ILMATIETEEN LAITOS
METEOROLOGISKA INSTITUTET
FINNISH METEOROLOGICAL INSTITUTE

Evaluation and revision of Finland's National Adaptation Strategy

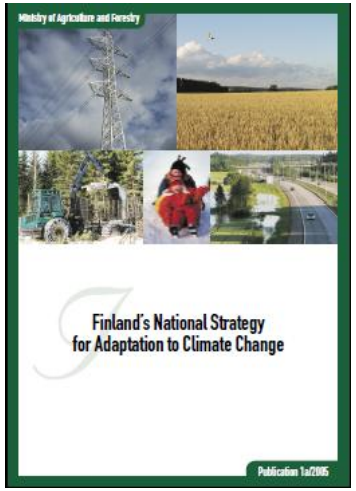
Sanna Luhtala

Science Editor/Climateguide.fi

Finnish Meteorological Institute

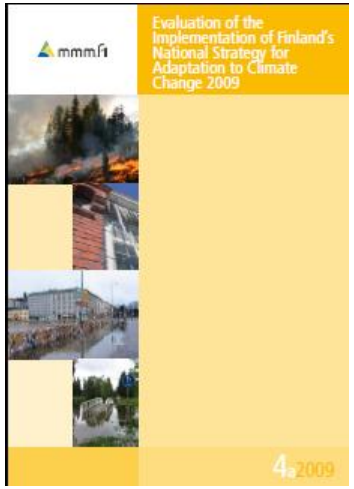
Nordic Adaptation Conference 30 August 2012

Finland's National Adaptation Strategy - continuing saga



Past:

- 2005: NAS published - first in Europe
  - Based on existing research information.
- 2009: (Midterm) Evaluation of the implementation of NAS



Present:

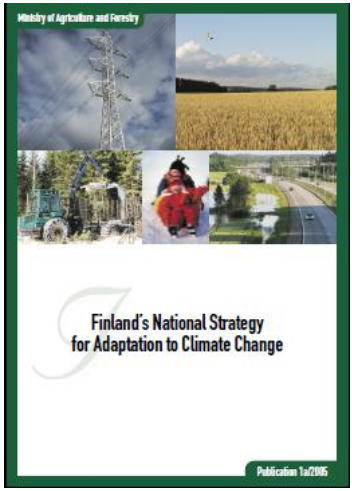
- 2012/2013 Final evaluation of the implementation

Future:

- (2012-)2013 Revision of the NAS

Goals set out by the Finnish Government

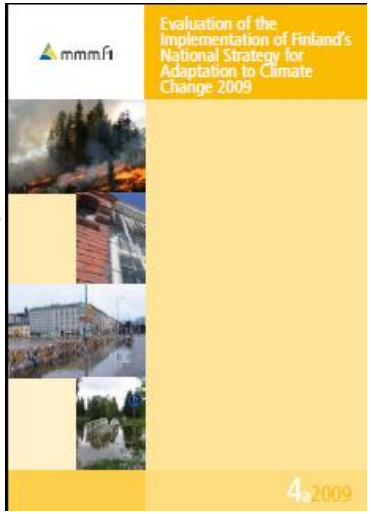
- The main objective of the NAS is to build up Finland's adaptive capacity & reduce the costs to the society where possible.
- Aims to be achieved by 2015:
  - Integrate impacts and adaptation into routine planning, implementation and follow-up (mainstreaming)
  - Strengthen and focus research and development
  - Include climate aspects into long-term investments
  - Improve capacities to address extreme weather events
  - Develop further observation and warning systems
  - Address international linkages and development cooperation.



Implementation of NAS

- Starting point: integrating/mainstreaming adaptation.
- Ministries have overall responsibility for the implementation of NAS in their own fields of activity.
  - Some ministries have prepared sectoral assessments and action plans: Min. of the Environment, Min. of Agriculture and Forestry.
  - Climate Change Adaptation Research Programme ISTO (2006-2010)
- The implementation of NAS is followed and promoted by the Coordination Group for Adaptation to Climate Change, steered by the Ministry of Agriculture and Forestry.
- Much of the practical implementation takes place in regions and municipalities
  - especially with regard to flood risk management and spatial planning at its different levels.

(Midterm) evaluation of the implementation of Finland's NAS 2009



- Main objective of evaluation: what kind of progress made in 15 different sectors since 2005
  - incl. two new sectors: administrative sectors of Min. of Defence & Min. of the Interior)
- 2009 evaluation was conducted by a survey of whether and how the indicative measures presented in the strategy had been launched in different sectors.
- Also information on adaptation research done
- Identified new needs for adaptation policy
  - for revising the adaptation strategy in 2012-2013

Survey to ministries: measures launched by 2009

- NAS identified indicative adaptation measures (anticipatory/reactive) for 15 sectors in tables, divided into
  - Public sector
    - Administration and planning
    - Research and information
    - Economic-technical measures
    - Normative framework
  - Private sector
  - 3 time periods: immediate (*), short-term (**) and long term (***).
- Evaluation report added a new column: measures launched.

Example: Measures launched in Agriculture

		Anticipatory (A)/Reactive (R)	Measures launched
Public	Administration and planning	• Attention to production methods adaptable to climate change, production structure and locations in support policy*** (A)	• In the context of the mid-term review of the EU's common agricultural policy (CAP) a decision to increase measures under Rural Development Regulation, incl. those concerning climate change adaptation.
		• Development of animal disease monitoring systems** (A)	• Finland has prepared a contingency plan for bluetongue disease, a catarrhal fever in ruminants spread by midges.
		• Development of plant disease and pest monitoring systems* (A)	
	Research and information	• Development of new technologies and cultivation methods and providing information on them** (A)	• Research project[1] on impacts of climate warming on the health of reindeer.
		• Conceptualisation of climate change and its risks* (A)	• One of the ISTO research projects[2] investigates the risks of changing climate.
	Economic-technical measures	• Integration of changed climatic conditions and plant protection requirements into plant improvement programmes* (A)	• A joint Nordic plant breeding project has been launched.
		• Minimising the disadvantages of the potentially increasing use of pesticides** (R)	• National action programme required under the framework directive on sustainable use of pesticides is being prepared.
	Normative framework	• Assessment of the revisions to water protection guidelines** (A)	
Private		• Introduction of new cultivation methods, cultivated crops and technology** (A)	• Companies Raisio plc and Boreal Plant Breeding Ltd contribute to the funding of the ILMASOPU[2] research project. • Action on farmers' own initiative.
		• Extending the farm animal grazing period*** (R)	• For the animal welfare payments, 550 farms have selected grazing during the growing period as the additional measure.
		• Increasing the control of pests and diseases** (R)	• According to the ILMASOPU[2] research project, prevention has increased.

Indicator of the level of adaptation

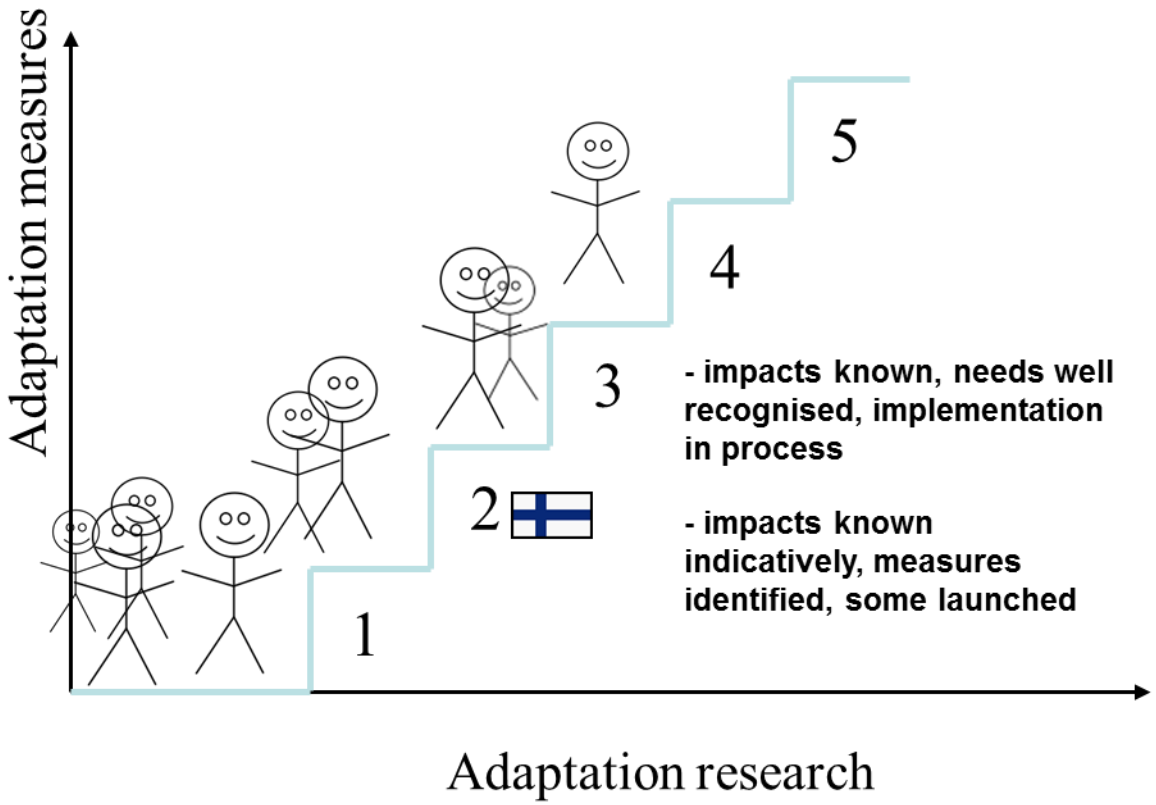
- The Coordination Group for Adaptation to Climate Change assessed the level of adaptation by means of a preliminary indicator developed in the context of the evaluation process.
- The indicator (on a scale 1–5) consists of four criteria that develop from step to step:
  - need for adaptation
  - impacts known
  - adaptation measures
  - cross-sectoral cooperation.
- The levels of adaptation provide only indicative information
  - a great deal of variation between and within sectors.
- This type of qualitative evaluation works quite well in self-evaluation.
- Adaptation indicator can be applied in other decision-making environments.

Levels of adaptation to climate change

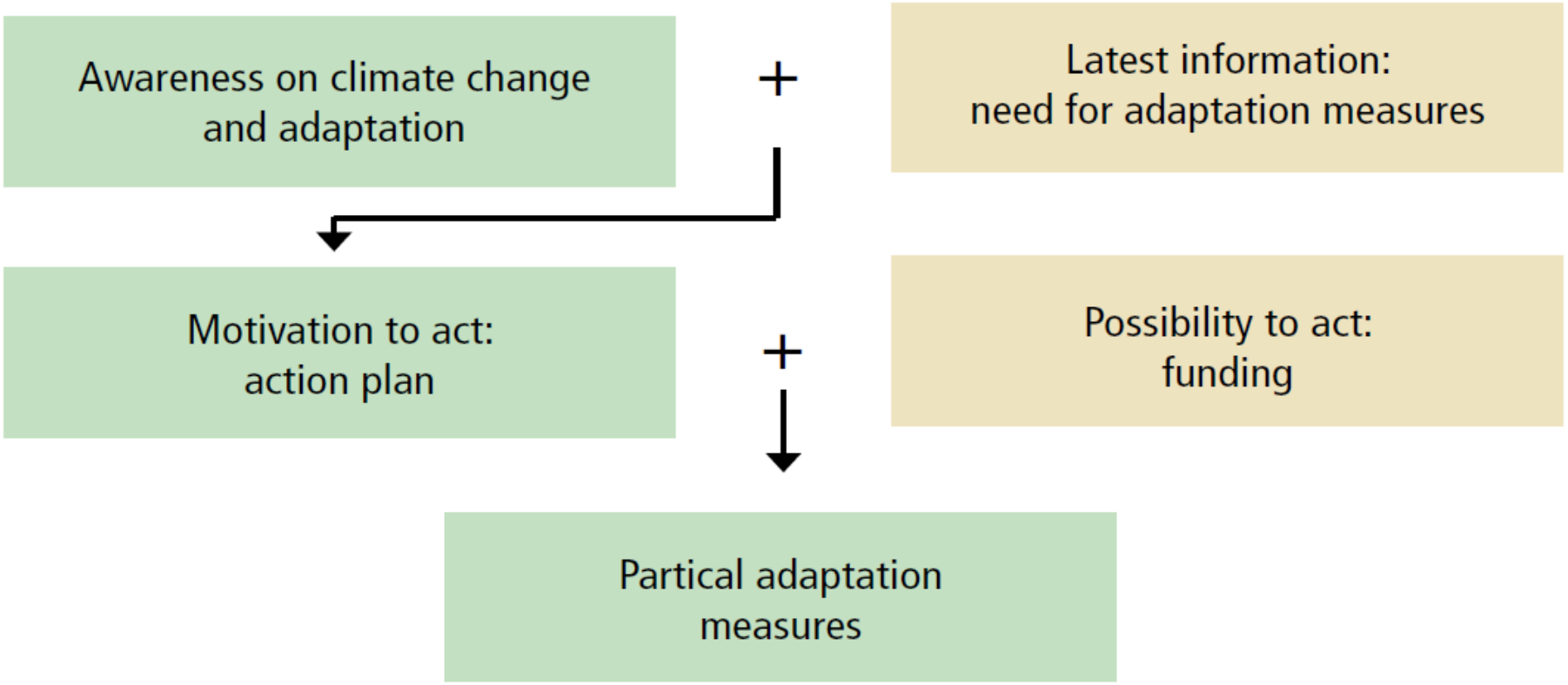
Step 1 (lowest level)	• Need for adaptation recognised among a group of pioneers in the sector. • Little research done on the impacts of or adaptation to climate change. • Some adaptation measures identified but not yet implemented.
Step 2	• Need for adapt. measures recognised to some extent in the sector (some decision makers). • Impacts of climate change known indicatively (qualitative information), taking account of the uncertainty involved in climate change scenarios. • Adaptation measures identified and plans made for their implementation, some of them launched.
Step 3	• Need for adaptation measures quite well recognised (majority of decision-makers). • Impacts of climate change quite well known (quantitative information), taking account of the uncertainty involved in climate change scenarios. • Adaptation measures identified and their implementation launched. • Cross-sectoral cooperation on adaptation started.
Step 4	• Need for adaptation measures widely recognised and accepted in the sector. • Adaptation incorporated into regular decision-making processes. • Impacts of climate change well known, within the limits of the uncertainty involved in climate change scenarios. • Implementation of adaptation measures widely launched and their benefits assessed at least to some extent. • Cross-sectoral cooperation on adaptation measures an established practice.
Step 5 (highest)	• Adaptation measures under the Adaptation Strategy or recognised otherwise implemented in the sector.

Evaluation of the strategy: Five steps of adaptation

- Finland:
  - On average on step 2
  - Agriculture, forestry, traffic, land use on step 3
  - Water resources on step 3-4
  - Measures launched in the private sector excluded

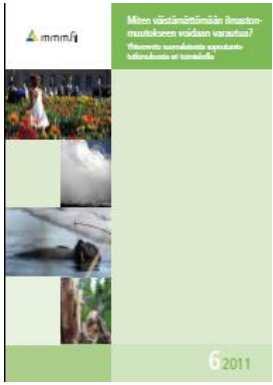


From awareness of climate change to practical adaptation measures



Some examples of the adaptation work

- Research:
  - Climate change adaptation research programme, ISTO (2006-2010)
  - Vulnerability assessment of ecosystem services for climate change impacts and adaptation, VACCIA (2009-2011)
  - MIL-research programme – Forests in changing climate (2007-2012)
  - How to adapt to inevitable climate change? – A synthesis of Finnish research on adaptation in different sectors (in English by the end of 2012)
  - The Finnish research programme on climate change, FICCA (2011-2014) of Academy of Finland



- Adaptation action plans:
  - for environmental administration 2008 & 2011
  - of the Ministry of Agriculture and Forestry 2011
- Adaptation surveys/pre-studies for road & rail management and maritime transport
- Provincial/regional and municipal climate strategies

ILMATIETEEN LAITOS
METEOROLOGISKA INSTITUTET
FINNISH METEOROLOGICAL INSTITUTE

Finland's National Adaptation Strategy, final evaluation 2012-2013

- How the objective "to strengthen and increase adaptive capacity" has been advanced since 2005?
- Evaluation of the implementation of the indicative measures => adaptation level
  - + gaps in the implementation and required additional measures
- Overview of existing regional and municipal level adaptation measures and requirements for national strategy
  - 150 of 336 municipalities has a climate strategy, in 70 % of them adaptation in some level
  - 12/13 regional climate and energy strategies include adaptation in some level
- Influence of the relevant EU policies
- Assessment of the level of knowledge (research)
- Cross-sectoral measures (?)
- Some information of the adaptation in private sector

Mid-term evaluation identified new needs for revising the NAS

- Synergies and contradictions of mitigation and adaptation
- More cross-sectoral collaboration
- Wider understanding for need to adapt to socio-economical impacts of climate change
- Risk assessment and management for pessimistic scenarios.
- Cost-benefit analysis for adaptation measures
- More local/regional aspects of adaptation
- More user-oriented communication about adaptation
- Recommendations of PEER study etc. into consideration
- Monitoring
- White Paper on adaptation / EU's Adaptation Strategy 2013

Revision of the NAS 2013: questions

- Form: revision/update/only additional measures?
- Integrating new elements (cross-sectoral issues, regional/municipal level requirements) to strategy with "restricted" sectoral approach?
- Linking "the new" with "the old" (maintaining the ongoing work, not end up with two strategies...)?
- Balancing between strategic and practical approach
- Including more pessimistic scenario and possible additional/optional measures for that?
- Awareness raising and enhanced participation in the process - also private sector?
- Getting/securing resources?

More information

- Finland's National Adaptation Strategy and Evaluation Report of NAS are available in English at the website of the Ministry of Agriculture and Forestry: www.mmm.fi/adaptationstrategy

Sanna Luhtala
PO Box 503
00101 HELSINKI
Tel. +358 29 539 1000
E-mail: firstname.lastname@fmi.fi