Multiple-Use Water Services Training

MUS Group Meeting – Washington, DC

January 20, 2012

Winrock International

Training prepared by:

WINROCK INTERNATIONAL

Training funded by:

USAID FROM THE AMERICAN PEOPLE · THE ROCKEFELLER FOUNDATION · Global Water for Sustainability PROGRAM

Overview

-Why

-How

-When

-What

    -Outline of training

    -Look into selected

    sessions

Why

Underlying reason:
Lack of knowledge of MUS among implementers, policy makers and funders is a barrier to scaling up MUS.

How: Designed and Tested

When / Target Audience

Training for anyone working interested in MUS.
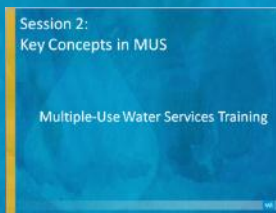*These are just some ideas, if after seeing the content you have others, please share!*

	WHEN
1	During professional development or capacity-building sessions.
2	During MUS program development and design.
3	At the start of a MUS project.

What – Outline of materials

Training is in 1 folder that can be put on CD or flash disk.

Multiple-Use Water Services:
Training Overview

1. **Training Overview**

Session 2:
Key Concepts in MUS

Multiple-Use Water Services Training

2. **PowerPoint Presentations** for each of the 10 sessions with notes for presenter

A Kabori Story:
Multiple Use Water Services
in Action

Financed by:
USAID   Coca-Cola   WADA   WAWI

Implemented by:
WINROCK

3. **Movie Files**

What – Outline of materials

Sessions:
1. The Big Picture
2. Key Concepts in MUS
3. Benefits and Costs of MUS
4. MUS Components and Process
5. Water Overview
6. Water Accounting
7. Water Service Options
8. Livelihoods
9. Health
10. Putting it into Practice

What's happening in these pictures?

A solution?

How does livestock watering affect this solution?

Session 1 Activity

Uses

Types of uses

- **Domestic**: drinking, cooking, bathing, sanitation, laundry cleaning

- **Productive**: gardening/irrigation, livestock, small-scale enterprises (brick making, food processing, etc.)

Water Service vs. Water System

Water Service

emphasis on outputs

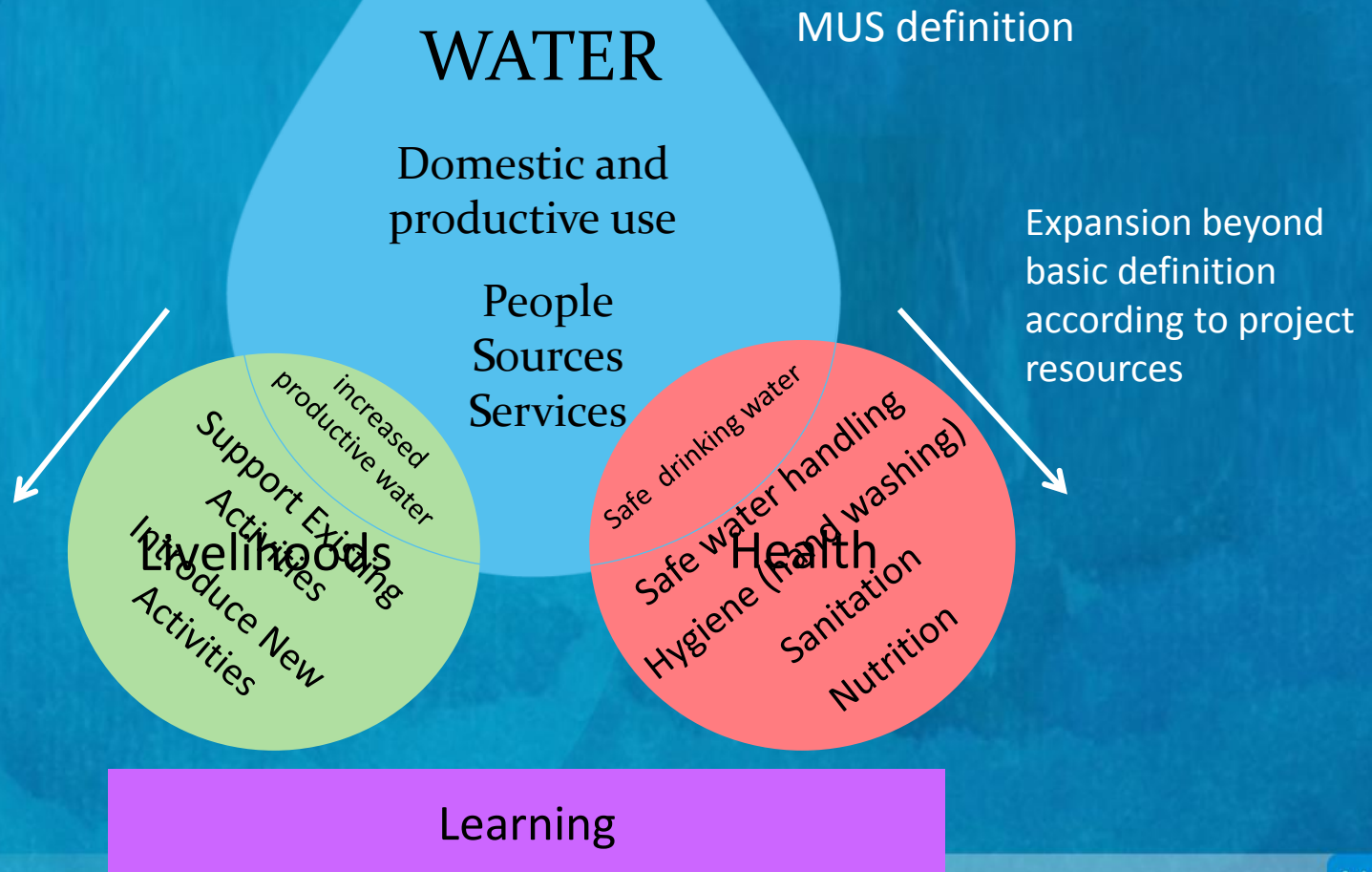– water –

what people actually receive

Water System

emphasis on water infrastructure
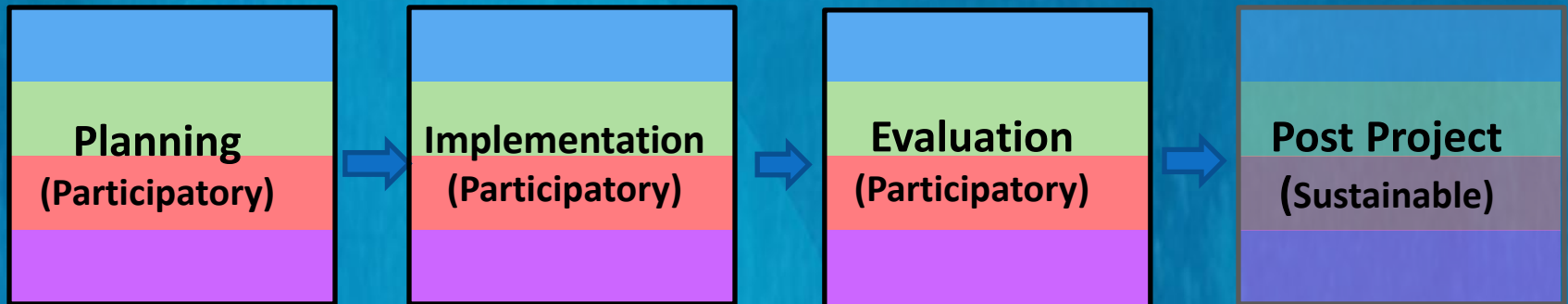- water supply scheme
- irrigation system

WI MUS Implementation Model

WATER

MUS definition

Domestic and productive use

People
Sources
Services

Expansion beyond basic definition according to project resources

increased productive water

Support Exids Activities Introduce New Activities

Livelihoods

Safe drinking water

Safe water handling

Hygiene (hand washing)

Health

Sanitation

Nutrition

Learning

Process

Monitoring

→

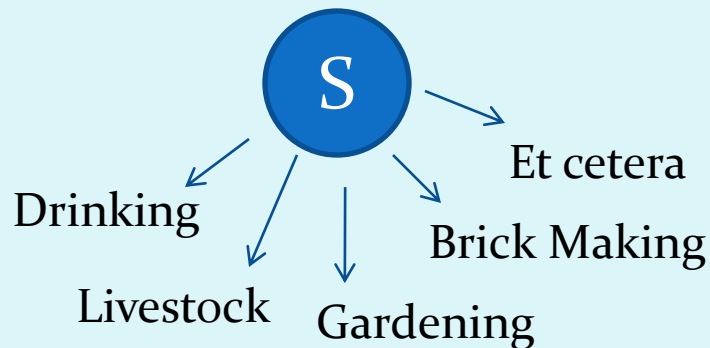| Planning **(Participatory)** | → | Implementation **(Participatory)** | → | Evaluation **(Participatory)** | → | Post Project **(Sustainable)** |

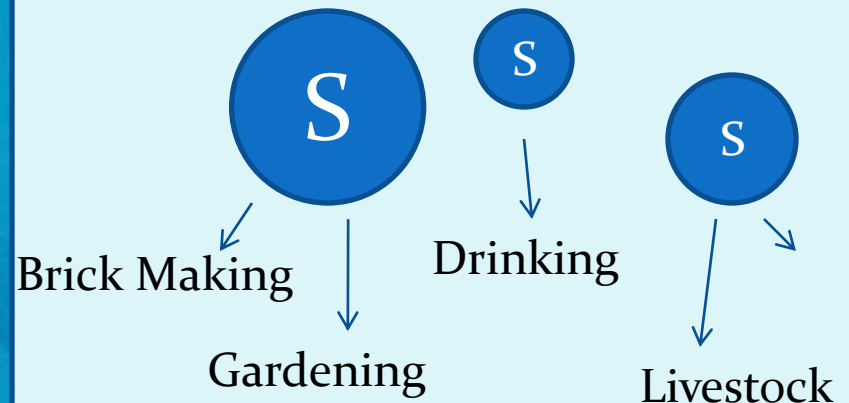Water Accounting

Design of Water Services

Hardware

- Hardware for both using *and* improving water sources
    - Using (wells, gravity schemes)
    - Improving (tube recharge, micro-catchments)
- New systems, upgrades, rehabilitations
- One source for multiple uses *or* multiple sources
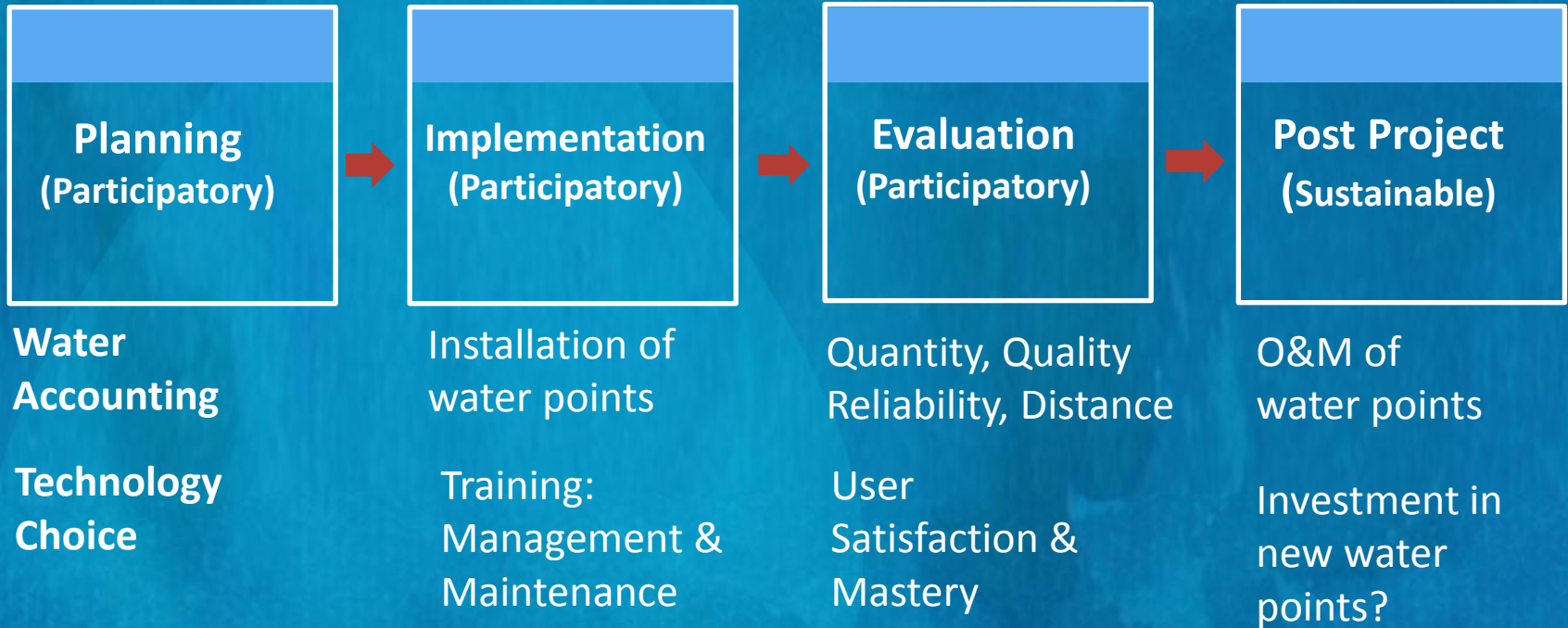
One source for multiple-uses

S

Drinking
Livestock
Gardening
Brick Making
Et cetera

Multiple sources for multiple-uses

S   s   s

Brick Making
Gardening
Drinking
Livestock

Process

Monitoring →

| **Planning** (Participatory) | → | **Implementation** (Participatory) | → | **Evaluation** (Participatory) | → | **Post Project** (Sustainable) |

Water Accounting

Technology Choice

Installation of water points

Training: Management & Maintenance

Quantity, Quality Reliability, Distance

User Satisfaction & Mastery

O&M of water points

Investment in new water points?

Sample Indicators

Impacts

Water
- Increase in sustainability of water services.
- Reduction in water-related conflicts.

Outcomes

Hardware
- # of people using an improved drinking water source
- # of people using water for livelihoods activities
- % increase in quantity of water available from source during dry season

Software
- % of water users associations collecting fees as agreed after 1 year of operation
- % of water users associations holding meetings as agreed after 1 year of operation

Outputs

Hardware
- # of water systems constructed
- # of micro-catchments constructed

Software
- # of water users associations trained

Example 1: Nepal – Single Source

- Hardware:
  - Single source for multiple uses
  - New systems
- Software:
  - Community management

Example 2: Niger – Multiple Sources

- Hardware
    - Multiple sources for multiple uses
    - Mix of new systems and rehabs
- Software
   - Mix of community and private management

General technology typology :

Source Improvement	Surface Micro-catchments Tree planting		Underground Well recharge Tube recharge
Water sources	Atmosphere Rain harvest Fog harvest	Surface Lake Dam	Underground Spring catchment Well
Water lifting devices	Traditional lift: Rope and bucket Noria Delou/ Chadouf	Man power lift: Rope pump India, vergnet Treadle	Power pumps: Motor pump Solar /submersible pump
Water storage and moving	Moving: Bucket Wheelbarrow Channel/ditch Pipes	Open reservoirs: Artificial ponds Underground reserve	Storage: Clay pot Iron Drum Plastic reservoir Iron reservoir
Water treatment	Physical: Sand filtration, tulip filter UV decantation		Chemical: CL Coagulants

WHO: community water technology and costs

Upgrade/rehabilitate a technology :

The limits of upgrading a single technology:
•Quantity
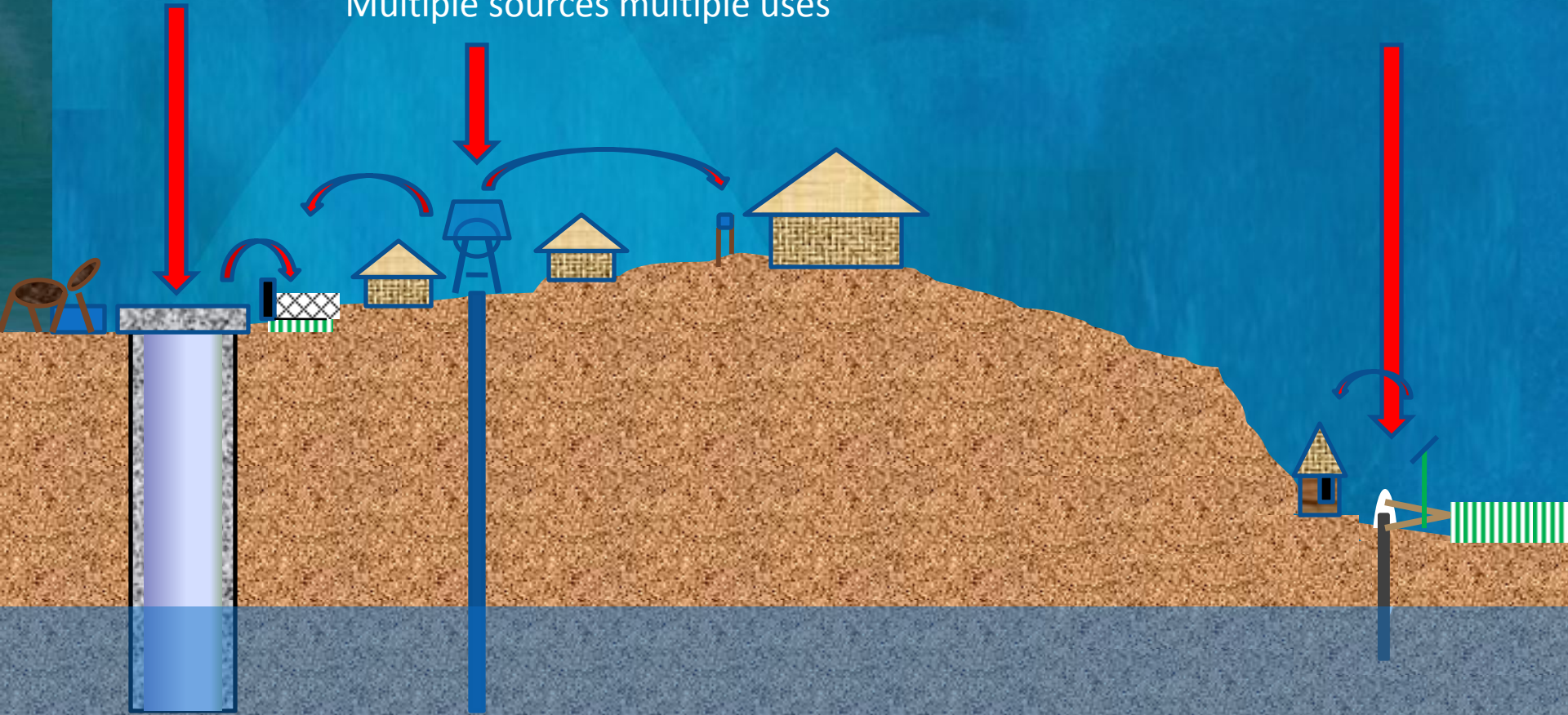•Original purpose is a constraint (ex: thin PVC borehole)

WATER for domestic and productive use

Livelihoods

Health

Learning
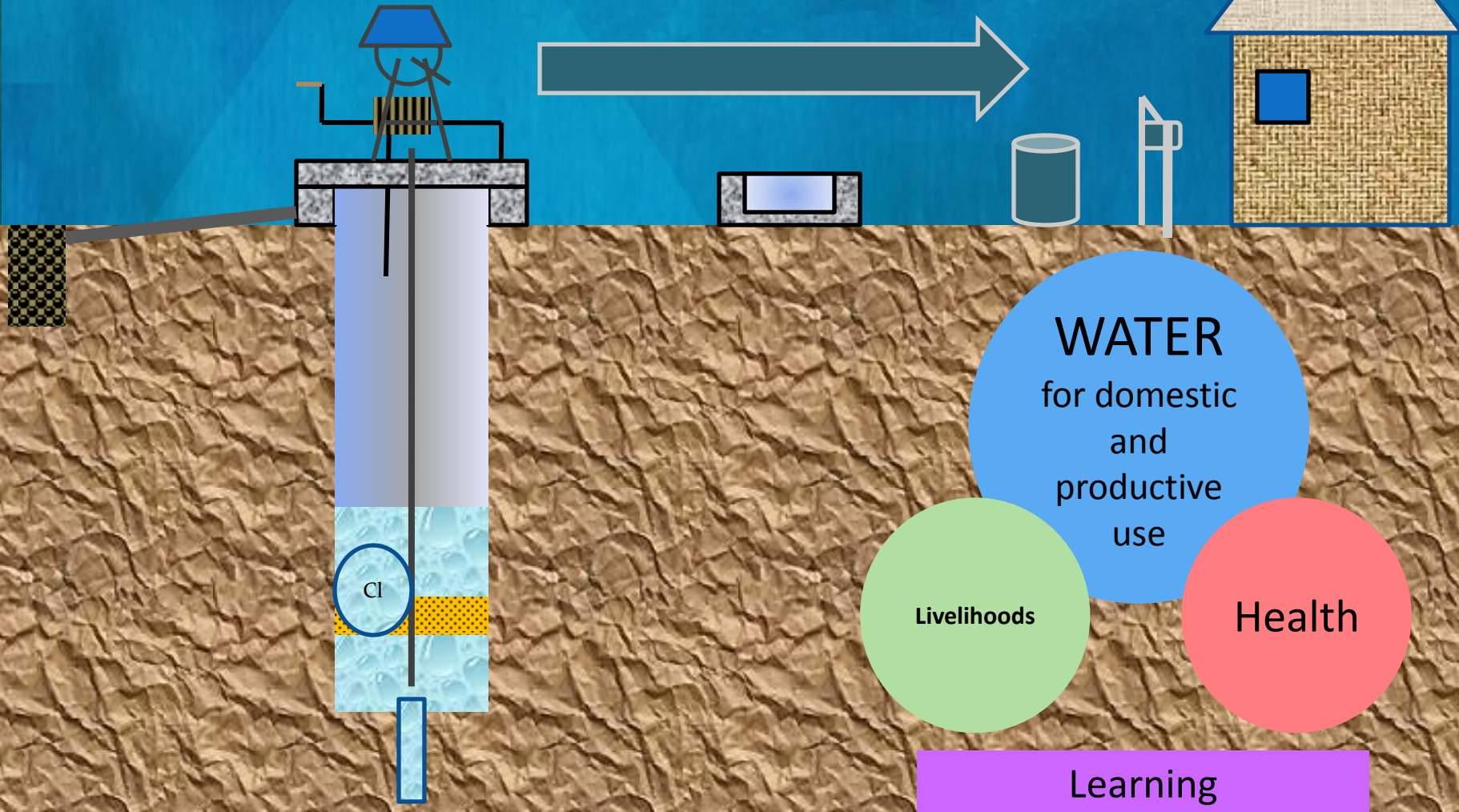
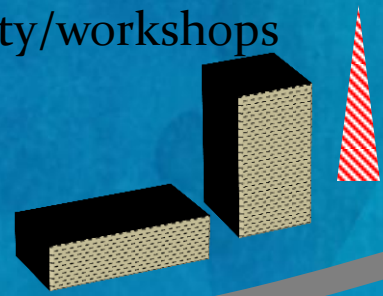# Technology choices and combinations:

(inspired by Niger example)

Diversification by improving the scope of sources: + software!
Multiple sources multiple uses

City/workshops

Mountain spring, river

100km
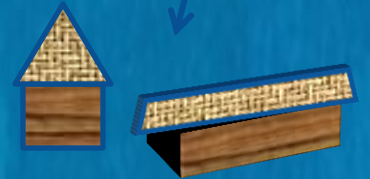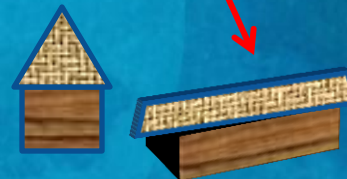
50km

1 km

Herders with 1000 cows
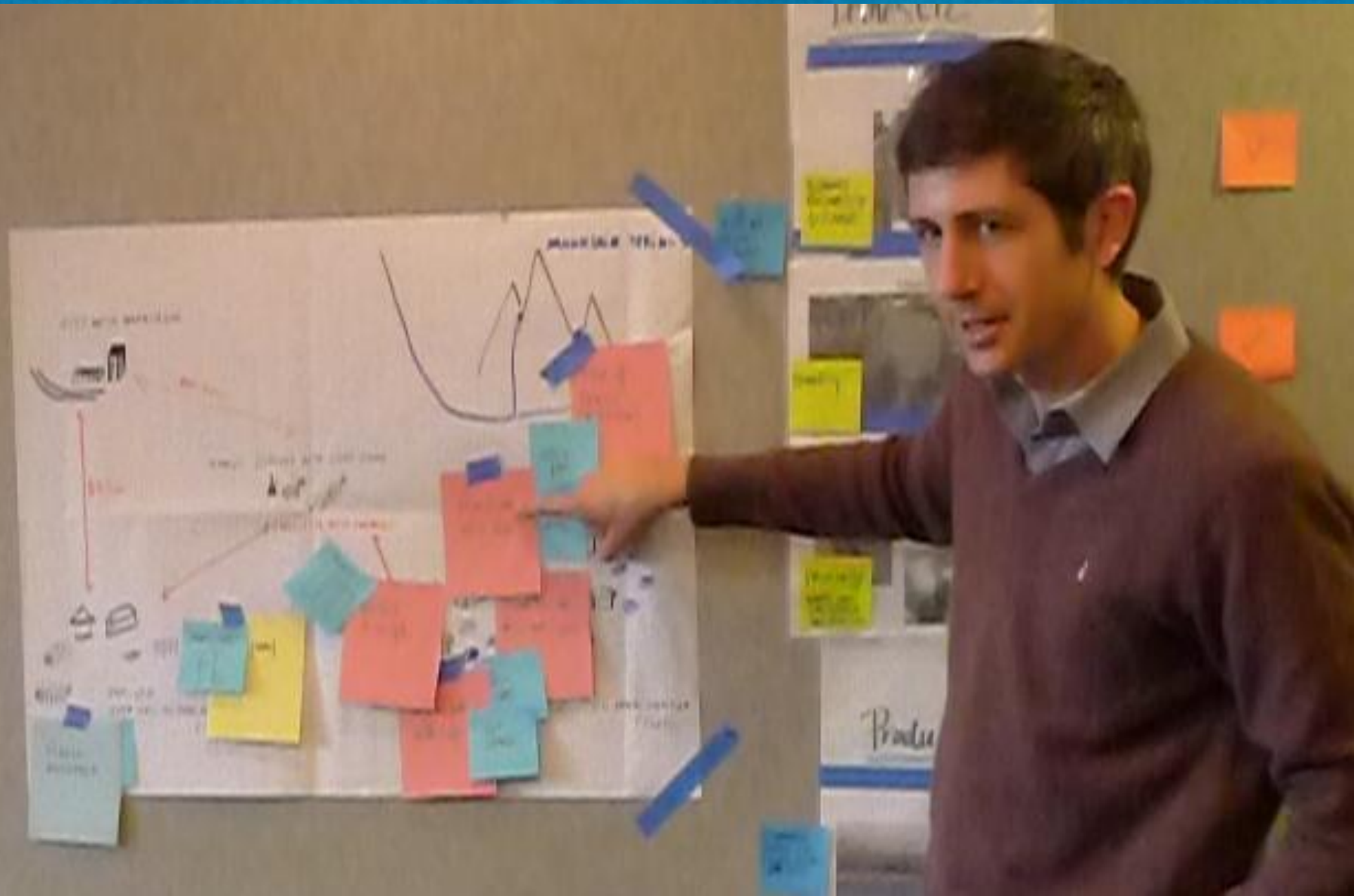Conflicts with farmers
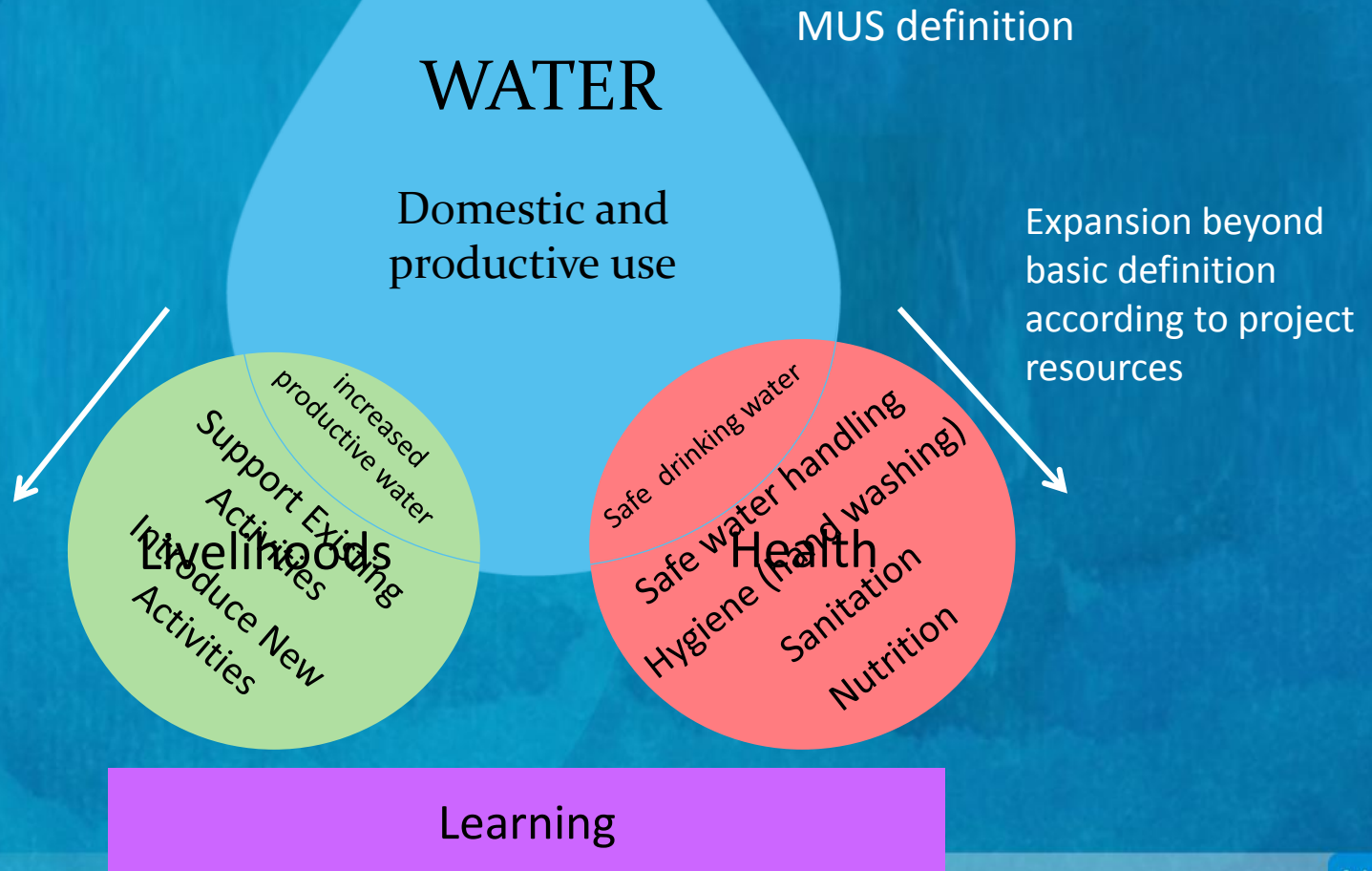
0,5 km

Pop: 150
Open wells on poor aquifer
Lot of clay

Pop: 1000
Open wells on poor aquifer
Lot of clay

Activity – Session 7

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Thank you!