



forus

SUSTAINABLE SOLAR PROJECT DEVELOPMENT

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Forus Oy

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AGENDA

- Forus Oy
- How we understand sustainability?
- Sustainability and solar power

FORUS OY

- Forus is Better Energy's partner and PV project developer in Finland
- Our mission is to stop the climate change by scaling up better solutions
- Shareholders are not paid dividends, and profits are invested into stopping climate change



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A landscape photograph of a forest at sunset. The sky transitions from a deep blue at the top to a bright orange and yellow near the horizon where the sun is setting. A dense line of evergreen trees is silhouetted against the bright sky. In the foreground, there is a field of tall, dry grasses and several smaller evergreen trees. A semi-transparent blue horizontal band is overlaid across the middle of the image, containing the text "HOW WE UNDERSTAND SUSTAINABILITY?".

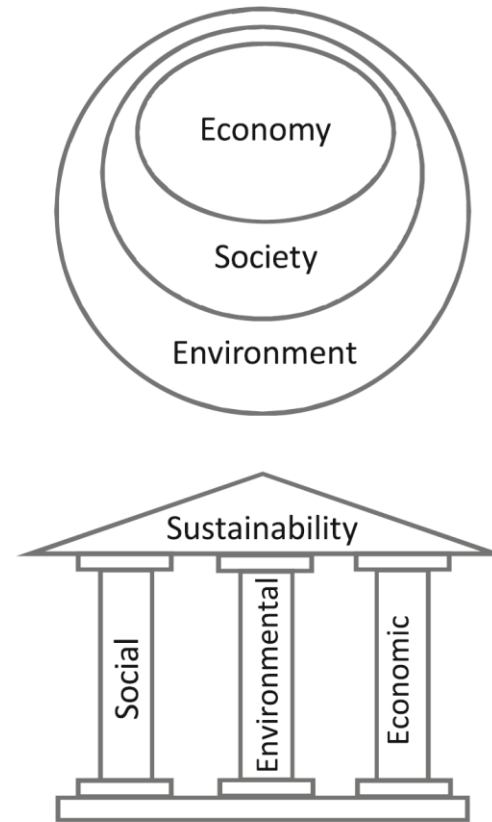
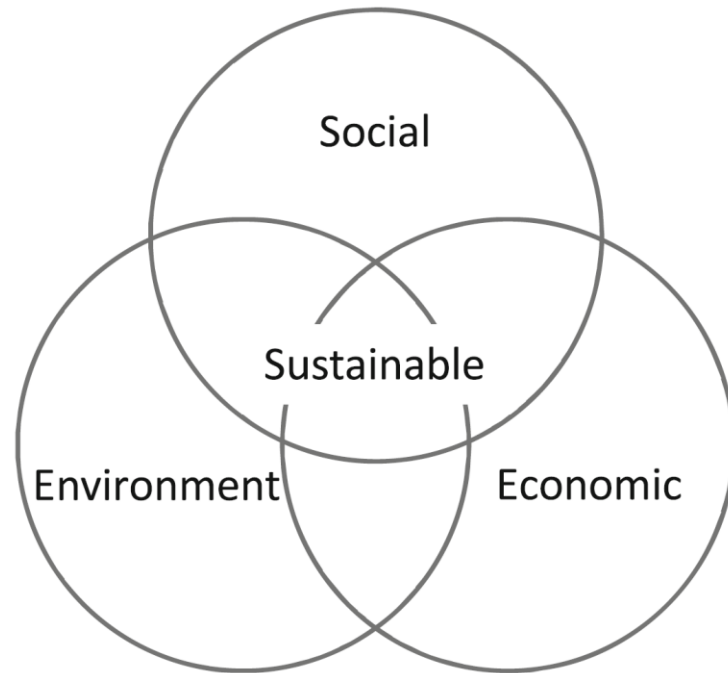
HOW WE UNDERSTAND **SUSTAINABILITY?**

SUSTAINABILITY

“Sustainability is a social goal for people to co-exist on Earth over a long time.”

Wikipedia

SUSTAINABILITY

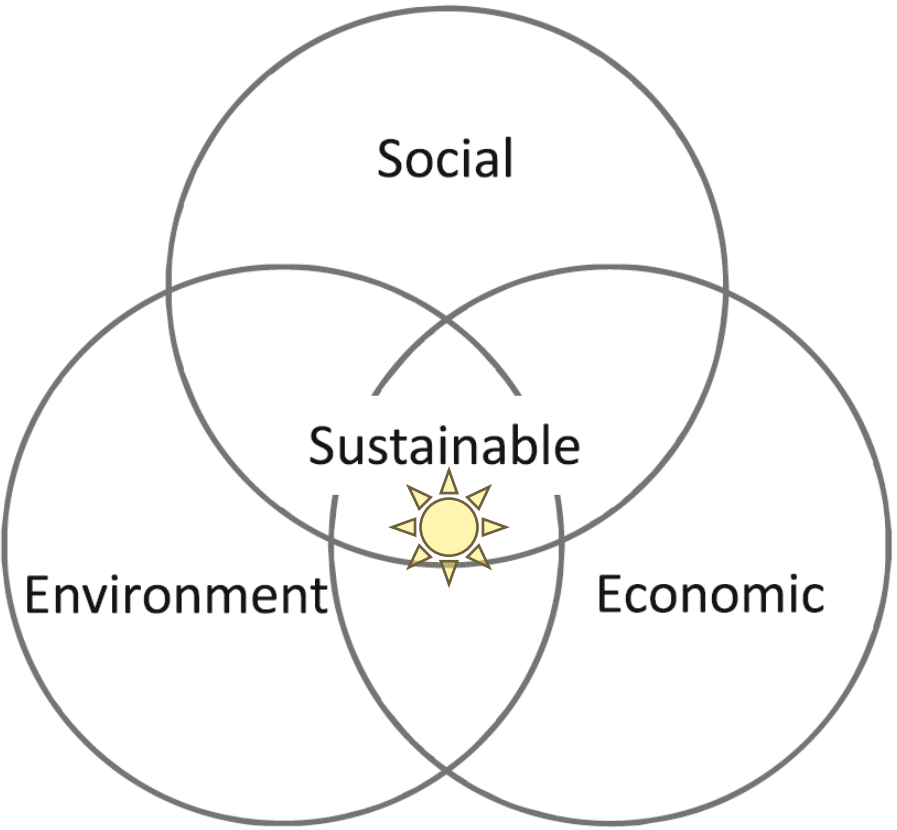


Source: Purvis, Mao and Robinson. Three pillars of sustainability: in search of conceptual origins. Sustainability Science (2019) 14: 681-695

A photograph of a solar panel in a field at dawn or dusk. The panel is in the foreground, angled towards the right. The background shows a line of trees and a hazy sky with a soft glow on the horizon. The entire image has a blue color overlay.

SUSTAINABILITY AND SOLAR POWER

SUSTAINABILITY AND SOLAR POWER



SUSTAINABILITY AND SOLAR POWER

HOW TO BE A SUSTAINABLE PROJECT DEVELOPER?

Environment:

Be like Greta Thunberg. Make a stand, challenge the existing norms and beliefs, demand more actions. Be bold.

Economy:

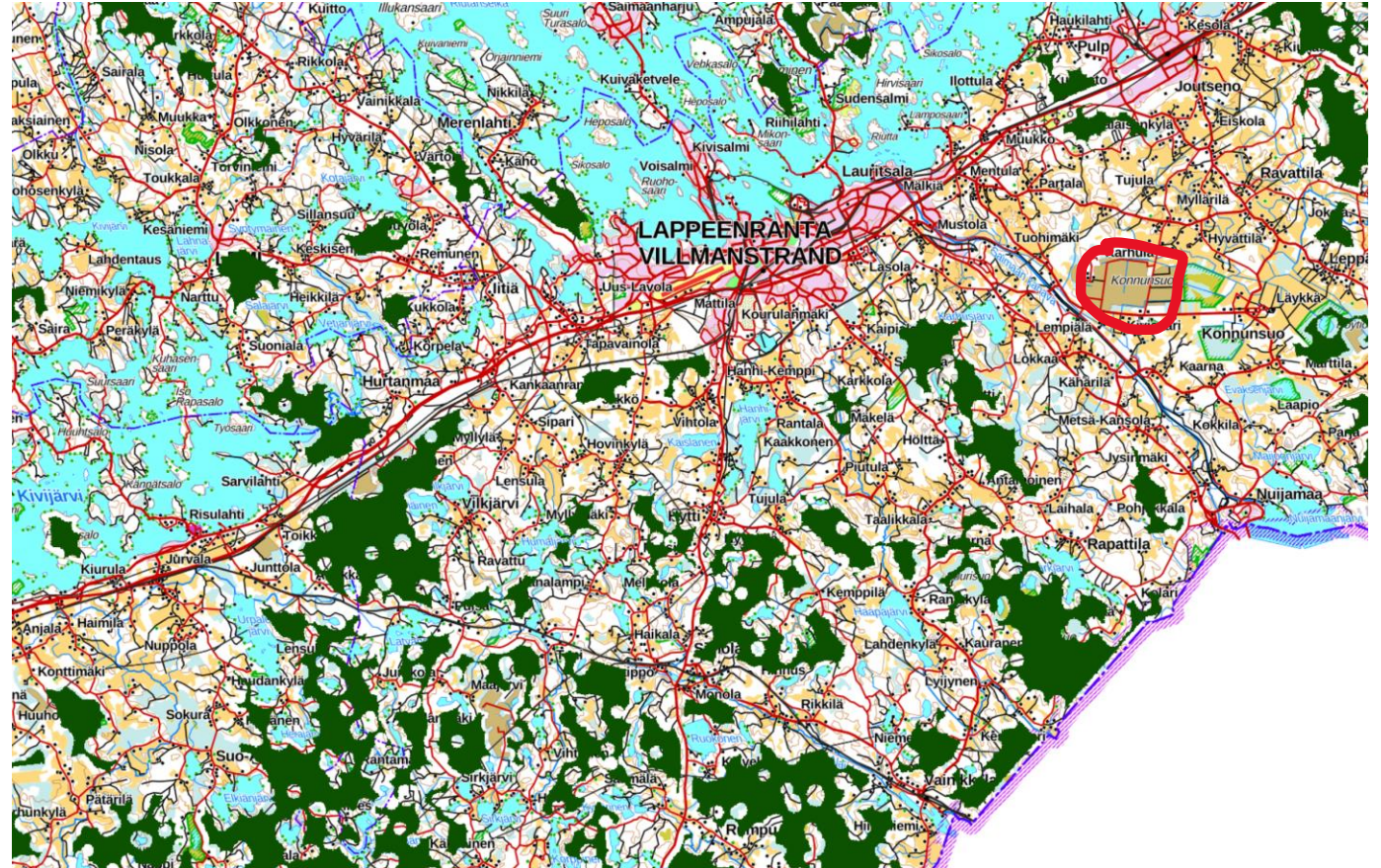
Be like Uncle Scrooge. Know the value of money. Make wise decisions. See the opportunities.

Society:

Be like Sauli Niinistö. Be trustworthy. Be humble and peaceful. Connect the people.

SUSTAINABILITY AND SOLAR POWER ENVIRONMENT: LOCATION SELECTION

- Select suitable location for the project
 - Human-altered lands to be prioritized
- Picture shows **core regions of nature** (SYKE, 2018) and **Konnunsuo solar power plant project**
- GIS is your friend

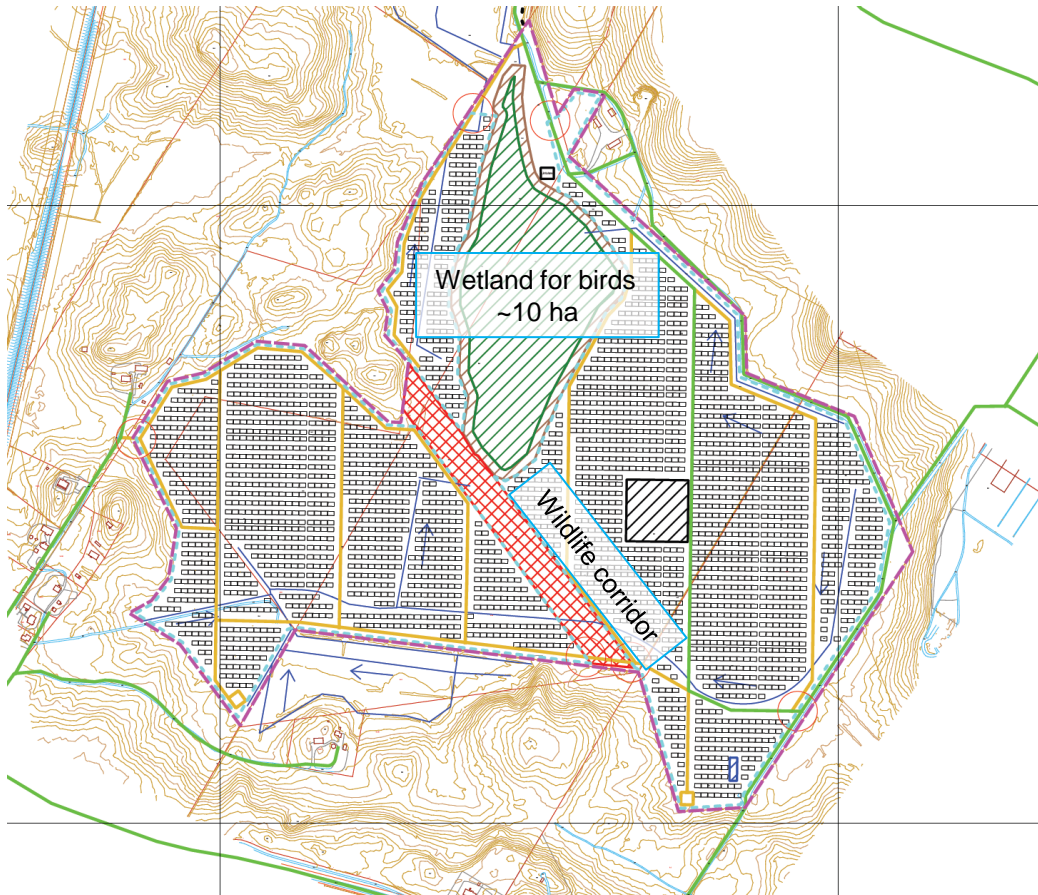


Source: SYKE, MML, paikkatietoikkuna.fi

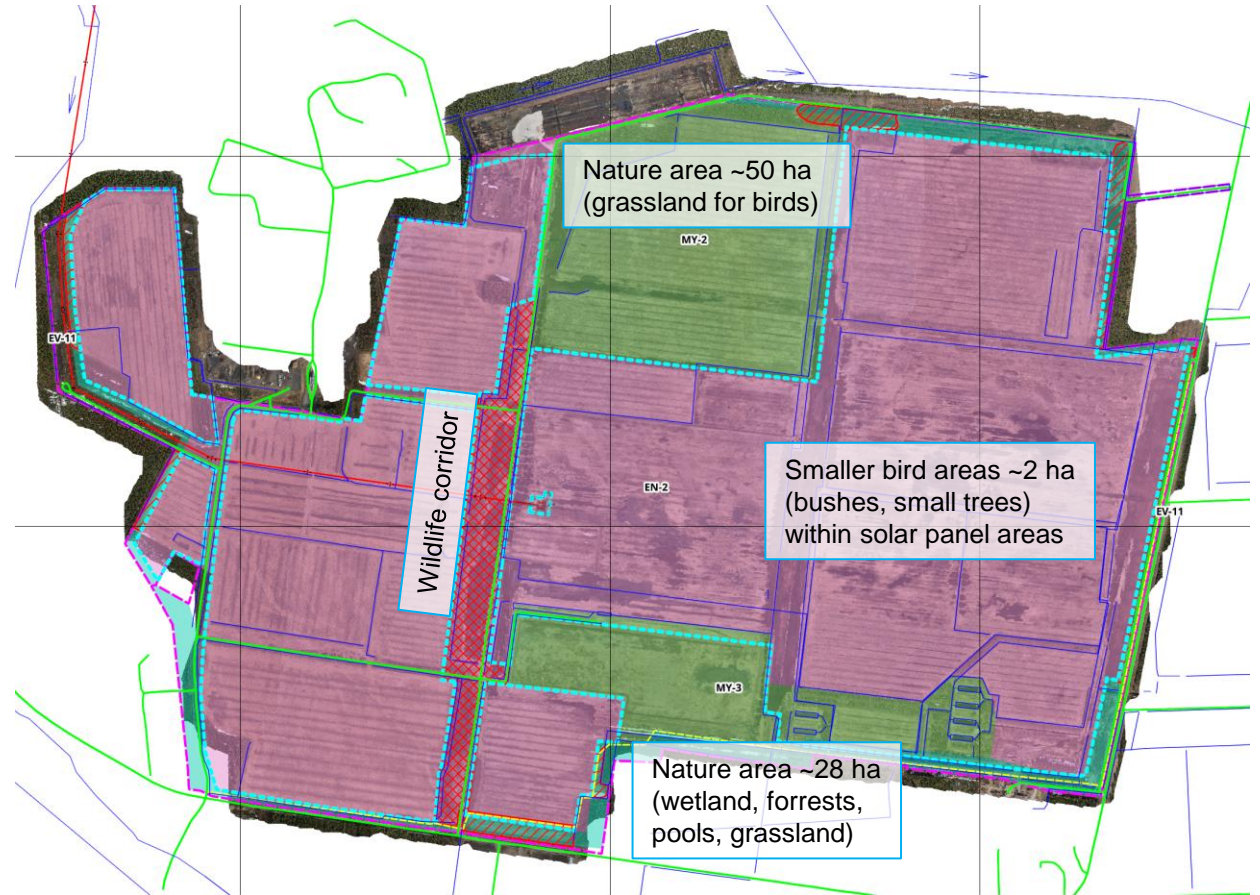
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ENVIRONMENT: LOCAL NATURE VALUES

Laviassuo, Heinola (77 ha)
Former peat production area



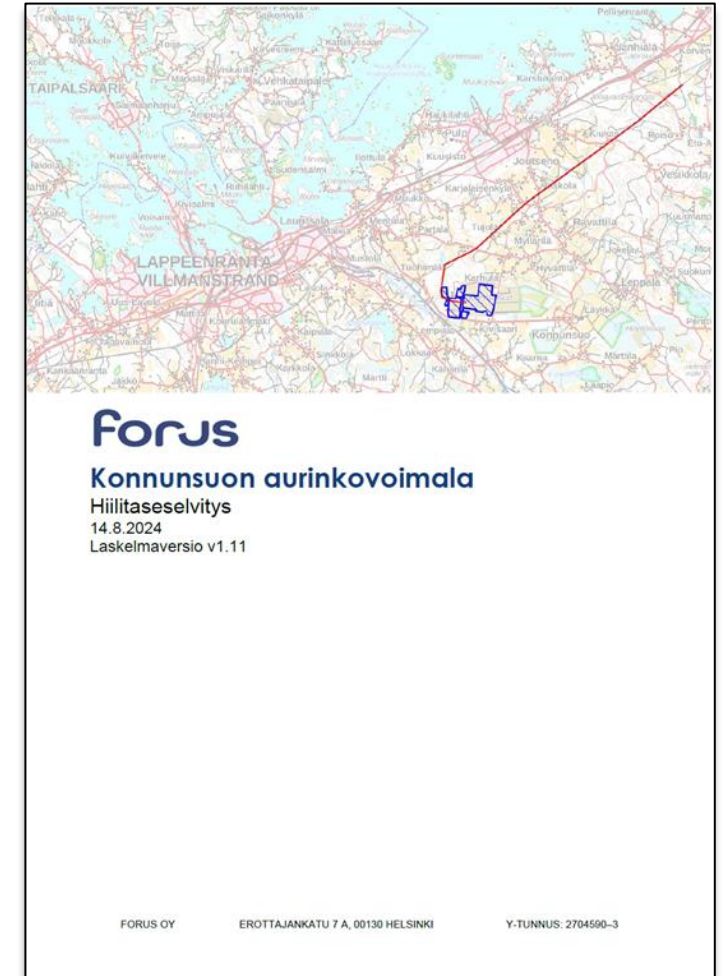
Konnunsuo, Lappeenranta (446 ha)
Former peat production area



SUSTAINABILITY AND SOLAR POWER

ENVIRONMENT: CLIMATE CHANGE

- What is the carbon balance? Do the math.
- Things to take into account
 - Materials, production, transportation and construction
 - Forrest and lost yearly growth of trees
 - Usage of land
 - Realistic scenarios for replaced electricity and reduced CO₂ emissions



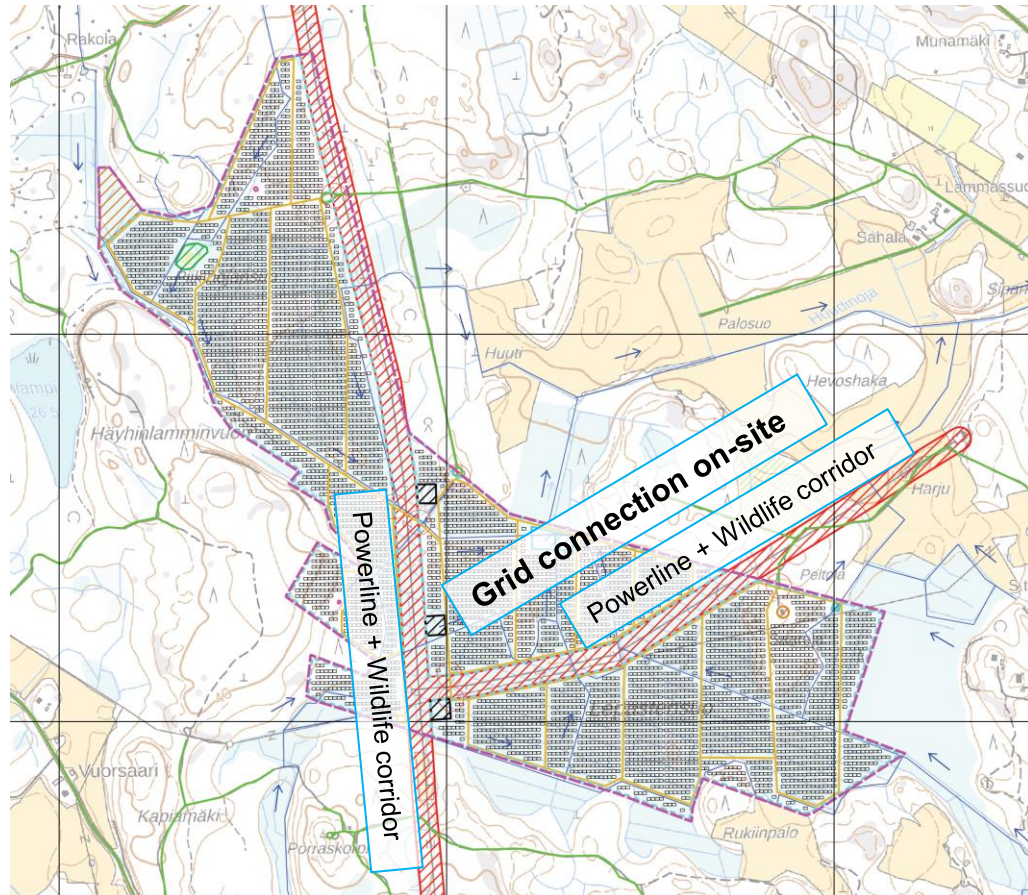
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ECONOMY: PROFITABLE WITHOUT SUBSIDIES

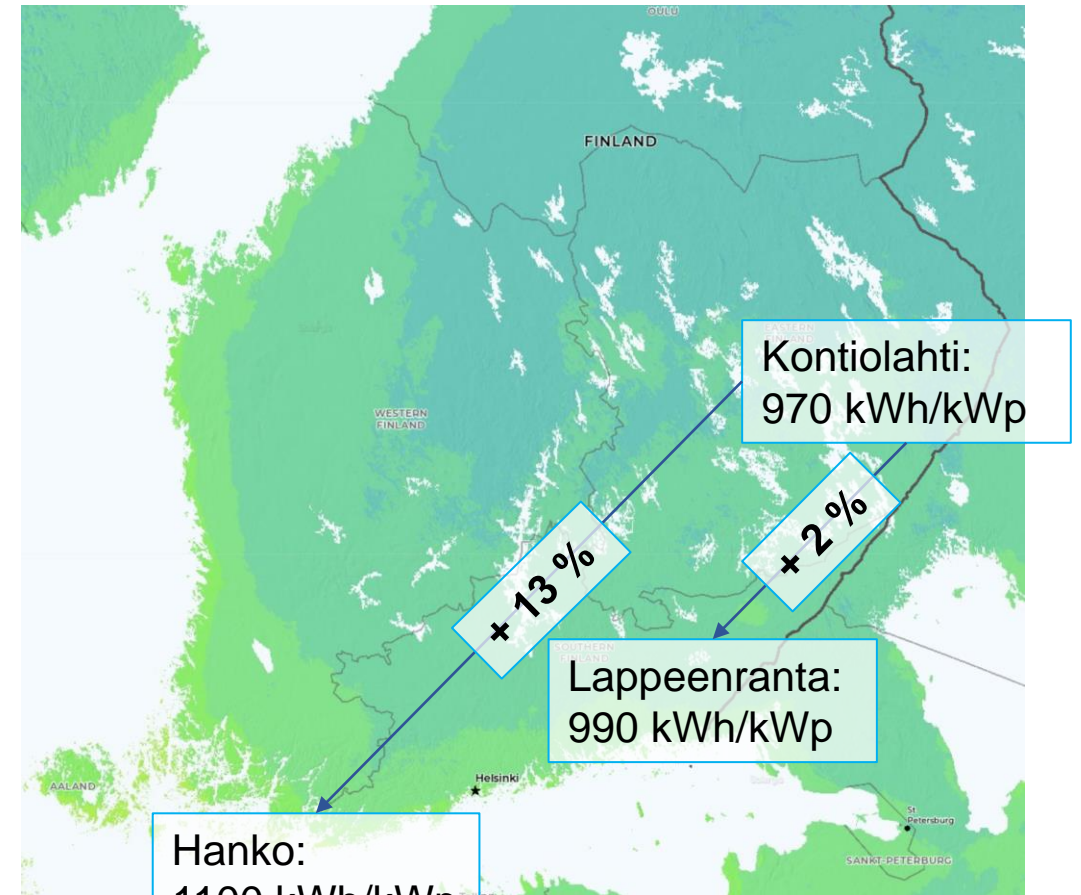
- The project must be economically feasible on its own
 - Subsidies for solar projects promote economically infeasible actions in the projects (location, construction, grid connection...)
 - Sustainable project is profitable without subsidies
- The project location must be economical
 - Grid connection, solar radiation, buildability, land value and use, property tax...

SUSTAINABILITY AND SOLAR POWER ECONOMY: GRID CONNECTION AND SUNNINESS

Lepästensuo, Miehikkälä (135 ha)



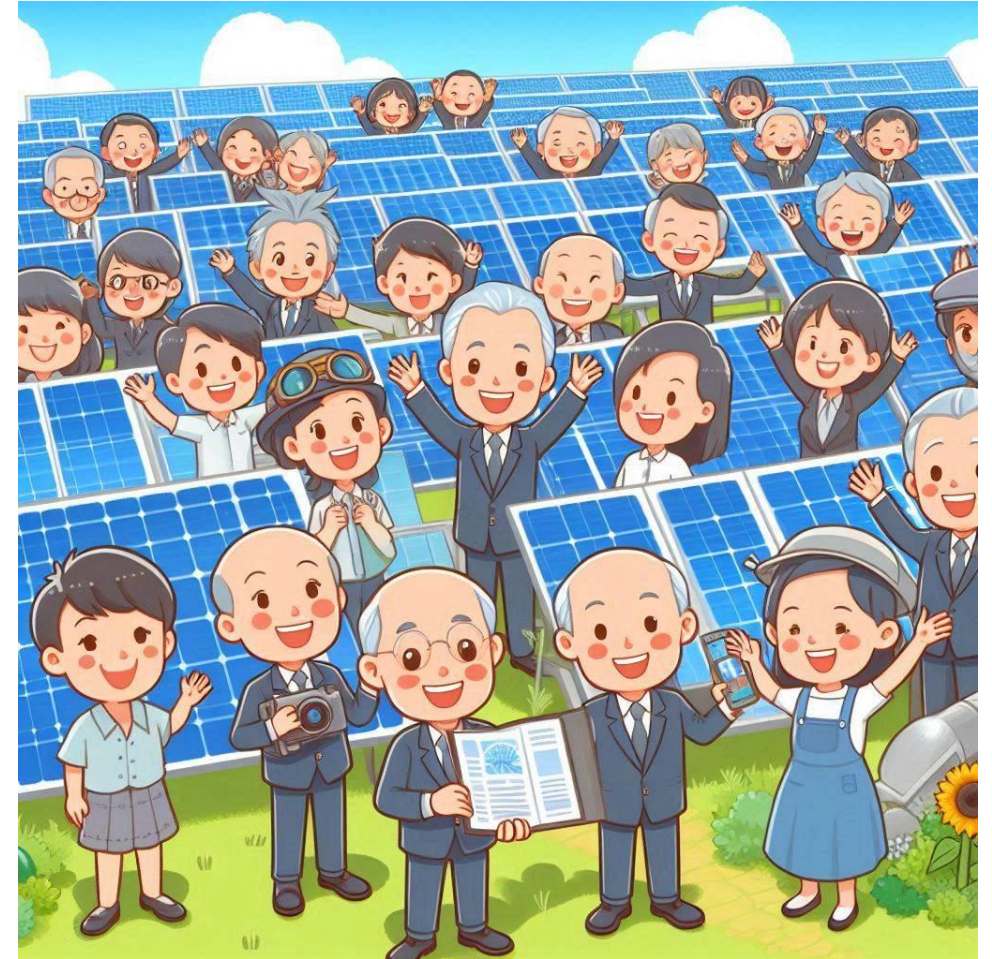
Specific photovoltaic power output



Source: globalsolaratlas.info

SUSTAINABILITY AND SOLAR POWER SOCIETY

- Solar power plants are made by people for people
 - Landowners, neighbours, inhabitants, entrepreneurs, politicians, officials, environmentalists...
 - Everyone should be heard, every opinion is real
 - Socially sustainable project has a common goal



SUMMARY

- To develop sustainable solar power plant projects, you need "*Thunberg-Scrooge-Niinistö*"-like attitude
- Take into account **all three aspects** of sustainability, in detail
- Sustainable project is profitable without subsidies



THANK YOU!

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