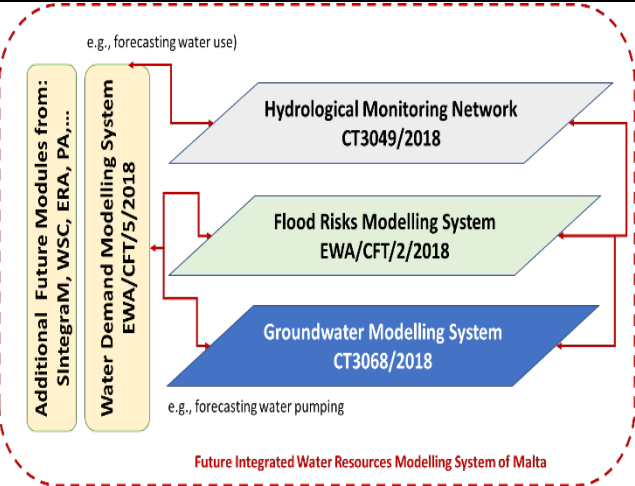


	Engagement		MALTA-GRW: Malta Groundwater Resources Mathematical Modeling					
	Countries	Project value (€)	% by EPSILON	€ by EPSILON	Engagement	Funding by	Date	Partners
	Malta	195.000	100%	195.000	Tender	Government of Malta	10/7/2018	EPSILON, NTUA-
Description					Outcome			
The objective of this engagement has been to propose numerical groundwater models to support the implementation of Malta's 2nd River Basin Management Plan (RBMP). The Maltese project extended beyond the development of numerical models for the identified groundwater bodies within the Maltese Islands. It also sought to build the necessary capacity within the Energy & Water Agency (EWA) staff, ensuring they can continue using these models to support, in the long run, a holistic and integrated management of Malta's water resources through a GIS-based management plan. This proposal was aimed to produce long-term benefits for the Energy & Water Agency by adhering to three key principles in developing the modeling platform: - The model(s) should have been operational on the EWA GIS platform or ArcGIS. - Any GIS technology, background data, or outputs will be compatible with SINTEGRAM (e.g., coordinates, INSPIRE compliance). - The GIS platform hosting the model(s) were designed to accommodate all other relevant EWA projects (as per Section 2.1: Project Implementation Philosophy), including: EWA/CF/2/2018 on flood risk (awarded to EPSILON Malta Ltd.), CT 3068/2018 on groundwater modeling (response via this proposal), CT 3049/2018 on the hydrological monitoring network.					 Outcome Data & Data-gap analysis and recommendations for modelling. Data collection aimed to focus on meteorological data, hydro-geological/soil characteristics and geochemical parameters, series of groundwater table elevations, chloride concentrations, and irrigation practices. Development of steady-state models A conceptual model aimed to be developed to simulate flow characteristics. Subsequently, a model will simulate variable-density flow. Pre- and post-processing GIS-based algorithms will be utilized for variable-density groundwater flow and step-by-step simulations. The EPSILON system was based on ArcGIS and compatible with the platforms used by EWA, WSC, and SINTEGRAM. Training Activities (one-week training course will be provided to EWA staff on relevant procedures) Development of numerical models simulating current scenarios (transient state conditions) Development of requested simulations results Dissemination and Public Engagement			