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Living Lab1 Silba

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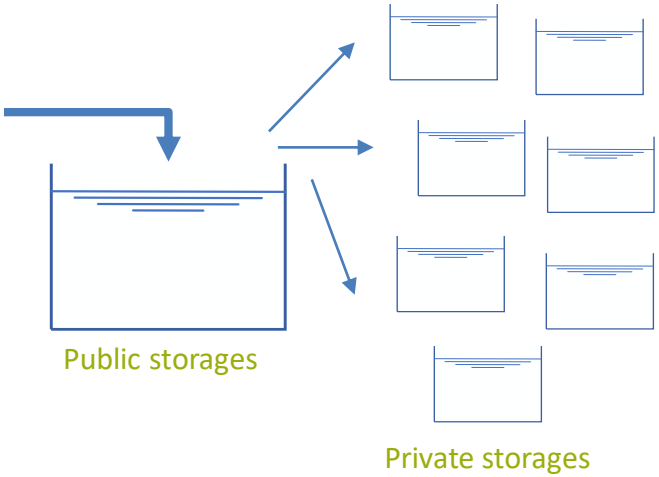
Silba, an island in the Adriatic Sea

- A small Croatian island with an area of 15 km^2 and ca. 300 permanent residents.
- 30 nautical miles away from Zadar (the centre of regional government).
- There are no roads for cars or motorcycles.
- The main activities on are agriculture, fishing and tourism.

Water and electricity supply

A limited amount of water is collected as rainwater while the remainder is delivered with **water supply ships from inland**.

Water supply ships bring water from inland



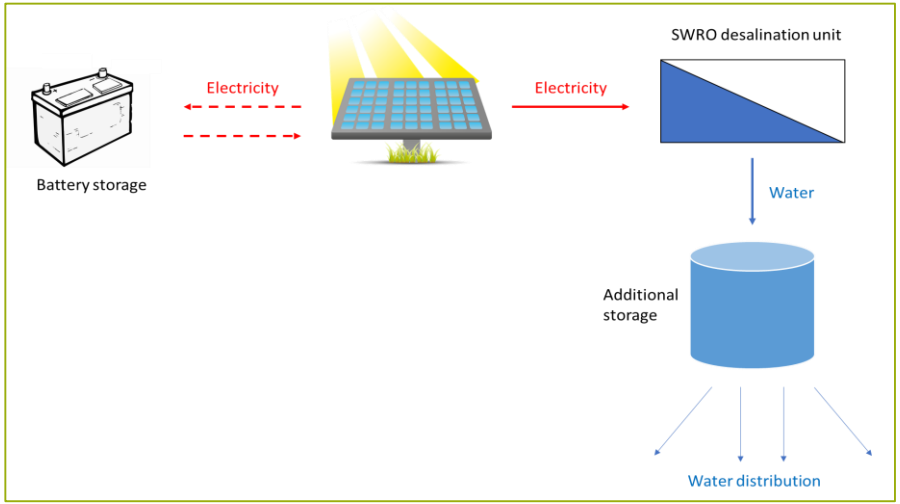
Electricity supply to islands is provided through **submarine cables**. In the cases when cables are broke, diesel generators are used to power the islands with electricity.

Living Lab1 Silba

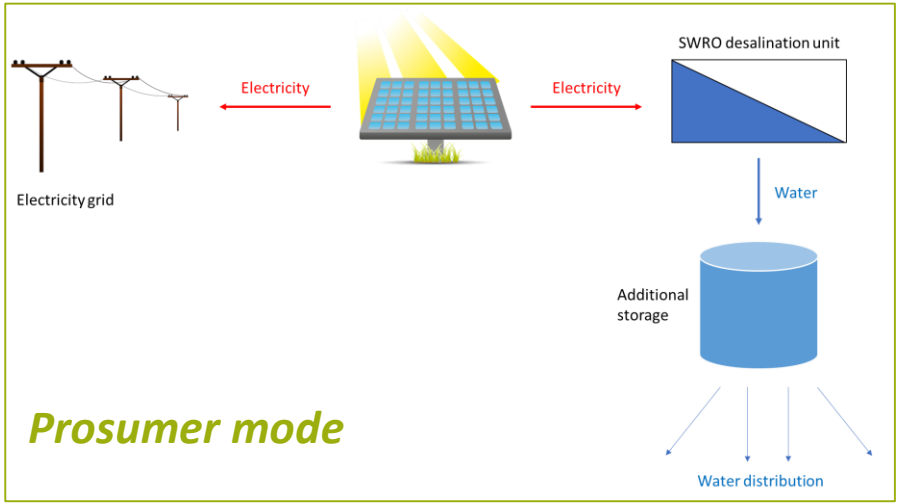
- The Living Lab1 Silba initiative was imagined as a holistic in-depth analysis of the water-electricity issues on the island.
- It was focused on the stakeholder engagement, technology selection and socio-economic feasibility assessment.
- The results and impacts (both measurable and non-measurable) were documented in a prefeasibility study which was publicly disseminated to local stakeholders and promoted on social channels.

Water-electricity nexus on Silba

Scenario A, off-grid



Scenario B, on-grid



+ Renovation of existing water supply network and building of new water pipelines which would be used to transport water from the production site to residentials.

Key technological and economic outputs

- 100 m^3/day desalination unit driven by a 100 kept PV plant and 300 kWh battery storage acting as a backup.
- Additional water storage in island targeted to 500 m^3.
- Renovation of 15 km of water supply network and building of new 2.5 km of water pipelines – the highest cost, **ca. 60 % of the total investment**.
- Techno-economic analysis showed that the water produced in the proposed system would have an LCOW of **3.2-5.7 €/m^3 (> current subsidised price)**.

Top 3 things we (l)earned from the LL1 Silba

1. Stakeholders have (very) different views on the proposed concepts

- Citizens on Silba (and on other Croatian islands):

Older residents / no change-oritented	Younger residents / change-oriented
Not interested in new solutions.	Interested in new solutions.
Not aware that subsidies will not be granted 4ever.	Aware of long-term challenges.
„I just want peace of mind".	Afraid of losing the prosperity.

- Regional government and water supply company were not interested in cooperation.
- The Island Movement (Croatian partner at LL1 Silba) proved to be a valuable contributor to engage stakeholders.

Top 3 things we (l)earned from the LL1 Silba

2. Water and electricity issues on (Croatian) islands are far more complex than we thought in the first place

- Poor water supply infrastructure (**losses up to 30 %**).
- No adequate **water drainage system** - some people even do not own cesspool, and they discharge wastewaters to uncultivated land.
- Diesel generators **are not ready in the place** – when the electricity cable breaks, the residents on islands wait for couple of days to receive generator from the inland.

Top 3 things we (l)earned from the LL1 Silba

3. Opportunities created from challenges for new projects

- Residents of Silba are interested in **upgrading and extending the prefeasibility study** by including the wastewater management.
- On other Croatian islands – the creation of **new studies for solving water-energy issues** and the development of new business models.
- Currently, we are looking for **suitable project calls and funding sources** to continue the good practice from the LL1 Silba**.**

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Thanks for your attention!

For more information:

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