



# CHECKLIST FOR LINING OF CANALS / DISTRIBUTARIES / MINORS / DRAINS

## **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** means land acquisition (temporary or permanent), excavation/diversion (diversion of water course, diversion route), earth work (provision, dressing, reshaping, compaction), construction of bridges, lining of water channel and closure of canal 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** means 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

**SAMPLE REPORTING FORM**

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

Project Stage	Planning PC-I	Execution	Completion
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Total Discharge \_\_\_\_\_  
 Total Command Area \_\_\_\_\_  
 Project Duration \_\_\_\_\_  
 Name and designation of executing Officer \_\_\_\_\_  
 Cell # \_\_\_\_\_  
 e-mail \_\_\_\_\_

**1. Major Project Actions/Activities**

1. LAND ACQUISITION
2. EXCAVATION/ DIVERSION
3. EARTH WORK (PROVISION, DRESSING, RESHAPING AND COMPACTION)
4. CONSTRUCTION OF BRIDGES
5. LINING OF WATER CHANNEL
6. CLOSURE OF CANAL

**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 LINING OF CANALS, DISTRIBUTARIES, MINORS AND DRAINS**

PARAMETERS OF ENVIRONMENTAL/SOCIAL IMPACTS	YES	NO	LIKELY	REMARKS (WHERE POSSIBLE, PROVIDE DETAILS)
<b>PHYSICAL ENVIRONMENT</b>				
<ul style="list-style-type: none"> <li>Will there be an unscheduled or extended closure of the canal(s)?</li> </ul>				
<ul style="list-style-type: none"> <li>Will there be changes in the area commanded by existing outlets?</li> </ul>				
<ul style="list-style-type: none"> <li>Will there be a change in water allocation and availability to the existing command area?</li> </ul>				
<ul style="list-style-type: none"> <li>Are households dependent on canal water for drinking?</li> </ul>				
<ul style="list-style-type: none"> <li>Is the quality of canal water suitable for drinking?</li> </ul>				
<ul style="list-style-type: none"> <li>Are sources of water pollution identified?</li> </ul>				
<ul style="list-style-type: none"> <li>Will access and availability of drinking water from the canals be disrupted/decreased by the project?</li> </ul>				
<ul style="list-style-type: none"> <li>Will access and availability of drinking water be disrupted/decreased for the livestock by the project?</li> </ul>				
<ul style="list-style-type: none"> <li>Do all households in the project area have access to groundwater for drinking?</li> </ul>				
<ul style="list-style-type: none"> <li>Are there any adverse trends in water availability or quality in the existing sources of groundwater for drinking?</li> </ul>				
<ul style="list-style-type: none"> <li>Will any project action affect the groundwater recharge in the project area and adversely affect the drinking water supplies?</li> </ul>				

PARAMETERS OF ENVIRONMENTAL/SOCIAL IMPACTS	YES	NO	LIKELY	REMARKS WHERE POSSIBLE, PROVIDE DETAILS
<b>BIOLOGICAL ENVIRONMENT</b>				
<ul style="list-style-type: none"> <li>Is there any kind of vegetation/trees in the area where project activities/actions are to be executed?</li> </ul>				No. of trees _____ Type / Species of trees _____
<ul style="list-style-type: none"> <li>If present, will there felling of trees/cutting of vegetation be required?</li> </ul>				No. of trees to be cut _____
<ul style="list-style-type: none"> <li>Is there any kind of endangered species of animals/birds in the area where project activities/actions are to be executed?</li> </ul>				No. of animals _____ Name/species of animals _____ No. of birds _____ Name/species of birds _____
<ul style="list-style-type: none"> <li>Is there any type of environmental hotspot in the project area?</li> </ul>				Name /Type of environmental hotspot _____ Present uses (if any) _____
<b>SOCIAL ENVIRONMENT</b>				
<ul style="list-style-type: none"> <li>Is there any kind of encroachment in the project area?</li> </ul>				Total No. of house holds _____ No. of shops/benches etc. _____ Any other structure _____
<ul style="list-style-type: none"> <li>Is there any kind of infrastructure in the project area?</li> </ul>				Railway Line _____ Gas pipeline _____ Sewerage Line _____ Telephone Line _____
<ul style="list-style-type: none"> <li>Is there any type of archeological / cultural/ religious site in the area?</li> </ul>				Name / type of site _____ Present conditions _____

**CHECKLIST FOR IDENTIFICATION OF S & E IMPACTS DURING LINING WORK OF CANALS, DISTRIBUTARIES, MINORS AND DRAINS**

MAJOR 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>EXCAVATION/ DIVERSION</b>	<b>PHYSICAL ENVIRONMENT</b>				
	• Dust Pollution				
	• Noise and vibration				
	<b>BIOLOGICAL ENVIRONMENT</b>				
	• Cutting of trees / Removal of vegetation				
	• Damage to forests/game reserves / national parks				
	• Disturbance of wild animals and birds etc				
	• Damage to wet lands				
	• Damage to fisheries / aquatic life				
	<b>SOCIAL ENVIRONMENT</b>				

MAJOR PROPOSED ACTIONS	PARAMETERS OF ENVIRONMENTAL/ SOCIAL IMPACTS	YES	NO	PROPOSED MITIGATION MEASURES	MITIGATION COST
	<ul style="list-style-type: none"> <li>• Damage to archeological / cultural/ religious sites</li> </ul>				
	<ul style="list-style-type: none"> <li>• Threat to health</li> </ul>				
	<ul style="list-style-type: none"> <li>• Deterioration of scenic/aesthetic quality</li> </ul>				
<b>EARTH WORK</b> ( PROVISION, DRESSING, RESHAPING AND COMPACTION)	<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 of wild animals and birds etc</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>• Deterioration of scenic/aesthetic quality</li> </ul>					
<b>CONSTRUCTION OF BRIDGES</b>	<b>PHYSICAL ENVIRONMENT</b>				
	<ul style="list-style-type: none"> <li>• Noise and vibration</li> </ul>				
	<b>SOCIAL ENVIRONMENT</b>				
	<ul style="list-style-type: none"> <li>• Loss of infrastructure/ Utilities</li> </ul>				



MAJOR PROPOSED ACTIONS	PARAMETERS OF ENVIRONMENTAL/ SOCIAL IMPACTS	YES	NO	PROPOSED MITIGATION MEASURES	MITIGATION COST
<b>LINING OF WATER CHANNEL</b>	<b>PHYSICAL ENVIRONMENT</b>				
	• Affect on groundwater recharge				
	• Affect on groundwater quality				
	• Dust Pollution				
	• Noise and vibration				
	<b>SOCIAL ENVIRONMENT</b>				
	• Threat to health				
<b>CLOSURE OF CANAL</b>	<b>PHYSICAL ENVIRONMENT</b>				
	• Water availability				
	<b>BIOLOGICAL ENVIRONMENT</b>				
	• Cutting of trees / Removal of vegetation				
	• Damage to forests/game reserves / national parks				
	• Disturbance of wild animals and birds etc				
	• Damage to wet lands				
	• Damage to fisheries / aquatic life				
	<b>SOCIAL ENVIRONMENT</b>				
• Loss of crops/ trees/ orchards					

**ADOPTED MITIGATION MEASURES**

<b>MAJOR PROJECT ACTIONS / ACTIVITIES</b>		<b>PARAMETERS</b>	<b>IDENTIFIED IMPACTS</b>	<b>ADOPTED MITIGATION MEASURE(S)</b>	<b>MITIGATION COST</b>
1.	<b>LAND ACQUISITION</b>				
2.	<b>EXCAVATION/ DIVERSION</b>				
3.	<b>EARTH WORK</b> ( PROVISION, DRESSING, RESHAPING AND COMPACTION)				
4.	<b>CONSTRUCTION OF BRIDGES</b>				
5.	<b>LINING OF WATER CHANNEL</b>				
6.	<b>CLOSURE OF CANAL</b>				

Name and Signature of executing officer:

Date:

**MONITORING / EVALUATION FORM**

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

Location of

Project/Channel: \_\_\_\_\_

Project Stage

Planning PC-I

Execution

Completion

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

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

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

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

	MAJOR PROJECT ACTIONS/ACTIVITIES	MITIGATION MEASURES	RESULTS INDICATORS	MONITORING RESPONSIBILITY
1.	LAND ACQUISITION			
2.	EXCAVATION/ DIVERSION			
3.	EARTH WORK ( PROVISION, DRESSING, RESHAPING AND COMPACTION)			
4.	CONSTRUCTION OF BRIDGES			
5.	LINING OF WATER CHANNEL			
6.	CLOSURE OF CANAL			

Name and Signature of executing officer: \_\_\_\_\_

Date: \_\_\_\_\_