an Exhibit Watching a Demonstration		Passive			
		Watching a Movie		"modern"	oower-noint	and youtube teaching	
<b>30%</b> of what v	we see	Looking at Pictures					
<b>20%</b> of what v	we hear	Hearing Words		Traditional	blackboard	i teaching	
10% of what	we read	Reading					
Source: Cone of	Source: Cone of Learning adapted from (Dale, 1969)					Passive Learning	



### Lessons' learnt

- Top-down vs Bottom-up
- Staff:
  - Availability
  - –Mobility
  - -Commitment
- Managerial Structure and Flexibility



### Innovation and way forward

- Opportunities due to Covid19:
  - reaching out more people (online)
  - reducing travel costs (economic & environmental)
  - develop new educational models and materials

