Annex 7: Impact Assessment

The impact of each activity on each receptor was assessed according to magnitude on a scale of -10 to 10, where negative values indicate a negative influence on the receptor, and importance on a scale of 0 to 10, which encompasses the probability of occurrence, frequency of the impact etc. The numbering system is used as a relative measure, where more negative numbers correspond to impacts having a higher negative magnitude. Susceptible receptors and corresponding activity are deduced and addressed if both magnitude and importance are of minor severity.

Further, the Buroz Relevant Integrated Criteria and is used to determine the Impact Significance, I, of the impact for each activity on all receptors and of the project overall.

On the basis of the value of the importance of impact, I, obtained, the severity of the impact of an activity is assessed.

Criterion	Definition	Scoring Scale
Intensity (IN)	Degree of destruction of activity on receptor	1 (lowest)-12 (highest)
Extension (EX)	Theoretical area of influence of the impact	1 (localized) – 8 (widespread)
Momentum (MO)	Period of time for manifestation of the impact	4 (immediate: <1 year) – 2 (medium: 1-5 years)- 1 (long term: > 5 years)
Persistence (PE)	Duration of the effect of the impact	1 (fleeting, < 1 year), 2 (temporary, 1-5 years), 4 (permanent, >5 years)
Reversibility (RV)	Possibility of returning to pre-activity initial conditions by rebuilding or natural means	1 (short term, < 1 year)- 2 (medium term, 1-5 years) – 4 (long term, > 5 years or irreversible)
Recoverability (MC)	Possibility of reconstruction with corrective measures	1 -2 (full and immediate recovery)- 4 (partial recovery and medium term)- 8 (unrecoverable)
Synergy (SI)	Reinforcement ability of manifested effects	1(No synergy of actions on a receptor) -2 (moderate synergism)-4 (high synergy)
Accumulation (Ac)	Progressive increase of the effect	1 (no cumulative effect)-4(cumulative effect)

Criterion	Definition	Scoring Scale
Effect (EF)	Directionality of impact-the cause (action)-effect (impact)	4 (direct)- 1 (indirect)
Frequency (PR)	Regularity of manifestation of the effect	4 (continuous) – 2 (irregular)-1 (periodic)
Impact Significance (I)	$I = \pm (3{\times}IN + 2{\times}EX + MO + PE + RV + SI + AC + EF + PR + MC)$	

CONSTRUCTION | OPERATION & MAINTENANCE

Activities (Construction): Transport of Equipment; Temporary storage; Site preparation: Area delineation & Fencing; Excavations; Concrete foundations; Installation of mechanical Equipment; Placement wiring and electrical connections; staffing; Liquid Waste Generation; Solid Waste Generation; testing; Hazardous waste; Connection with infrastructure

Activities (Operation & Maintenance): Commissioning tests; PRS normal operation; worker and tools transportation; Storage of hazardous material; Inspection of routine work; Preventive Maintenance; water consumption (human used and firefightinh); hazardous waste generation; solid Waste generation

CATEGORY	COMPONENT	RECEPTOR
PHYSICAL RECEPTORS	Soil	Soil degradation
		Potential Soil pollution
		Landscape & visual impact
	Air	Air quality
		Air emissions
	Water	Potential pollution of ground water sources
		Superficial water sources consumption
BIOLOGICAL RECEPTORS	Flora	Endangered & protected species
		Habitat modification
	Fauna	Endangered & protected species
		Disturbance of fauna
		Barriers/corridors
SOCIO-CULTURAL RECEPTORS	Social	Land use
		Occupational Health & Safety for workers
		Community Health, Safety & Security
		Workforce & job opportunities
		Land needed
		Traffic & Accessibility
		Cultural/historical heritage
		Overconsumption of community resources
		Women & vulnerable groups
	Economic	Infrastructure development
		Community Development
		Local economy (local supply chain)
		Regional economy (supply chain)

Legend:

$M = (+ -)(1 - 10)$

Magnitude / Importance

$I = (1 - 10)$

The table below is based on the Buroz's Relevant Integrated Criteria

CHARACTERISTICS \ ACTIVITIES	CONSTRUCTION									Water utilization for:				OPERATION & MAINTENANCE								
	Assembling structures	Energy supply (Diesel generator)	Placement permanent structures and plataforms	Placement of temporary buildings	Placement wiring, electrical connections & excavation	Construction of infrastructure & permanent buildings	Transportation of workers	Reception & storage of equipment and materials	Waste Generation	Construction	Human consumption	Cleaning activities	Sanitary facilities	Commissioning tests	Receiving equipment & materials (heavy trucks & transporters)	Operation of the solar panels	Connection to the distribution grid	Inspection of routine civil engineering quality records	Preventive Maintenance	Corrective maintenance	Water consumption (human activities)	Waste generation
Type of impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
Intensity (IN)	6	6	12	6	12	3	5	12	12	12	12	12	12	1	2	1	1	1	12	2	1	3
Extension (EX)	1	3	1	1	1	1	1	1	3	3	1	3	3	1	1	1	1	1	3	3	1	3
Momentum (MO)	4	1	4	4	4	4	1	4	4	4	1	1	4	1	1	1	1	1	4	4	2	4
Persistence (PE)	4	2	4	2	4	4	1	1	4	4	4	4	4	1	1	4	1	1	4	1	1	1
Reversibility (RV)	1	1	1	1	1	1	1	1	4	2	2	2	2	1	1	1	1	1	1	1	1	1
Sinergy (SI)	1	1	1	1	1	1	1	1	4	4	4	4	4	1	4	1	1	1	4	4	1	4
Acumulation (AC)	1	1	2	1	1	1	1	1	4	4	1	4	4	1	1	1	1	1	2	2	1	4
Effect (EF)	4	4	4	4	1	4	4	1	4	2	2	2	4	1	1	1	1	1	4	2	2	2
Frequency (PR)	2	2	2	1	4	2	2	2	4	4	4	4	4	1	2	1	1	1	2	2	1	2
Recoverability (MC)	1	1	1	1	1	1	1	1	4	2	2	2	4	1	1	1	1	1	2	2	1	4
IMPORTANCE	38	37	57	35	55	29	29	50	74	68	58	65	72	13	20	16	13	13	65	30	15	37

IMPORTANCE

51.3	24.7

IRRELEVANT
Minor
Meduim
Major