



# CHECKLIST FOR

## CONSTRUCTION AND REMODELING OF J-HEAD SPURS / DIKES / FLOOD BUNDS / TRAINING WORKS

## **INSTRUCTIONS FOR FILLING IN THE CHECKLIST**

Before filling the Checklist, concerned officer should read these instructions carefully and contact SEMU office if further clarification or information is required

1. Study “Social and Environmental Assessment Guidelines for Irrigation Infrastructure” circulated by the IPD with the purpose to fully understand the guidelines, checklists and mitigation measures
2. Project based supplementary checklists have been provided for different irrigation and drainage Projects including small dams. Fill only the concerned checklists
3. Glossary of Terms is provided below for convenience
4. Before submitting PC-1 to DDSC for approval, final PC-1 along with the filled checklists may be sent to SEMU at least 3 days prior to the DDSC meeting for timely feedback
5. Use additional space if required with any of the checklists
6. Monitoring Plan of SEMU:

Keeping in view the responsibility to ensure social and environmental mitigation measures are duly implemented, SEMU team has developed a monitoring mechanism which includes:

- ✓ Reporting by the project executing engineer to SEMU
- ✓ Inspection visits by SEMU for field observations

## **GLOSSARY**

**Major Project actions/activities** mean land acquisition (temporary or permanent), earth work (provision, excavation, redressing, reshaping, compaction) and stone pitching etc

**Mitigation measures** are the measures that will be proposed by the executor to mitigate the potential negative impacts and to enhance the beneficial impacts

**Results indicators** mean to provide the documents or data to verify that mitigation measures have been properly taken in time including progress reports, photographs etc

**Environmental hotspots:** The areas which have environmental as well as cultural and social value. They may include protected areas, game reserves, national parks, wildlife sanctuaries, forests and trees etc

**Protected area:** An area of land especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and is managed through legal or other effective means

**National park:** A national park is a reserve of land, usually, but not always declared and owned by a national government, protected from most human development and recreation

**Game reserve:** A game reserve is an area of land set aside for maintenance of wildlife for tourism or restricted hunting purposes

**Encroachment:** Illegal occupation of land and construction of structures e.g houses, shops, koasacs, chappar, benches etc

**Infrastructure:** Structures like railway, road network, sewerage, telephone, and gas pipelines etc

**Archeological sites:** The sites which have significance as built heritage and have historic value

**Cultural sites:** The sites which have educational, artistic, civilizing, literary and intellectual value

**Religious sites:** The sites which have religious, sacred, spiritual or symbolic value e.g. shrine, temple, tomb or any other holy place of worship

**Health hazards:** The hazards which can cause damage to human health either by direct or indirect means e.g. during project activities

**Scenic/Aesthetic beauty:** Landscape of the area that may be affected due to project activities e.g. due to irregular cutting of trees, due to piles of solid waste and garbage etc

**Water logging:** It is a phenomenon whereby soil remains water saturated at least one year and is detrimental to the growth of normal plants

**Soil salinity:** The excessive accumulation of soluble salts in the soils which affects the growth of normal plants or crops

**Ecosystem:** means dynamic complex of plant, animals and microorganism communities and their non living environment inter acting as functional unit

**Squatters:** People who take unauthorized possession on unoccupied land

**SAMPLE REPORTING FORM**

Name of Project: \_\_\_\_\_

Location of Project: \_\_\_\_\_

<b>Project Stage</b>	<b>Planning PC-I</b>	<b>Execution</b>	<b>Completion</b>
----------------------	----------------------	------------------	-------------------

Project Duration \_\_\_\_\_

Name and designation of executing Officer \_\_\_\_\_

Cell # \_\_\_\_\_

e-mail \_\_\_\_\_

**1. Major Project Actions/Activities**

1. LAND ACQUISITION
2. EARTH WORK (Provision, Excavation , Dressing, Reshaping And Compaction)
3. STONE PITCHING
4. \_\_\_\_\_

**2. Identify and explain problems encountered in applying IPD Social and Environmental Guidelines.**

  

**3. Do you have any suggestions on how the guidelines/checklists can be improved?**

  

**4. Was SEMU assistance sought for filling in the checklist before submission of PC-1 to DDSC?**

  

**5. What % age of total cost has been allocated for environmental mitigation measures?**

  

Name and Signature of executing officer:

Date:

**PRIMARY BASELINE DATA COLLECTION FOR CONSTRUCTION AND REMODELING OF J-HEAD SPURS/ DIKES/ FLOOD BUNDS/ TRAINING WORKS**

PARAMETERS OF ENVIRONMENTAL/SOCIAL IMPACTS	YES	NO	LIKELY	REMARKS WHERE POSSIBLE, PROVIDE DETAILS
<b>PHYSICAL ENVIRONMENT</b>				
<ul style="list-style-type: none"> <li>What land forms units are present in the project area?</li> </ul>				Active flood plain                      Recent flood plain Belas (island) in the active flood plain
<ul style="list-style-type: none"> <li>Are there any inundation areas on right and left bank of river?</li> </ul>				
<ul style="list-style-type: none"> <li>Are the Belas are under cultivation?</li> </ul>				
<ul style="list-style-type: none"> <li>Would there be any change in pattern of flow of river water during bund/ dike construction?</li> </ul>				
<ul style="list-style-type: none"> <li>Is there any risk of soil erosion and damage to the agriculture lands of adjoining villages in high flow season?</li> </ul>				
<ul style="list-style-type: none"> <li>Whether project activity would stop high flood risk in the area?</li> </ul>				
<ul style="list-style-type: none"> <li>Are people dependent on river water for drinking or for livestock or fisheries?</li> </ul>				
<ul style="list-style-type: none"> <li>Will access and availability of water be disrupted by the project activity?</li> </ul>				
<ul style="list-style-type: none"> <li>What is the river water quality?</li> </ul>				Good    bad    marginal
<ul style="list-style-type: none"> <li>Is the quality of river water suitable for agriculture?</li> </ul>				
<ul style="list-style-type: none"> <li>Do people in the area use groundwater for drinking?</li> </ul>				
<ul style="list-style-type: none"> <li>What is groundwater quality in surrounding areas?</li> </ul>				
<ul style="list-style-type: none"> <li>Does the river water receive any discharges/ effluents from the municipal or industry?</li> </ul>				

PARAMETERS OF ENVIRONMENTAL/SOCIAL IMPACTS	YES	NO	LIKELY	REMARKS WHERE POSSIBLE, PROVIDE DETAILS
• Are there any sources of water pollution identified?				If yes, have these been documented?
• Does project action affect groundwater recharge and adversely affect drinking water supplies in vicinity?				
• Is there water logging exist in surrounding areas?				
• Is there soil salinity exist in the surrounding areas?				
<b>BIOLOGICAL ENVIRONMENT</b>				
• Are there trees, forest, gardens and other vegetation resources of special importance present in proposed area?				No. Type
• Is there any affect on trees, forest, gardens and vegetation due to activity? How many?				No. Type
• Whether people use trees and vegetation as fuel wood?				
• Are there any environmental hotspots in the Bella or in and around the project? What type?				Protected areas, National park, Wetlands, Grazing areas, Wildlife sanctuary
• Does the riverine ecosystem abundant in the activity area?				
• What type of wildlife is present in the area?				Type
<b>SOCIAL ENVIRONMENT</b>				
• What type of land is present for construction of Spur Bund/ Dike/Training works?				Private land State land
• Is land acquisition necessary? How much is the area?				Voluntary ----- acres Involuntary----- acres Has it been documented?
• Is there any displacement of people, their households, assets or livelihoods involved?				
• Is there aggravation of any dispute on land ownership?				



**CHECKLIST FOR IDENTIFICATION OF S & E IMPACTS DURING CONSTRUCTION AND REMODELING OF J-HEAD SPURS/ DIKES/FLOOD BUNDS/TRAINING WORKS**

PROPOSED ACTIONS	PARAMETERS OF ENVIRONMENTAL/ SOCIAL IMPACTS	YES	NO	PROPOSED MITIGATION MEASURES	MITIGATION COST
<b>LAND ACQUISITION</b>	<b>SOCIAL ENVIRONMENT</b>				
	• Displacement / resettlement				
	• Loss of houses				
	• Loss of infrastructure/ Utilities				
	• Loss of crops/ trees/ orchards				
	• Loss of land/ ownership				
<b>EARTH WORK</b> ( PROVISION, EXCAVATION, DRESSING, RESHAPING AND COMPACTION)	<b>PHYSICAL ENVIRONMENT</b>				
	• Dust Pollution				
	• Noise and vibration				
	<b>BIOLOGICAL ENVIRONMENT</b>				
	• Cutting of trees / Removal of vegetation				
	• Disturbance to wild animals and birds etc				
	• Disturbance to riverine ecosystem				
	• Damage to forests/game reserves / national parks				



PROPOSED ACTIONS	PARAMETERS OF ENVIRONMENTAL/ SOCIAL IMPACTS	YES	NO	PROPOSED MITIGATION MEASURES	MITIGATION COST
	<ul style="list-style-type: none"> <li>• Damage to wetlands</li> </ul>				
	<ul style="list-style-type: none"> <li>• Damage to fisheries / aquatic life</li> </ul>				
	<b>SOCIAL ENVIRONMENT</b>				
	<ul style="list-style-type: none"> <li>• Loss of crops/ trees/ orchards</li> </ul>				
	<ul style="list-style-type: none"> <li>• Loss of infrastructure/ Utilities</li> </ul>				
	<ul style="list-style-type: none"> <li>• Threat to health</li> </ul>				
	<ul style="list-style-type: none"> <li>• Damage to archeological / cultural/ religious sites</li> </ul>				
	<ul style="list-style-type: none"> <li>• Deterioration of scenic/aesthetic quality</li> </ul>				
<b>STONE PITCHING</b>	<b>PHYSICAL ENVIRONMENT</b>				
	<ul style="list-style-type: none"> <li>• Dust Pollution</li> </ul>				
	<ul style="list-style-type: none"> <li>• Noise and vibration</li> </ul>				
	<b>BIOLOGICAL ENVIRONMENT</b>				
	<ul style="list-style-type: none"> <li>• Cutting of trees / Removal of vegetation</li> </ul>				
	<ul style="list-style-type: none"> <li>• Disturbance to wild animals and birds etc</li> </ul>				
	<ul style="list-style-type: none"> <li>• Damage to forests/game reserves / national parks</li> </ul>				
	<ul style="list-style-type: none"> <li>• Damage to wetlands</li> </ul>				
<ul style="list-style-type: none"> <li>• Damage to fisheries / aquatic life</li> </ul>					

PROPOSED ACTIONS	PARAMETERS OF ENVIRONMENTAL/ SOCIAL IMPACTS	YES	NO	PROPOSED MITIGATION MEASURES	MITIGATION COST
	<b>SOCIAL ENVIRONMENT</b>				
	<ul style="list-style-type: none"> <li>• Loss of crops/ trees/ orchards</li> </ul>				
	<ul style="list-style-type: none"> <li>• Loss of infrastructure/ Utilities</li> </ul>				
	<ul style="list-style-type: none"> <li>• Deterioration of scenic/aesthetic quality</li> </ul>				
	<ul style="list-style-type: none"> <li>• Threat to health</li> </ul>				

**ADOPTED MITIGATION MEASURES**

MAJOR PROJECT ACTIONS / ACTIVITIES		PARAMETERS	IDENTIFIED IMPACTS	ADOPTED MITIGATION MEASURE(S)	MITIGATION COST
1.	<b>LAND ACQUISITION</b>				
2.	<b>EARTH WORK</b> ( PROVISION, EXCAVATION, DRESSING, RESHAPING AND COMPACTION)				
3.	<b>STONE PITCHING</b>				

**Name and Signature of executing officer:**

**Date:**

**MONITORING / EVALUATION FORM**

**Name of Project/Channel:** \_\_\_\_\_  
**Location of Project/Channel:** \_\_\_\_\_

<b>Project Stage</b>	<b>Planning PC-I</b>	<b>Execution</b>	<b>Completion</b>
----------------------	----------------------	------------------	-------------------

**Project Duration** \_\_\_\_\_  
**Name and designation of executing Officer** \_\_\_\_\_  
**Cell #** \_\_\_\_\_  
**e-mail** \_\_\_\_\_

MAJOR PROJECT ACTIONS/ACTIVITIES		MITIGATION MEASURES	RESULTS INDICATORS	MONITORING RESPONSIBILITY
1.	<b>LAND ACQUISITION</b>			
2.	<b>EARTH WORK</b> ( PROVISION, EXCAVATION, DRESSING, RESHAPING AND COMPACTION)			
3.	<b>STONE PITCHING</b>			

**Name and Signature of executing officer:**

**Date:**