

No.	Port import operations	w <sub>1</sub> Δ R1			Difference with the base case BAU	Tank	w <sub>2</sub> Δ R2			Difference with the base case BAU	Alternative scenarios (Operational activities)				w <sub>4</sub> Δ R4	w <sub>5</sub> Δ R5	w <sub>6</sub> Δ R6	Difference with the base case BAU	Operations and storage on industrial site	w <sub>7</sub> Δ R7	w <sub>8</sub> Δ R8	w <sub>9</sub> Δ R9	Difference with the base case BAU	Total Σw <sub>i</sub> Δ R	Comments on feasibility viz.: - Estimation time for implementation - Continuous supply - Economics							
		w <sub>1</sub>	Δ	R1			w <sub>3</sub>	Δ	R3		w <sub>3</sub>	Δ	R3	w <sub>3</sub>												Δ	R3	w <sub>3</sub>	Δ	R3		
3A	1) 80 x 12,5 tons Iso-container/week to Haifa Port (1000 t/week);	3	1	3	1) more movement with containers chance of leakage (+)	No storage tank	1	-10	-10		1	1	1	1) smaller quantity of ammonia (-);				1) Transport of 10 iso-containers/day from terminal by road tanker to Haifa N (+);	3	5	13	Move traffic on road and possibility of road accidents	1) 50 Iso-container (625 t) at pressure of about 11 bar in Haifa North	3	2	5	1) smaller quantity of ammonia (-);	11.5	Reason: - Many iso-containers required so more handling and possibility of falling iso-containers - More movement by trucks so road accidents in probably populated area - Many connections and disconnections of hoses etc. to empty the iso-containers - Additional strategical amount of ammonia in iso-container on the site to maintain continuity			
	2) 80 x 12,5 tons Iso-container/week to Ashdod (1000 t/week)				2) smaller quantities (-)									2) partition of amount in 12,5 t/container (-)				2) Transport of 10 iso-containers/day from terminal by road tanker to Demisha (+);					2) 50 Iso-container (625 t) at pressure of about 11 bar in Haifa South;				2) partition of amount in 12,5 t/container (-)					
					3) pressurize containment, so leakage more likely (+)									3) robust construction (-)				3) Transport of 10 iso-containers/day from terminal by road tanker to Haifa S (+);					2) 50 Iso-container (625 t) at pressure of about 11 bar in Deshamin;				3) robust construction (-)					
					4) iso-containers can fall from the crane (+)									4) higher probability of leakage (+)													4) higher probability of leakage and emission because of connecting and disconnecting of hoses in order to empty the iso-containers (+)					
																											5) Strategical amount of ammonia needs to be stored for process continuity (+)					
					Remark: Only people in the harbour will be affected if the maximum distance of 300 metres would give lethality																						Remark: Only personnel on the plant will be affected if the maximum distance of 300 metres would give lethality					
BAU	2500 -16000 t/3 weeks by ship;	3	0	0	Basis of Δ R	12000 t in Haifa, including emergency storage	1	0	0	Basis of Δ R	1	0	0	No storage of ammonia in port				From storage tank:	3	0	0	Basis of Δ R					3	0	0		0	
	Unloading in 24 h with capacity of 500 t/h																	1) direct to Haifa N;														
																		2) by underground pipeline to Deshamin;														
																		3) 5 road tankers per day														