

Week-06-L-04

Value Engineering Agricultural Plan

Value Engineering Case Study

Case 2: Irrigation Strategies

Information & Function Phase

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CASE STUDY: Irrigation Strategies

Challenges in Improving Irrigation in Remote Areas:

- ✓ 1. Limited Water Access
- ✓ 2. High Evaporation Rates
- ✓ 3. Uneven Terrain
- ✓ 4. Lack of Infrastructure
- ✓ 5. Inefficient Techniques
- ✓ 6. Climate Variability
- ✓ 7. Soil Erosion



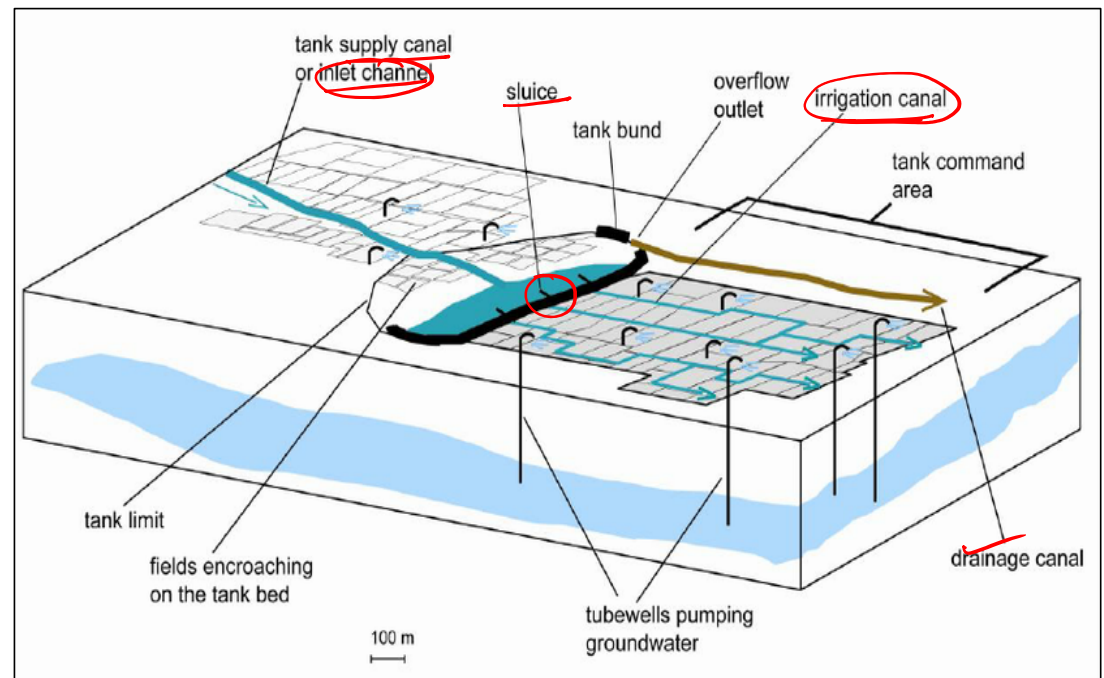
Information Phase

Project: Irrigation Strategies

- 1. Project Location and Scope:** Farmlands in arid, semi-arid regions, hilly terrains, and remote places.
- 2. Stakeholder Analysis:** Smallholder farmers, local government agencies, NGOs, and water resource management authorities.
- 3. Existing Irrigation Methods:** Surface irrigation and furrow irrigation.

Some common practices in Irrigation

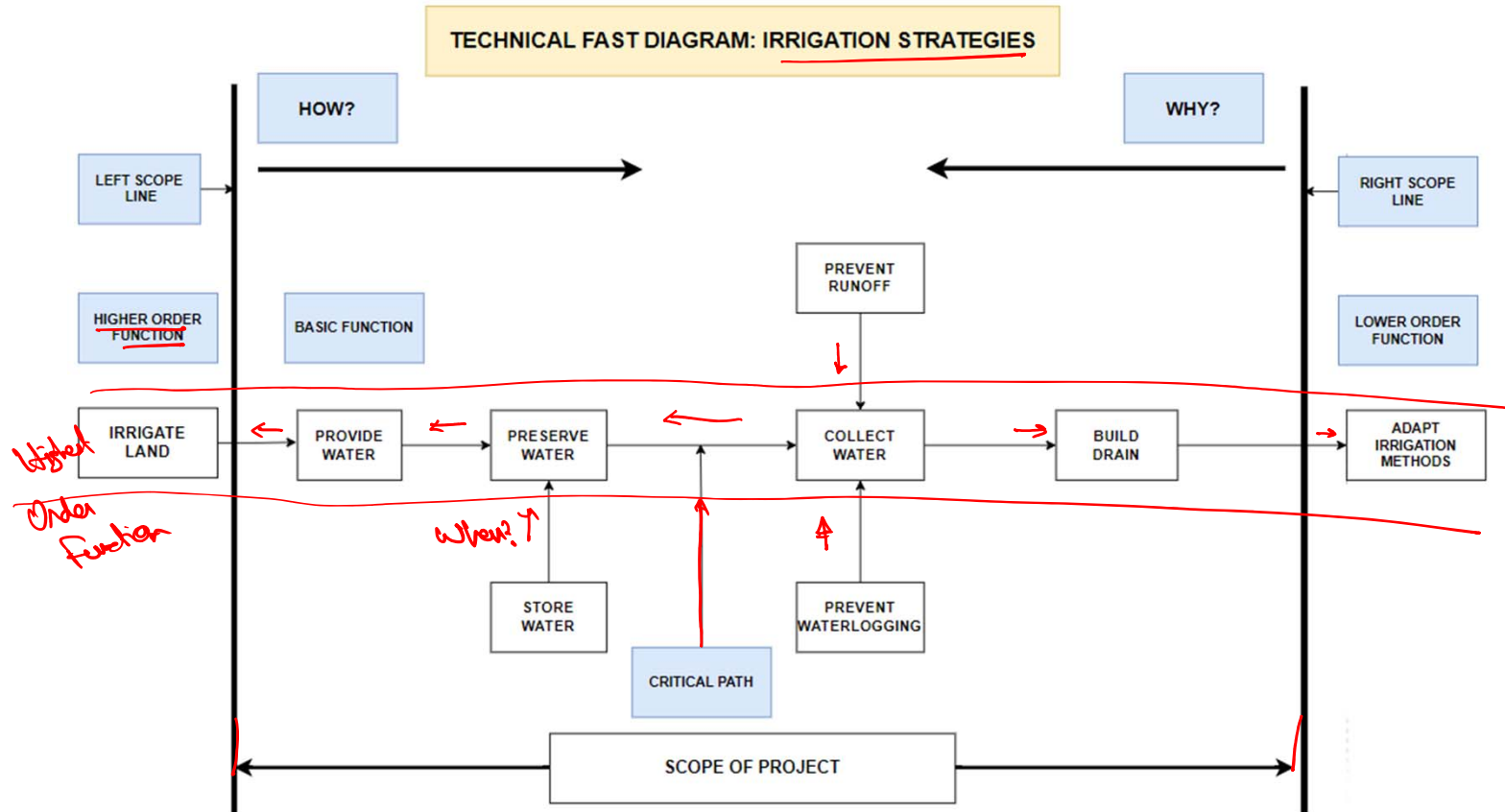
- ✓ Catchment area
- ✓ Drains
- ✓ Pond
- ✓ Supply Canal
- ✓ Irrigation Canal
- ✓ Sluice



Function Definition Worksheet

Sr. No	Part Name	Function Definition		Function Location			
		Verb	Noun	Part		Assembly	
				Primary	Secondary	Primary	Secondary
1.	<u>Catchment Area</u>	<u>Collect</u>	<u>Water</u>	✓			✓
		Harvest	Rainfall		✓		✓
		Capture	Runoff		✓		✓
2.	<u>Drains</u>	Provide	<u>Water</u>	✓			✓
		<u>Control</u>	Drainage		✓		✓
		<u>Prevent</u>	Waterlogging		✓		✓
3.	<u>Pond/Tank</u>	<u>Store</u>	<u>Water</u>	✓			✓
		Prevent	Runoff		✓		✓
		Preserve	Water		✓		✓
4.	<u>Supply Canal</u>	<u>Provide</u>	<u>Water</u>	✓			✓
		Collect	Water		✓		✓
		Control	Erosion		✓		✓
5.	<u>Irrigation Canal</u>	<u>Irrigate</u>	<u>Land</u>	✓		✓	
		<u>Distribute</u>	Water		✓		✓
		<u>Manage</u>	Water		✓		✓
6.	<u>Sluice</u>	<u>Control</u>	Flow	✓			✓
		<u>Prevent</u>	Overflow		✓		✓
		<u>Preserve</u>	Water		✓		✓

Function Phase



Thank You

