



Annex 8: 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 total importance, 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.

Criterium	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)
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)



Importance of Impact (I)

$$I = \pm (3 \times IN + 2 \times EX + MO + PE + RV + SI + AC + EF + PR + MC)$$

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

Receptor CATEGORY	COMPONENT	RECEPTOR	PROJECT PHASES												Construction	Operation	
			CONSTRUCTION						OPERATION								
		ACTIVITIES															
			Transport of equipment/ machinery- truck driving	Temporary storage/unloading of equipment and materials	Site preparation: Area delineation & Fencing	Working in outdoor environment	Building construction of control room	Installation of mechanical equipment	Placement wiring and electrical connections	Excavation: High pressure steel pipeline	Welding	Pipe laying	Hydrostatic testing	Backfilling	Waste Generation	PRS operation	High pressure pipeline
																	Odorizing unit (replacing tanks)
																	Routine inspection and maintenance (control room)
Physical	Soil	Soil degradation			-1	1		-1	1				-5	5			
		Soil pollution						-1	1							-1	1
		Landscape															
	Air	Emission of gases		-10	2		-10	1	-10	4	-7	2		-10	3	-6	2
		Emission of dust		-4	4	-10	4	-1	1	-9	9		-5	5	-9	4	-1
	Water	Surface water pollution											-2	1			
	Noise	Background noise levels		-3	1	-1	1	-1	1	-4	3	-5	-5	4	-2	2	-1
Biological	Flora	Trees and plants along canal															
	Fauna	Dogs, cats, pigeons															
Socio-Economic	Social	OHS Workers		-2	2	-5	4	-1	1	-6	6	-4	-6	4	-10	2	-2
		Integrity of UG facilities															
		Community Health, Safety & Security		-2	2	-2	1			-4	1	-4	-6	6	-5	2	-1



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Criteria	Activities	Construction														Operation and maintenance			
		Transport of equipment and machinery	Temporary storage/ unloading of equipment and materials	Site preparation area delineation and fencing	Working in outdoor environment	Building construction of control room	Installation of mechanical equipment	Placement/wiring and electrical connections	Waste generation	Excavation: high pressure network	Welding	Pipe laying	Backfilling	Leakage testing:Hydrostatic	PRS operation	High pressure pipeline	Odorant unit	Routine inspection and maintenance	
Type of impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Intensity (IN)/12	1	1	1	7	1	6	12	6	9	9	9	5	12	6	6	6	8		
Extension (EX)/8	1	2	1	1	1	1	1	1	1	1	1	1	4	1	1	2	4		
Momentum (MO)/4	3	4	3	4	4	4	4	4	4	4	4	4	4	4	3	4	4		
Persistence (PE)/5	1	1	2	1	1	1	2	4	4	4	4	4	1	1	1	1	1		
Reversibility (RV)/4	1	1	1	1	1	1	4	1	4	4	4	1	1	1	1	3	1		
Sinergy (SI)/4	1	1	1	2	1	1	1	4	1	1	1	1	1	1	1	1	2		
Accumulation (AC)/4	1	1	1	2	1	1	1	4	1	1	1	1	1	1	1	2	1		
Effect (EF)/4	1	1	1	4	1	1	1	4	4	3	4	4	4	1	1	4	3		
Frequency (PR)/4	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1		
Recoverability (MC)/8	1	1	1	4	1	1	4	1	3	4	4	1	4	1	1	4	1		
Importance of impact (I)	15	18	16	42	16	31	56	46	51	51	52	31	61	31	30	42	46		
							37.4								37.3				
									37.3										

