

Introduction to FINSCAPES

Timothy Carter

Finnish Environment Institute (Syke)

on behalf of the FINSCAPES project team



Suomen ympäristökeskus
Finlands miljöcentral
Finnish Environment Institute



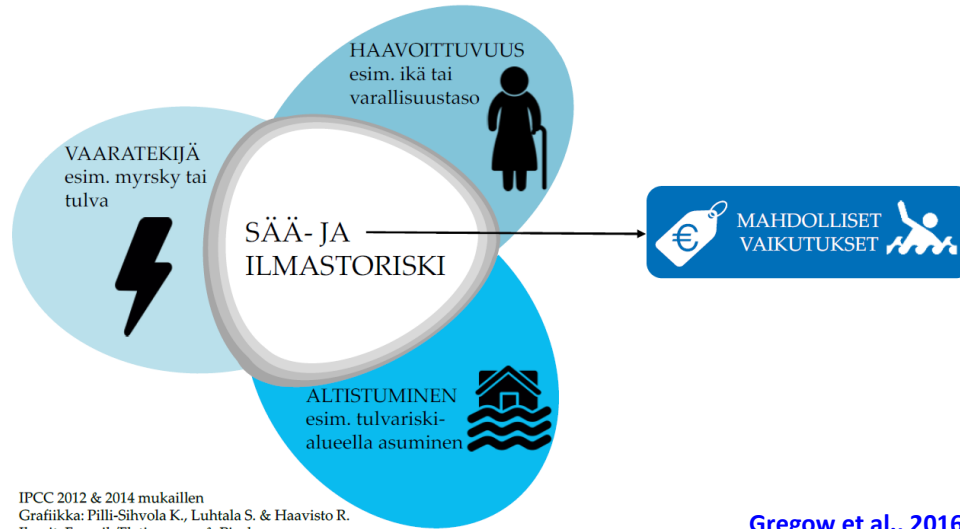
- It lies ahead of us, so
we need to plan for it

- It's uncertain, yet
all paths lead to it

- If it can't be predicted
what else can we try?



Future climate change risks, opportunities & responses



- It lies ahead of us, so **we need to plan for it**

- It's uncertain, yet **all paths lead to it**

Scenarios

Alternative and plausible images of how the future *could* unfold

- If it can't be predicted **what else can we try?**

The FINSCAPES project



Duration: 2021 – 2024

Funding: Research Council of Finland Special funding for system-level research into climate change mitigation and adaptation

Partners: Syke, FMI, Luke



Timothy Carter



Kirsti Jylhä



Taru Palosuo

Consortium web site: <http://www.syke.fi/projects/finscapes>

Co-creation goals, with regional partners:

1. **A new scenarios framework and methodology** for climate change analysis in Finland
2. **Regional socioeconomic pathways** for societally-relevant systems based on global SSPs
3. **Regional climate projections** of relevance, including climate and impact storylines
4. **Integrated scenarios** combining socioeconomic pathways and climate projections
5. **Practical demonstrations** of scenario application
6. **Effective dissemination** to a wide variety of potential users

The FINSCAPES project



Tutkimusta ja päätöksentekoa tukevien
kansallisten ilmastomuutoksen skenaarioiden
alueelliset ja järjestelmätason ulottuvuudet

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FINSCAPES project team (all years)

Syke: Timothy Carter, Stefan Fronzek, Stefan Fagerström, Kaisa Korhonen-Kurki, Anna Lipsanen, Nina Pirttioja, Sanna-Riikka Saarela, Uula Saastamoinen

FMI: Kirsti Jylhä, Thomas Kühn, Saara Leppänen, Sanna Luhtala, Anna Luomaranta, Erika Médus, Joonas Merikanto, Henna Naumanen, Taru Olsson, Kimmo Ruosteenoja, Reija Ruuhela, Petri Räisänen, Laura Utriainen, Meri Virman, Athanasios Votsis

Luke: Taru Palosuo, Päivi Abernethy, Janne Kaseva, Niina Kautto, Heikki Lehtonen, Karoliina Rimhanen, Jaana Sorvali, Domna Tzemi

FINSCAPES advisory board

Cornelia Auer (Potsdam Institute for Climate Impact Research, DEU)
Henrik Carlson (Stockholm Environment Institute, SWE)
Atte Harjanne (Finnish Parliament)
Kasper Kok (Wageningen University, NLD)
Kirsi Mäkinen (Ministry of Agriculture & Forestry)

Scenarios for climate change analysis

Shared Socioeconomic Pathways (SSPs)

- Five plausible future global development pathways expressed both as narratives and as numbers
- Alternative views on the extent of challenges affecting *mitigation* of greenhouse gas emissions & *adaptation* to the impacts of climate change
- Time horizon is 21st century to 2100



The roads ahead: Narratives for shared socioeconomic pathways describing world futures in the 21st century

Brian C. O'Neill^{a,*}, Elmar Kriegler^b, Kristie L. Ebi^c, Eric Kemp-Benedict^d, Keywan Riahi^{e,f}, Dale S. Rothman^g, Bas J. van Ruijven^a, Detlef P. van Vuuren^{h,i}, Joern Birkmann^j, Kasper Kok^k, Marc Levy^l, William Solecki^m

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^b Potsdam Institute for Climate Impact Research, PO Box 601203, 14412 Potsdam, Germany

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^d Stockholm Environment Institute, 15th Floor, Witthayakorn Building, 254 Chulalongkorn University, Chulalongkorn Soi 64, Phayathai Road, Pathumwan, Bangkok 10330, Thailand

^e International Institute for Applied Systems Analysis, Laxenburg, Austria

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^g Frederick S. Pardee Center for International Futures, Josef Korbel School of International Studies, University of Denver, 2201 South Gaylord Street, Denver, CO 80208-0500, USA

^h PBL Netherlands Environmental Assessment Agency, Bilthoven, The Netherlands

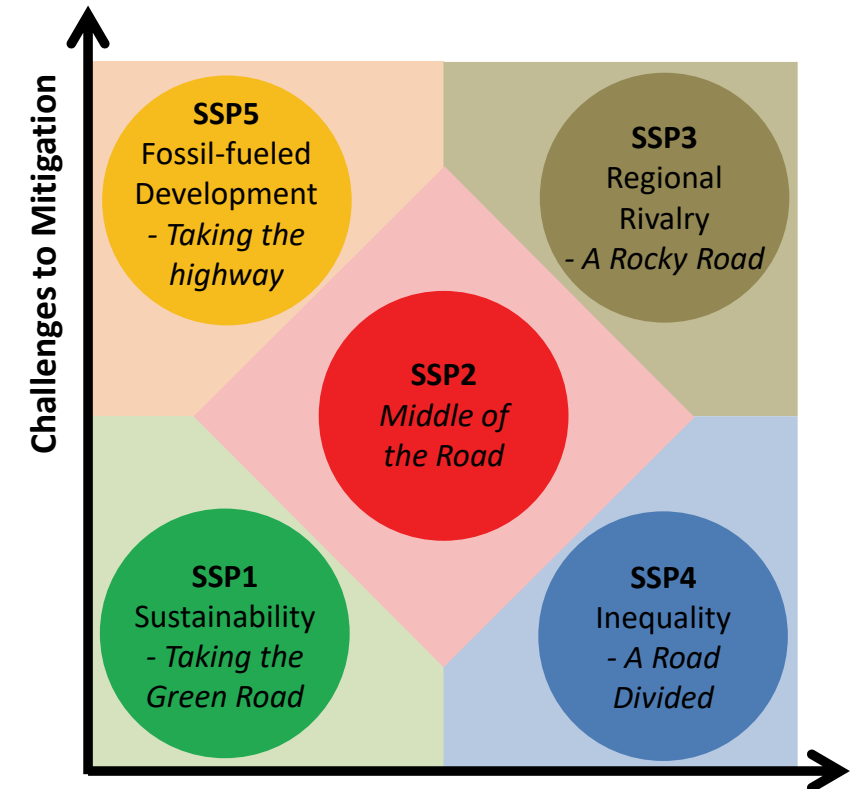
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^j Institute for Spatial and Regional Planning, University of Stuttgart, Pfaffenwaldring 7, 70569 Stuttgart, Germany

^k Soil Geography and Landscape Group, Wageningen University, Wageningen, The Netherlands

^l Center for International Earth Science Information Network (CIESIN), Columbia University, 61 Route 9W, PO Box 1000, Palisades, NY 10964, USA

^m CUNY Institute for Sustainable Cities and Department of Geography, Hunter College—City of New York, 695 Park Avenue, New York, NY 10021, USA

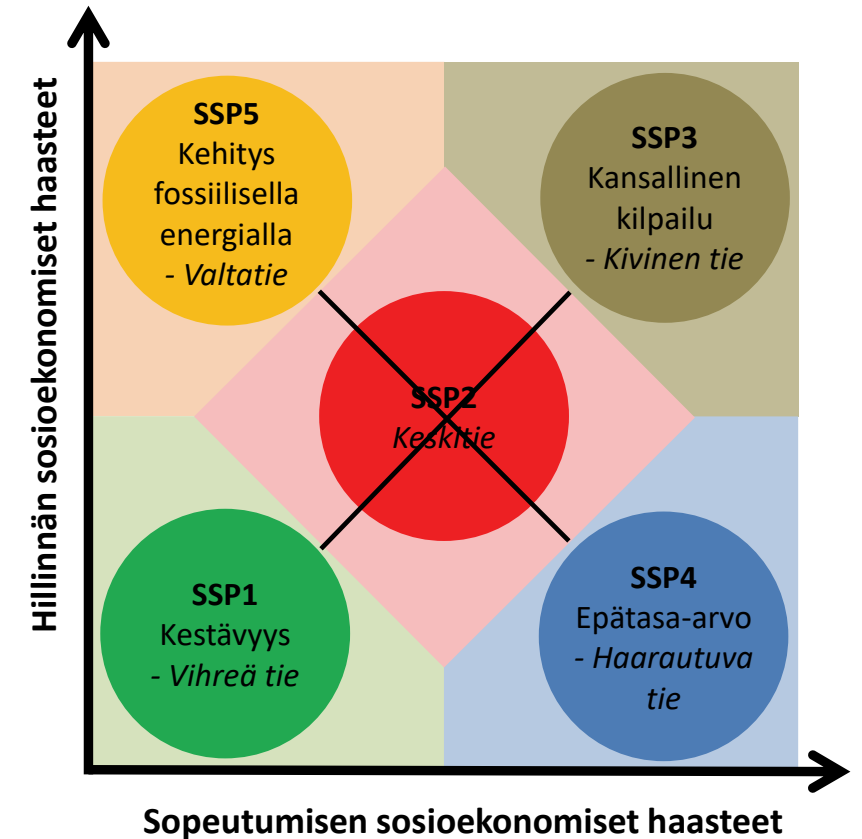


Based on O'Neill et al. (2014) and Frame et al. (2018)

Scenarios for climate change analysis

FINSCAPES SSP extensions (out to 2050s):

- Elaborations of global assumptions to local- and regional-scales and/or for specific sectors or systems

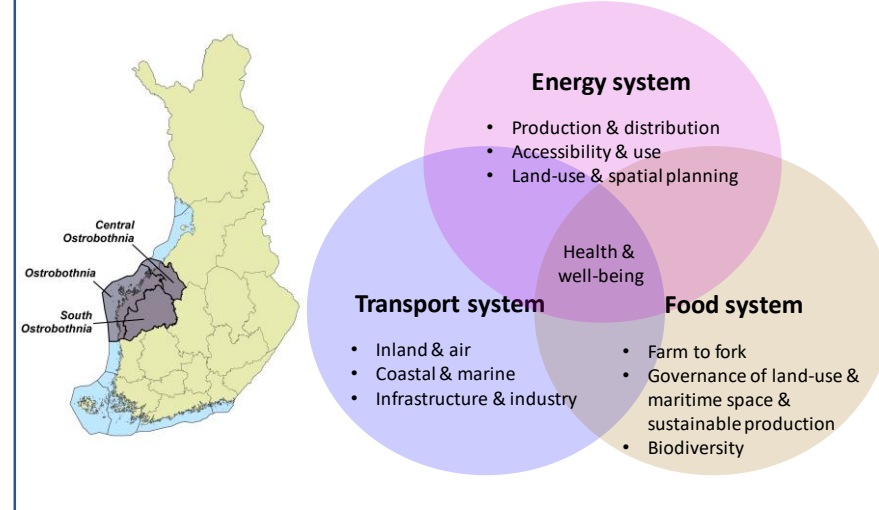


Scenarios for climate change analysis

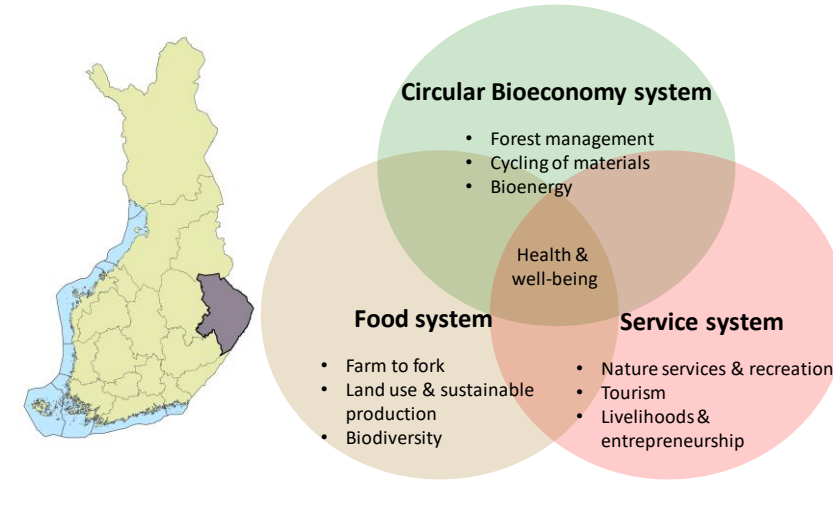
FINSCAPES SSP extensions (out to 2050s):

- Elaborations of global assumptions to local- and regional-scales and/or for specific sectors or systems
- Focus on two regions
 - agreed with the regional climate network in 2021
 - priority systems also agreed in 2021
- Co-produce the elements of regional integrated scenarios
- Potential useful features include: global consistency; awareness raising; risk assessment; adaptation planning; capacity building

Ostrobothnian counties



North Karelia



FINSCAPES Final Seminar, 24 October 2024

Programme

Finnish Meteorological Institute, Dynamicum, Erik Palménin aukio 1, 00560 Helsinki & Online

08:30 – 09:00	Arrival and refreshments/Saapuminen ja virvokkeita
09:00	Welcome Brainstorm-auditorio, floor P (downstairs) Petteri Taalas (Director General, FMI) Timothy Carter (Syke), Taru Palosuo (Luke) & Kirsti Jylhä (FMI), project Pls
Session 1	Context, regions & socioeconomic narratives Chair: Kirsti Jylhä (FMI)
09:10	Overview of FINSCAPES and purpose of this meeting + Discussion Timothy Carter (Syke)
09:20	Introducing the study regions: North Karelia & the Ostrobothnian counties Sari Koivula (Regional Council of North Karelia) Irina Nori (Regional Council of Ostrobothnia)
09:40	SSP-based regional socioeconomic narratives + Discussion Anna Lipsanen (Syke)
10:00 – 10:20	Refreshment break + Snacks/Kahvitauko + pientä syötävää
Session 2	Climate projections, stories & integration Chair: Taru Palosuo (Luke)
10:20	SSP-based regional climate projections + Discussion Kirsti Jylhä, Petri Räisänen & Laura Utriainen (FMI)
10:40	Climate- and adaptation-stories + Discussion Karoliina Rimhanen (Luke) & Nina Pirttioja (Syke)
11:00	Integrated regional scenarios + Discussion Timothy Carter (Syke)
11:20 – 11:30	Refreshment break/Jaloittelutauko
Session 3	Scenario application & expert feedback Chair: Timothy Carter (Syke)
11:30	Demonstration projects + Discussion Heikki Lehtonen (Luke); Reija Ruuhela (FMI)
12:00	Observations from Advisory Board Members + Discussion Cornelia Auer (Potsdam Institute for Climate Impact Research, GER) Atte Harjanne (Finnish Parliament)
12:30 – 13:30	Lounas/Lunch

FINSCAPES Final Seminar, 24 October 2024

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12:30 – 13:30	Lounas/Lunch
Istunto 4	Hybridityöpaja (suomeksi) Aura (1A09c) Fasilitointi: Kari Kukkola ja Jonas Rajanto, Grape People
13:30 – 14:55	Työpajatyöskentelyä Työskentelyn tavoitteena on tarkastella, miten skenaarioiden tuottamaa tietoa voidaan hyödyntää ilmastotyössä, erityisesti sopeutumisessa.
14:55	Loppusanat Kirsti Jylhä, Taru Palosuo & Timothy Carter
15:00	Tilaisuus päättyy/Close

Version: 23.10.2024

Purpose of this meeting:

- Present the FINSCAPES scenarios (note draft brochures)
- Discuss relevance for regional adaptation needs
- Explore applications in research & policy
- Identify future needs & possible next steps

Notice

Colleagues are welcome to incorporate these slides into their own presentations, assuming they are correctly acknowledged. However, the authors would also appreciate being informed prior to the extensive use of this material in public meetings

