

ANNEX: FIGURES AND TABLES



Figure 1: ECOWAMA and the Circular Economy

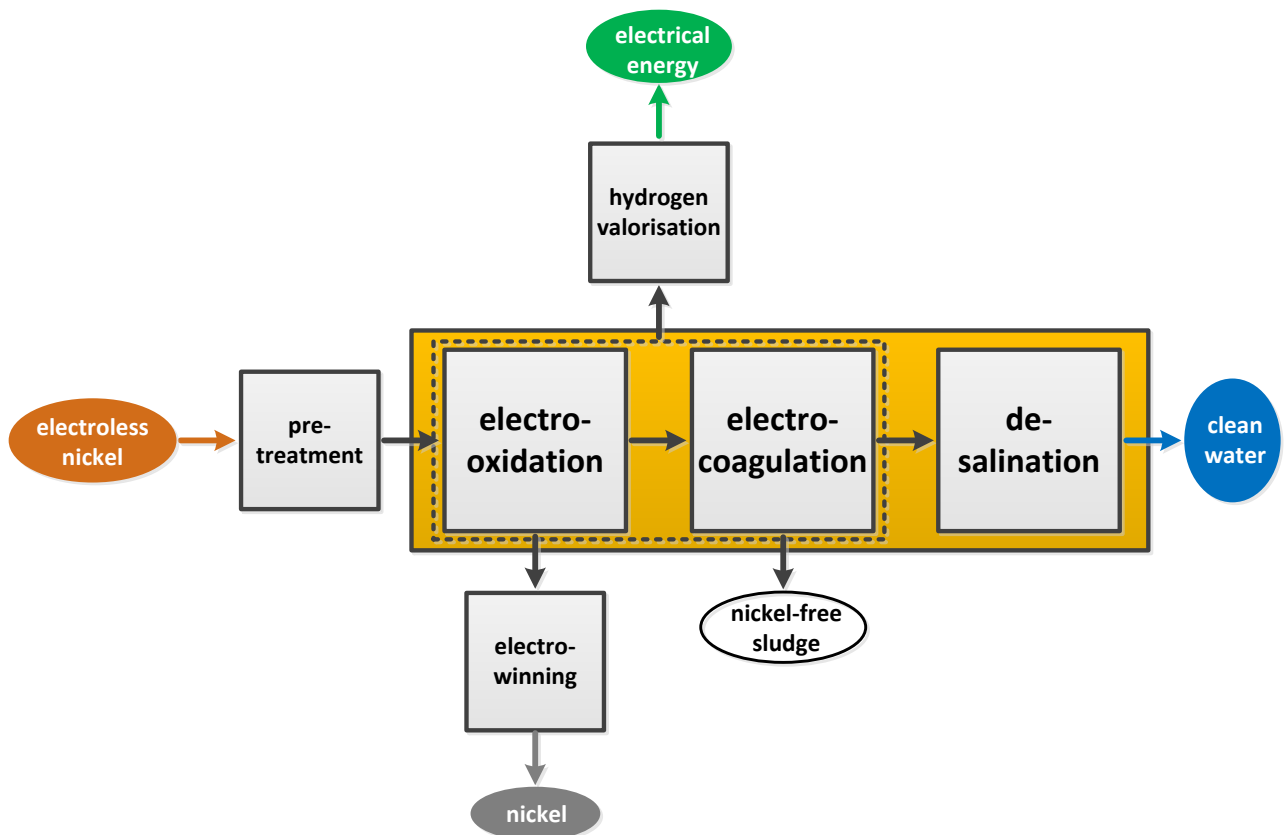


Figure 2: Overall concept of ECOWAMA project

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Table 1: Monitored parameter during demonstration phase (stream: nickel rinsing wastewater)

Parameter (Average over the demonstration phase period)	Unit	Raw wastewater	Distillate	Concentrate
Conductivity	µs/cm	4 500	18	35 000
Nickel	mg/L	1000	< 0,1	15 500

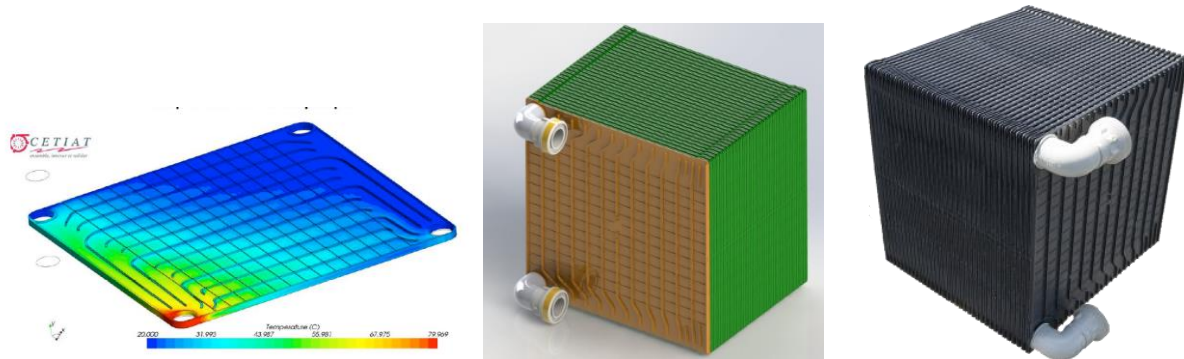


Figure 3: Heat transfer simulation / New plastic heat exchanger (CAO view and real picture)

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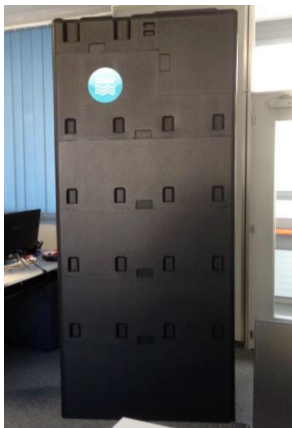
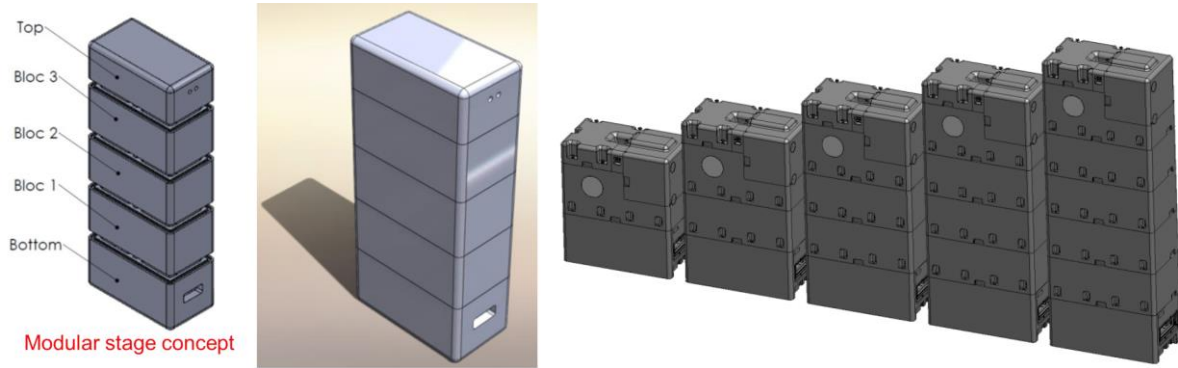


Figure 4: MHD new evaporation unit / CAO views

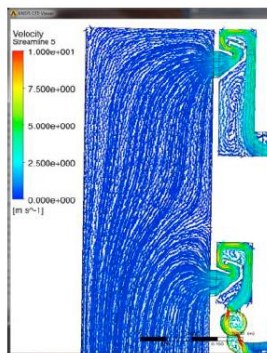


Figure 5: CFD simulation to evaluate the air flow and optimise the droplet separator geometry

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Figure 6: The 2 MHD evaporation units and its control system implemented in the ECOWAMA pilot plant

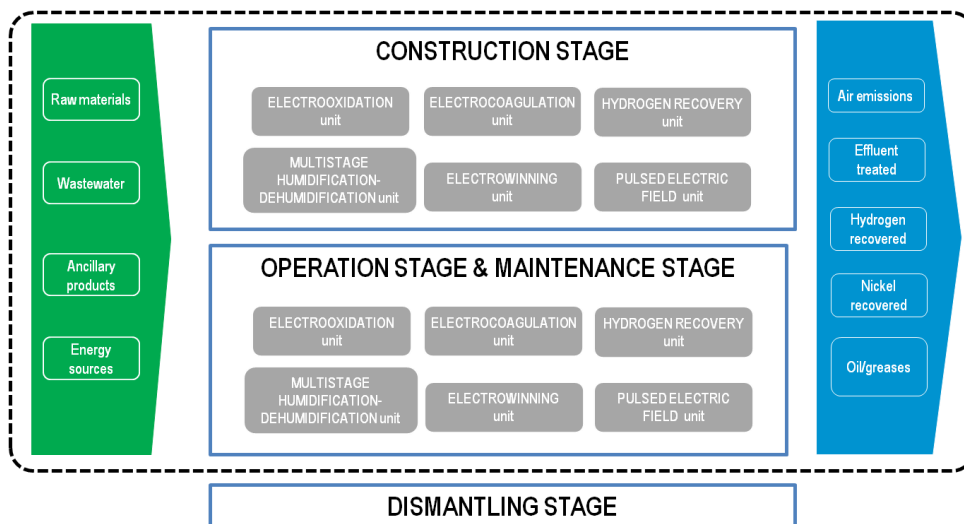


Figure 7. System boundaries of the system under study

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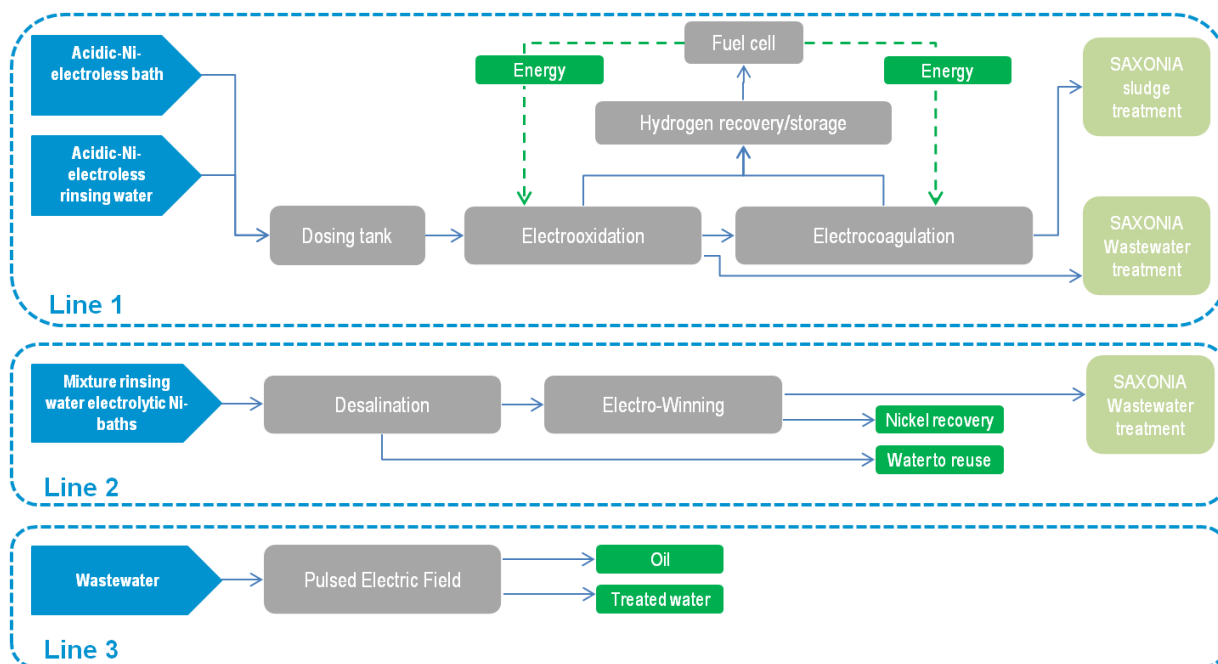


Figure 8. ECOWAMA System definition (operation)

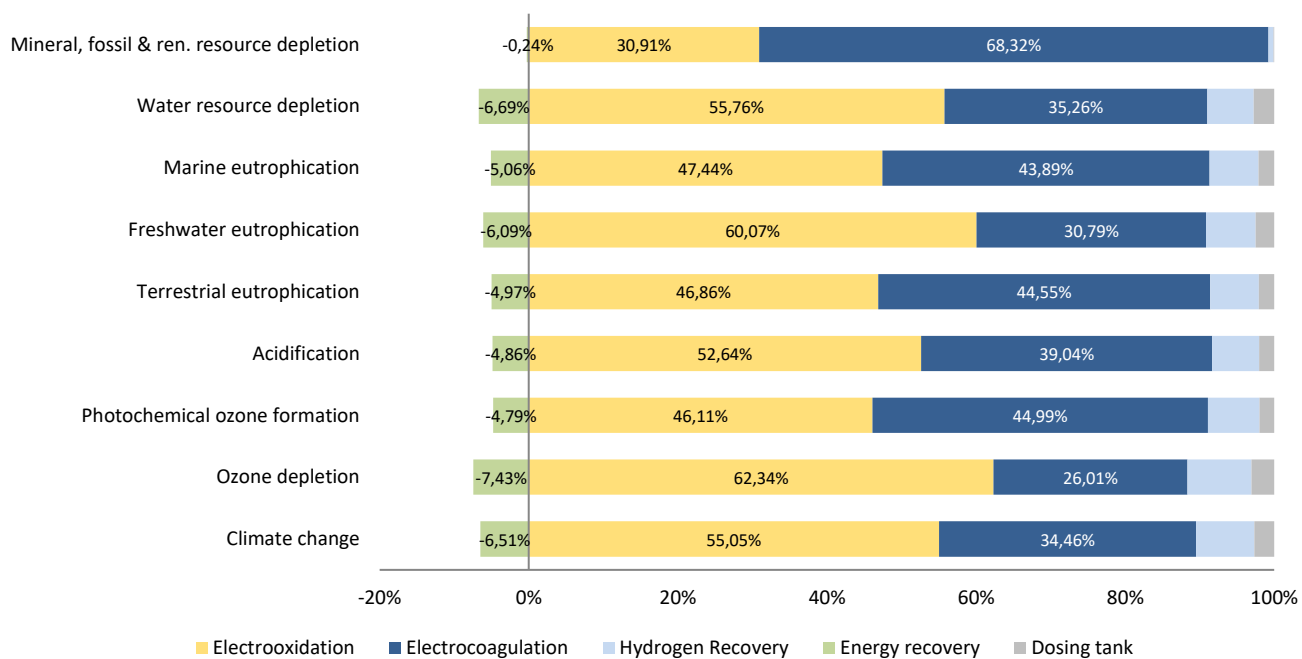


Figure 9. Potential environmental impact contributions of Line1

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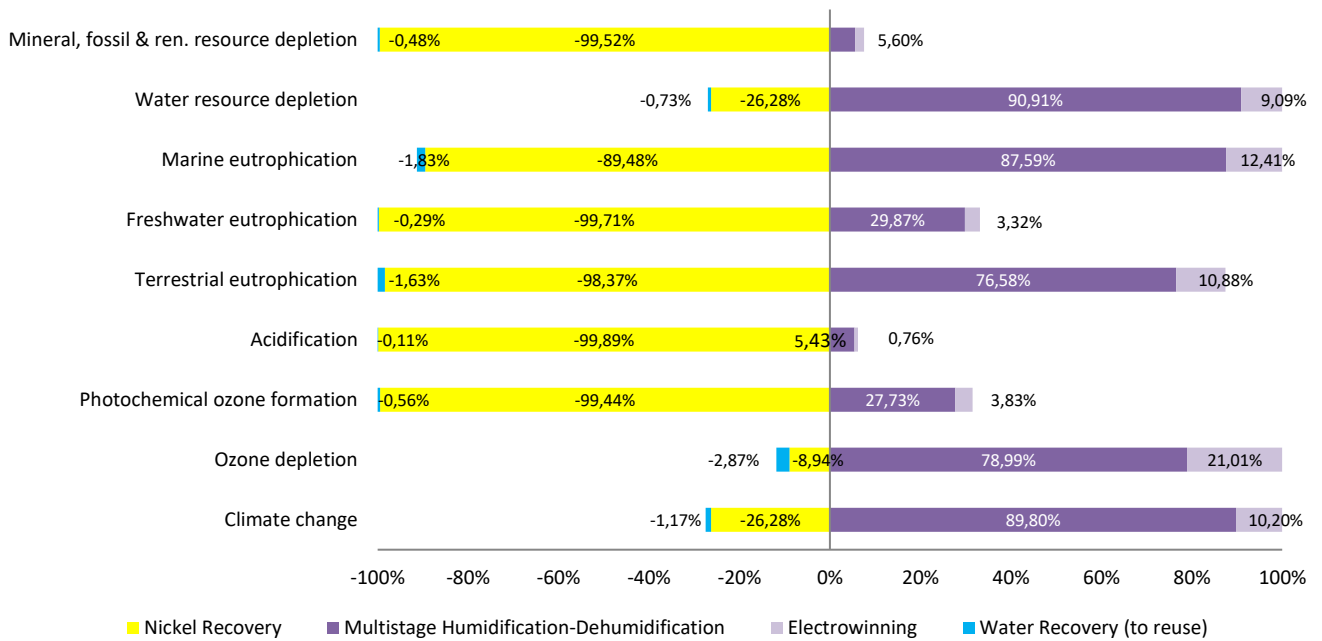


Figure 10. Potential environmental impact contribution of Line 2

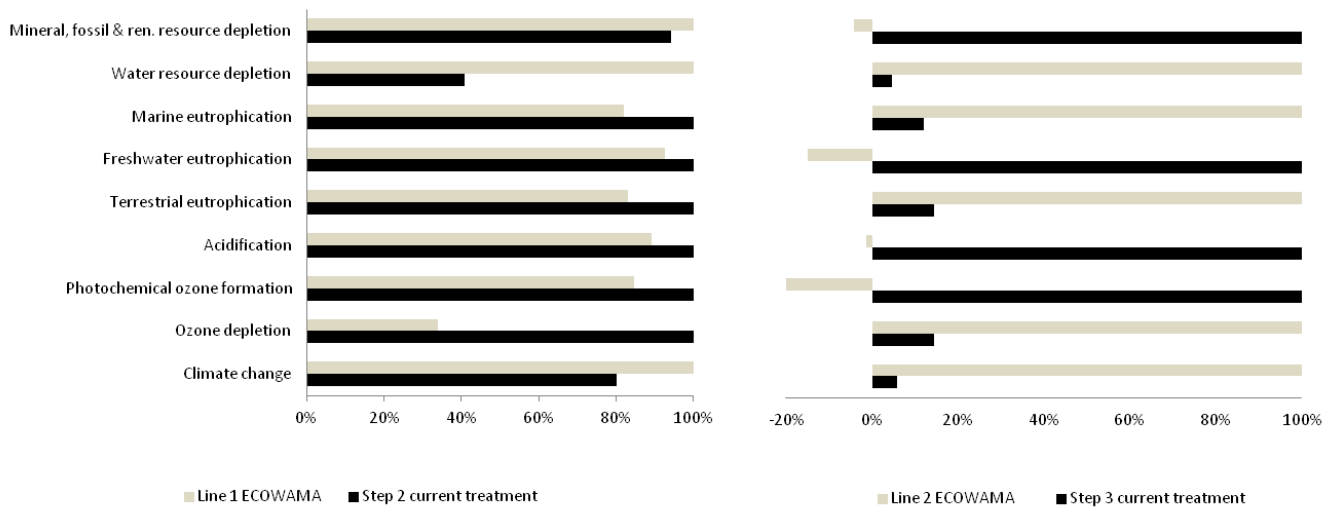


Figure 11. Potential environmental impact contribution of Line 1 and Line 2 of ECOWAMA system compared with the step 2 and step 3 (respectively) of the current treatment performed in Saxonia Galvanik