

A large, intricate ice sculpture is the central focus of the image. It is composed of several interconnected, organic shapes that resemble a stylized figure or a complex architectural structure. The ice is translucent and has a deep blue hue, with numerous small air bubbles trapped within. The sculpture is set against a dramatic sunset background, with the sun low on the horizon, casting a warm, golden glow. The sky transitions from a deep blue at the top to a bright orange and yellow near the horizon. The overall mood is serene and contemplative.

The Finnish Climate Fund

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11.4.2024

Agenda

Green transition investments in Finland

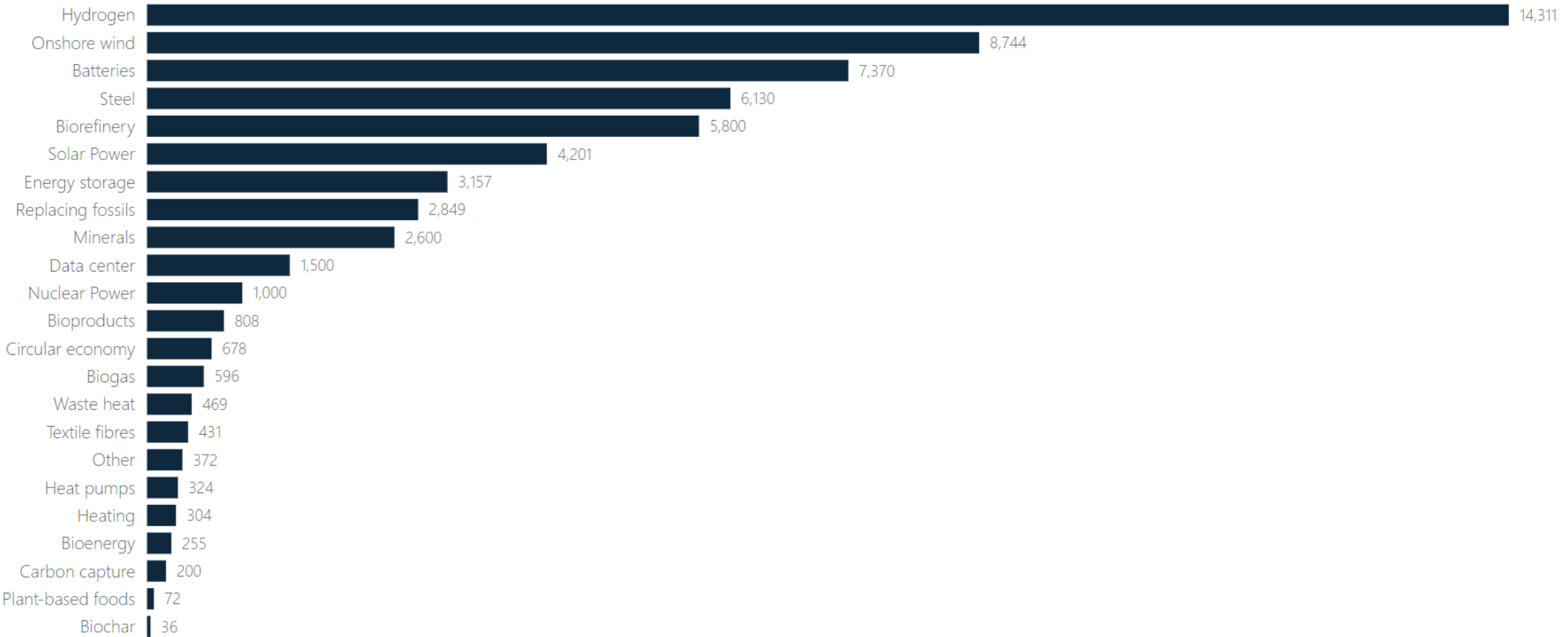
The Finnish Climate Fund

Funding climate tech ventures



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INVESTMENT AMOUNT (M€) BY THEME



Big picture of green transition investments in Finland

- Green transition seems to be progressing
- A lot of renewable energy coming available
- Finland seems to be a competitive location for new wind power
- Imbalance between energy – energy storage – industrial investments
- Low value add focus (energy infrastructure, hydrogen, e-fuels)

- Only ~5% in investment decision phase (majority early planning stage)
- Very few new investment decisions in 2023 (high interest rates, inflation, long time to positive cash flow, uncertainty in financial markets, ...)
- Industrial policy / subsidies driving investments to large nation states

The Finnish Climate Fund

IN BRIEF

- Finnish state-owned special assignment company
- Targets getting climate solutions to scale faster
- Invests together with private investors in a minority role
- All investments must meet investment criteria
- Specializes in assessing and follow up of impact potential and realization

2021 first investments

19 published investments

~187 M€ investment decisions

~290 Mt CO2e est. 10y potential

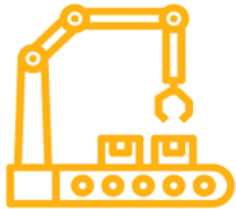
> 300 dealflow cases

4-40 M€ ticket size

35% CF share of total funding (avg.)

20 staff in Helsinki

Climate Fund's funding focuses on identified climate venture scaling bottlenecks and the high-risk commercialisation phase



1. Facility investments and other climate infrastructure

- Use of funds and funding bottleneck most often CAPEX
- Investment focus demonstration of technology in an industrial scale or infrastructure which supports commercial development and scaling of climate solutions



2. Scaling up the deployment of climate solutions

- Use of funds and funding bottleneck most often working capital
- Funding objective is typically enabling accelerated sales and deployment of an existing climate solution



3. Digital climate solutions

- Use of funds and funding bottleneck most often development investments required to accelerate commercialization & deployment
- Funding objective is typically enabling development of a new digital solution, emissions reduction enabling feature or data platform



Facility investments and other climate infrastructure

SOLAR FOODS

capital loan
10 M€

Low-emission protein

conversion right



capital loan
10 M€

Green hydrogen for industry and transport

conversion right,
sustainability incentive



capital loan
5 M€

Torrefied biomass for industrial processes

conversion right

QHEAT

capital loan
3,3 M€

Medium-deep heat wells

conversion right

TAALERI Bioindustry

fund investment
15 M€

Sustainable bioindustry investments

investment in two parts



capital loan
10 M€

Rotor sail technology for maritime

conversion right



capital loan
10 M€

Clean hydrogen and industrial carbon

conversion right,
sustainability incentive



capital loan
6 M€

Chemical recycling plant for plastics

interest rate premium



WASTEWISE GROUP

capital loan
4,2 M€

Chemical recycling plant for plastics

conversion right



capital loan
10 M€

Wood fiber-based packaging materials

profit-sharing component



Scaling up the deployment of climate solutions



capital loan
4 M€

Emissions-free steam for industrial processes

conversion right



capital loan
4,5 M€

Circular economy solution for steel industry

profit-sharing component



capital loan
5 M€

Hydrogen turbines for industry

conversion right,
sustainability incentive

Resand

capital loan
8 M€

Foundry sand recycling solution

conversion right



fund investment
5 M€

Smart energy storages

investment in infrastructure fund



capital loan
4 M€

Industrial dust extraction systems

conversion right,
sustainability incentive



Digital climate solutions

BETOLAR

capital loan
7 M€

Substitute materials for cement industry

interest rate premium



Aeromon

Accurate measurement of fugitive emissions

capital loan
2,4 M€

conversion right



capital loan
1 M€

Data intermediation service for food chain

profit-sharing component

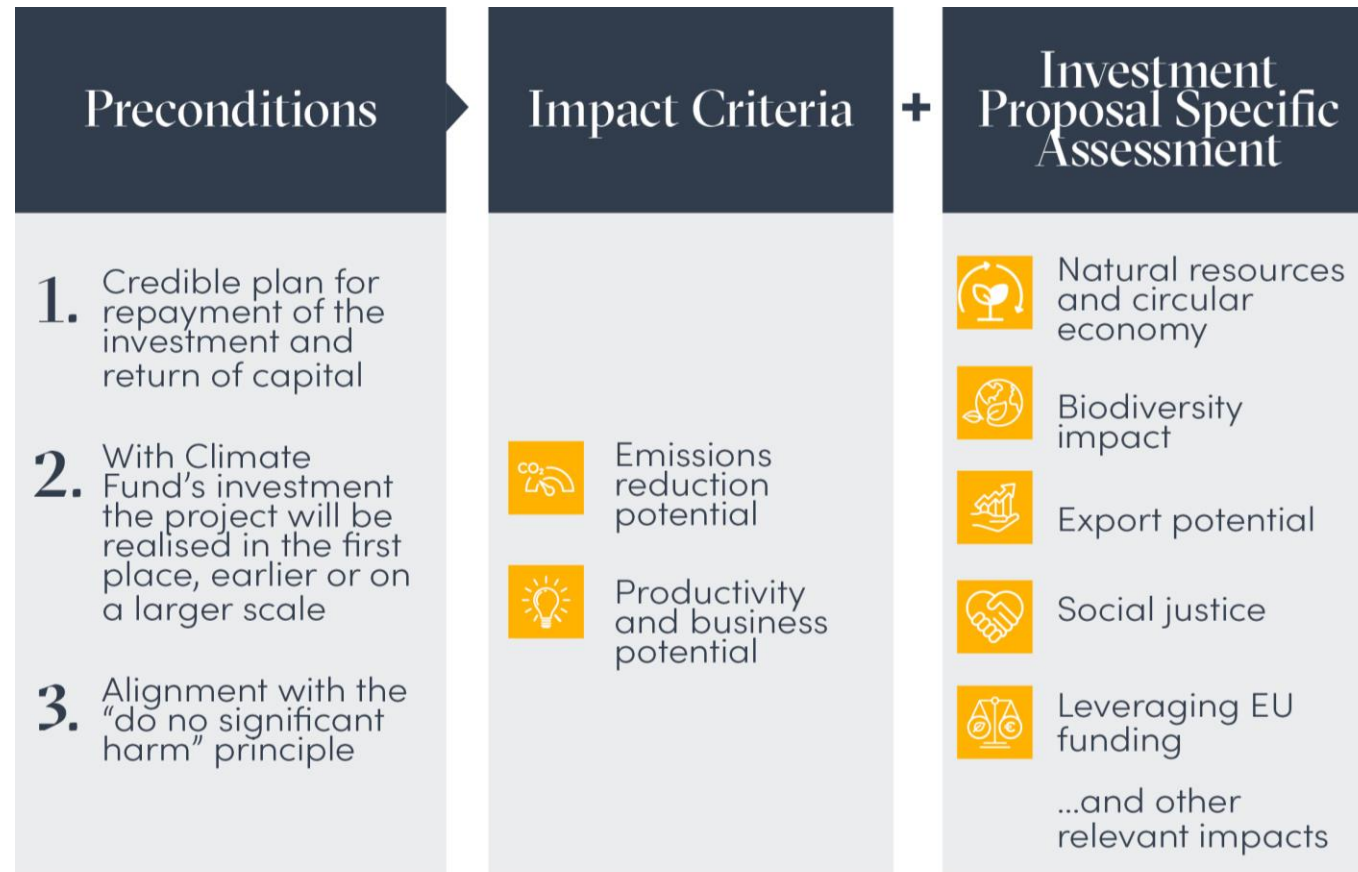


capital loan
6 M€

Infrastructure project data management service

conversion right

Climate Fund's Investment Criteria



In addition, the Climate Fund's assessment process examines the project's alignment with the EU taxonomy.

Where does the Climate Fund fit compared to other ESG investing?

		Impact Investment				Philanthropy	
		Traditional	Responsible	Sustainable	Thematic	Impact-first	Philanthropy
		Competitive returns					
		ESG risk management					
		ESG opportunities					
		High-impact solutions					
Focus	Finance only	The New Paradigm				impact only	
	Limited or no focus on ESG factors of underlying investments	Focus on ESG risks ranging from a wide consideration of ESG factors to negative screening of harmful products	Focus on ESG opportunities , through investment selection, portfolio management and shareholder	Focus on one or a cluster of issue areas where social or environmental need creates a commercial growth opportunity for market-rate or market-beating returns	Focus on one or a cluster of issue areas where social or environmental need requires some financial trade-off	Focus on one or a cluster of issue areas where social or environmental need requires subsidies or philanthropic support	
Examples		<ul style="list-style-type: none"> PE firm integrating ESG risks into investment analysis Ethically screened investment fund 	<ul style="list-style-type: none"> "Best-in-class" SRI fund Long-only public equity fund using deep integration of ESG to create additional value 	<ul style="list-style-type: none"> Clean energy mutual fund Emerging markets healthcare fund Microfinance structured debt fund 	<ul style="list-style-type: none"> Fund providing debt or equity to social enterprises and/or trading charities 		



The Finnish Climate Fund

Source: Bridges Ventures (2012), Bridges Ventures & Impact Investing: An Overview, p. 3

Alternative protein for food

Low-emission protein is produced from carbon dioxide and electricity

Carbon neutrality requires many changes throughout society. Different solutions and methods must be introduced also in food production. Solar Foods has developed a low-emission protein, Solein, that is suitable for food, and represents a completely new innovative solution.

The innovation enables very low-emission protein production by utilizing renewable energy. The facility will be the world's first commercially operating plant to produce protein from carbon dioxide and electricity.

Funding demonstration facility investment

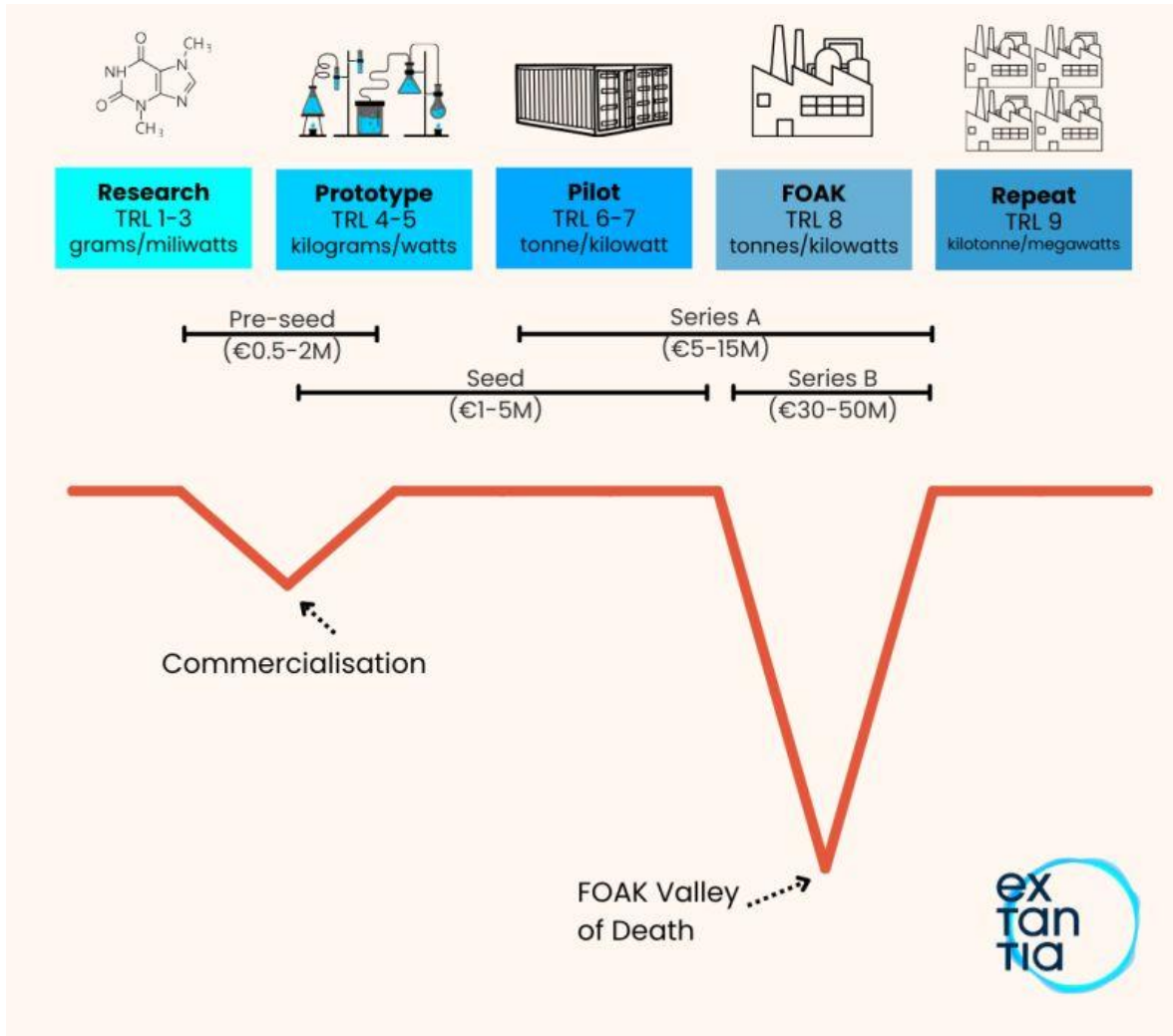
The aim of the demonstration facility is to verify the functionality of the solution on a commercial scale. This stage of development requires significant investments which still involve risks. By participating in the total funding, the Climate Fund enables Solar Foods' facility investment to be realised earlier and thereby a faster path to emissions reductions.

In the case of Solar Foods, the impact criteria emphasises the considerable emissions reduction potential – up to 90% compared to meat production and 80% to plant protein production.

SOLAR FOODS

- **Established:** 2017
- **Climate Fund investment decision:** 4/2021
- **Funding target:** demonstration facility in Finland 2023
- **Funding:** 10 M€ capital loan. The loan includes a convertibles option.
- **Main anticipated impact:** cumulative emissions reduction potential of up to 6,8 Mt CO₂-eq in 10 years, and significant business and productivity potential.

(Climate) tech funding gaps



FOAK challenge

- Technology risk (out of scope for infra investors)
- Large investment size, long payback time (out of scope for early-stage VC funds)
- Often too small for large late-stage VC funds (very few operate in the Nordics)
- ...