



An EAFRD financial instrument for the decarbonisation of irrigation

Julio Pombo Romero, Senior Researcher,
Universidad Politécnica de Madrid
SolaQua – Financial instrument for Solar irrigation

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Irrigation in Europe

- 10.2 million ha. of irrigated land
- More than half of the value of agricultural production in the Mediterranean regions
- 60 bn m³ year of water consumption (44% of total water used in Europe)
- 24 TWh/ year of energy consumption
- Directly responsible for emissions of more than 4 MM tons of CO₂



Solar irrigation



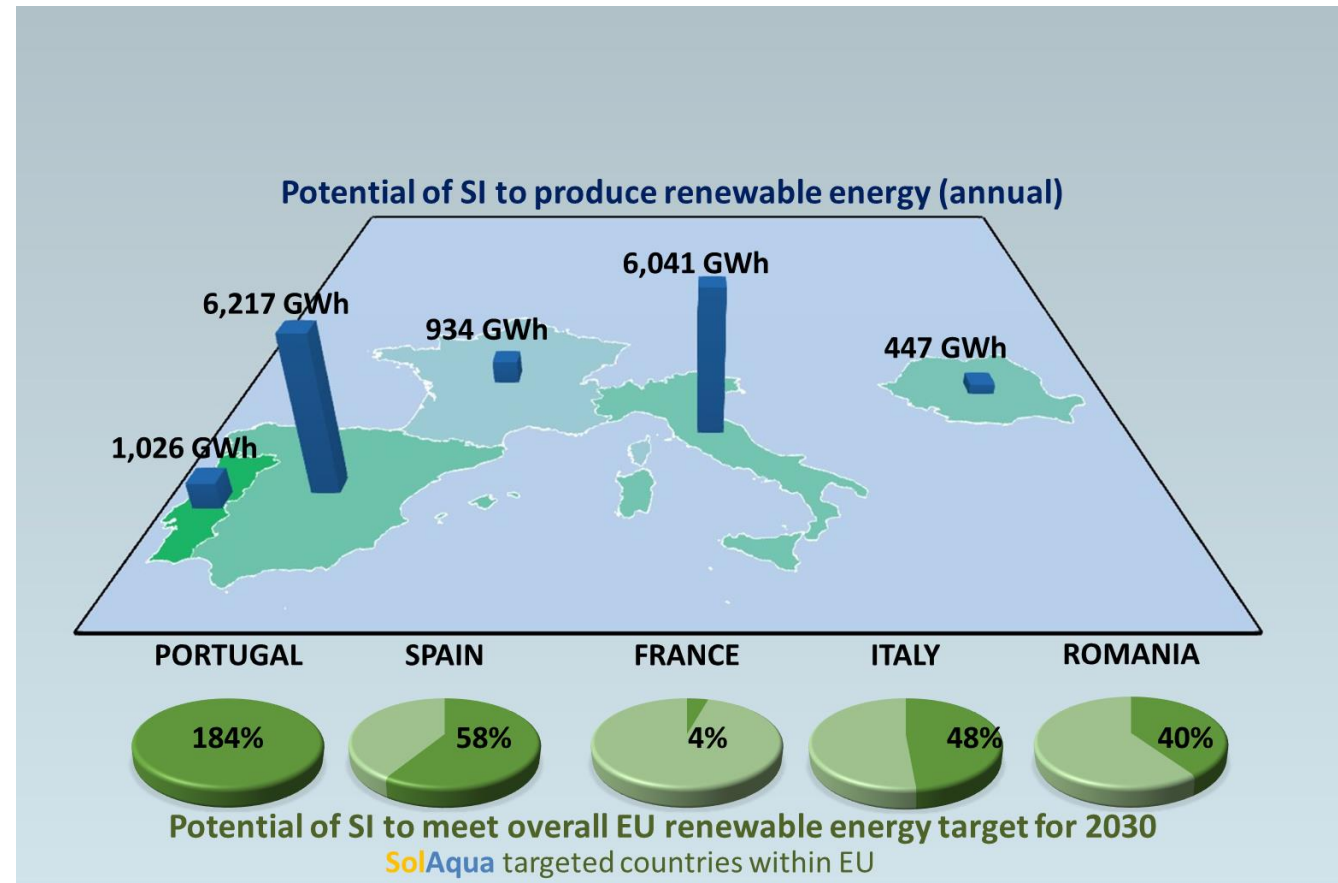
Consist of the integration of a photovoltaic generator into the irrigation system

100% clean energy and 0 fuel costs but:

- Requires high up-front investments and long payback times
- Requires a careful EPC and O&M in order to avoid infrastructure damage
- Projects are complex to design, obtain permits and integrate into the electricity grid

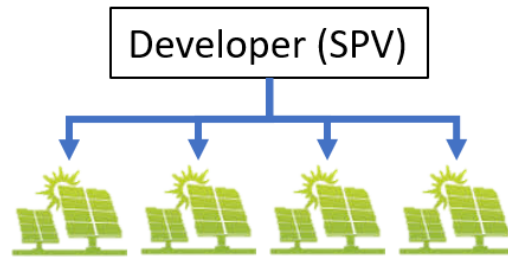


Potential of solar irrigation in Europe

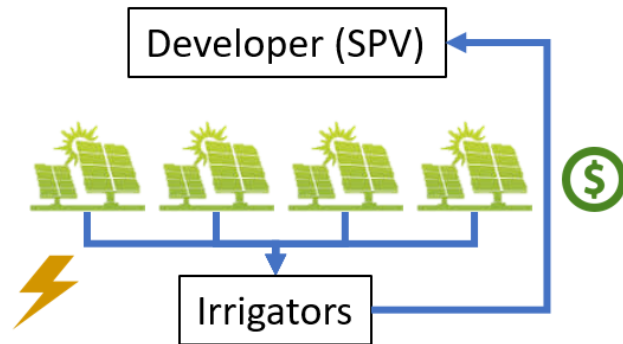


Investments over EUR 20bn needed

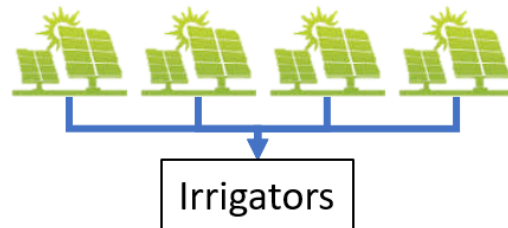
PPA: A suited business model for solar irrigation



1. The developer funds and installs PVI systems on the irrigators' land. The irrigator obtains clean energy without any upfront cost.



2. Irrigators pay the developer a periodic amount for the energy consumed. The price of the energy is established in the PPA and is decoupled from the volatility of energy markets.



3. At the end of the period established in the PPA (around 20 years), the property of the system is transferred to the irrigator.

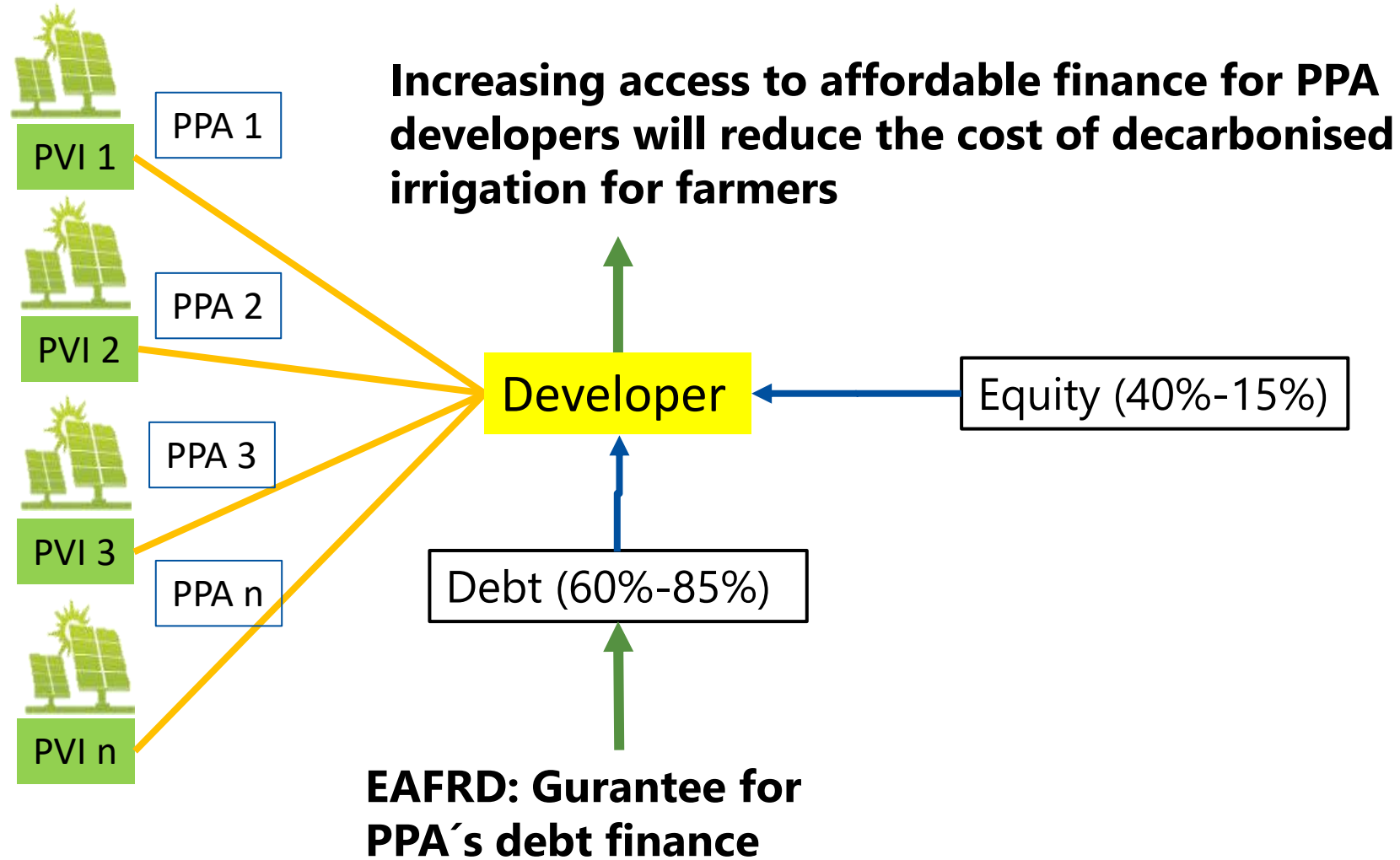
What are the main barriers to 0-carbon PPAs in irrigation:



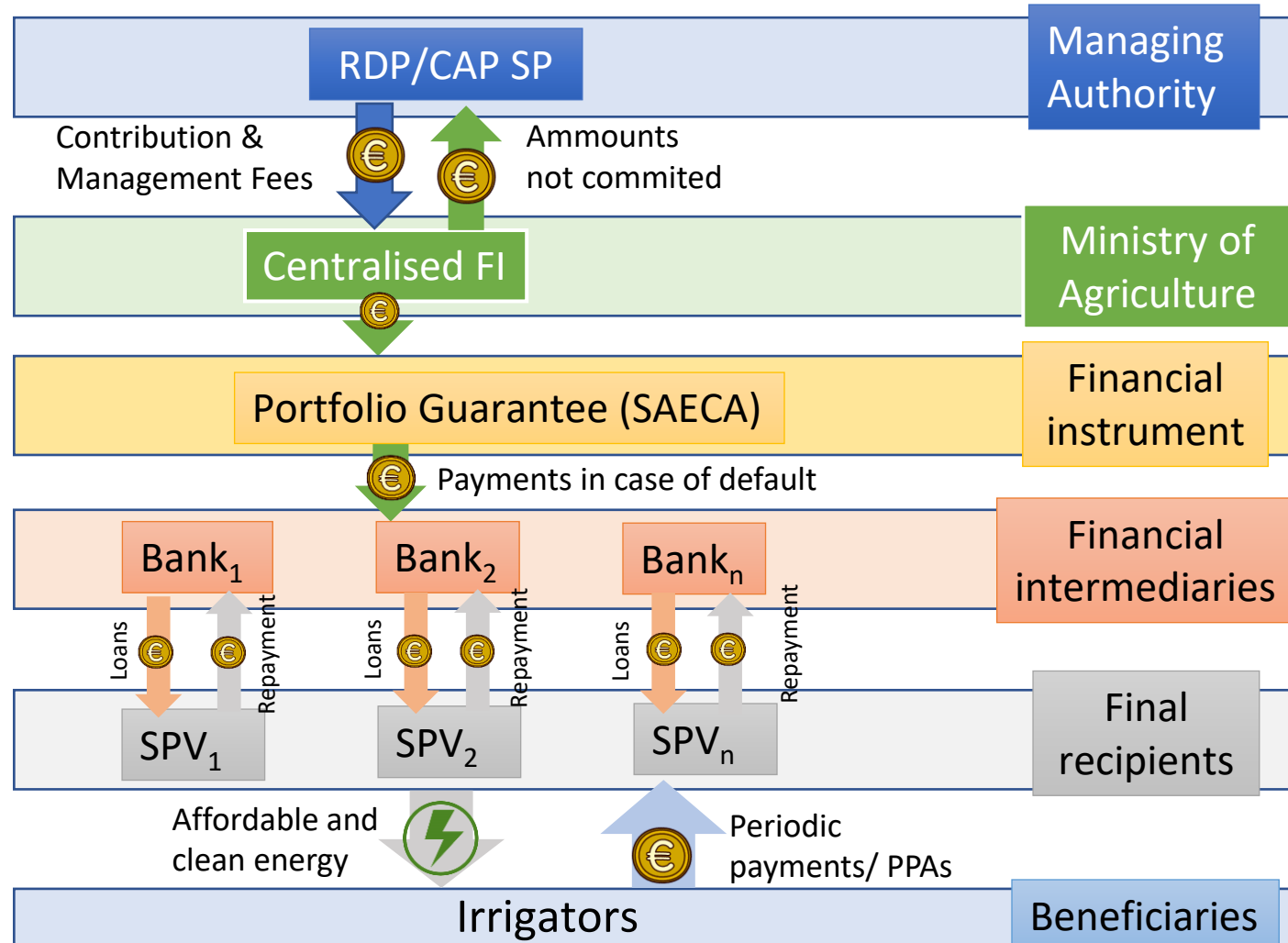
1. HIGH COST OF CAPITAL: The cost of capital is key for obtaining a competitive PPA
2. INSUFFICIENT AVAILABILITY OF FINANCE: The level of unmet demand for finance in Spanish agriculture is estimated to be EUR 8.6 billion.
3. EXISTENCE OF MARKET FAILURES: **The main reasons for rejection of farmers' loan applications in Spain is the lack of collateral**¹

¹ EC/EIB. Financial needs in the agricultural and agri-food sectors in Spain

A financial instrument for 0-carbon PPAs in irrigation



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SOLAQUA PROJECT



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