

Annex 2 — Finland country case study

BLOSSOM: Support to analysis for long-term governance and institutional arrangements



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Acronyms

BLOSSOM	B ridging L ong-term S cenarios and S trategic analysis — O rganisation and M ethods
CEP	Collingwood Environmental Planning
EEA	European Environment Agency
EU	European Union
FTE	full-time equivalent
GDP	gross domestic product
ICT	information and computing technology
MoE	Ministry of the Environment
MP	Member of Parliament
PMO	Prime Minister's Office
SYKE	Finnish Environment Institute
Tekes	Finnish funding agency for technology and innovation

1 Introduction

1.1 Introduction

This report sets out the current status of the main institutional and governance arrangements for futures thinking in Finland with respect to environmental — and environment-related — policymaking. It is an update to the case study report completed under the previous Blossom project in October 2009 and is based on a review of changes in documentation and other available resources, and a set of interviews with high-level officials and experts in relevant government departments, agencies and institutions. The aim has been to understand how futures thinking is undertaken in Finland, the relationships between different futures programmes, and how these relate to, and influence, environmental policymaking. The report particularly tries to identify the success factors in ensuring futures thinking is embedded in environmental policymaking; however, barriers to success are also identified. It does not seek to explore the whole range of futures work, only those aspects of most relevance to environmental policymaking, and is focused on the institutional and governance

structures, not the details of the futures studies or the quality of those studies. Further details can be found in the Appendices.

In 2009, the previous version of this report, along with similar reports for seven other EU Member States, formed the basis for further cross-country analysis to identify common themes and issues in institutional and governance arrangements, as well as distinctive aspects of different cultural and administrative traditions and approaches to futures thinking. This updated report has been used to present a revised cross-country analysis, which has also drawn upon new case studies in four additional countries: Germany, Hungary, Austria and Portugal.

This study presents the results of an attempt to synthesise and evaluate current practices: it is meant to shed light on important developments and stimulate discussion but it is not meant to be understood as a comprehensive and concluding assessment of futures-oriented studies or their impacts on decision-making.

2 The landscape for long-term thinking and governance in Finland

There is extensive use of futures thinking across the Finnish administration, and the value and benefits it brings to policymaking are explicitly recognised in the structures which formalise the foresight process. The economic recession of the early 1990s, when the country's GDP decreased by over 14 % ⁽¹⁾ from its peak and unemployment increased to almost 20 % ⁽²⁾, signalled the need for a new approach to policymaking. The general consensus across the political spectrum was that the country was completely unprepared for the factors that led to the recession, which highlighted the need to improve the capabilities for anticipating and coping with future developments. To respond to the economic crises, the government demanded information on the major factors likely to affect Finland's future and key policy challenges faced by the country.

Historically, government agencies in Finland have formulated policy alone, taking a sectoral approach. However, there has been greater cooperation recently, with numerous organisations now either dedicated to futures work, and other organisations incorporating a futures perspective in their work. In 1992, an initiative by the parliament called on the government to prepare and present strategies for Finland's future. Consequently, since 1993 futures work has been undertaken in central government by the Government Foresight Report task force, which examines a topic or set of topic areas in detail every electoral term. This is done on a cross-party basis, and is used to set the strategic framework for the country over the electoral term of the government. In addition to the work conducted by this permanent organisation, there have been ad hoc futures studies, commissioned to respond to specific issues, such as FinnSight 2015. There is also extensive use of futures thinking across the 11 government ministries and all are responsible for drafting strategies for their own sectors. These strategies must, where relevant, take account of the strategies prepared by the Government Foresight Report task force and include

an element of foresight. It is widely recognised that foresight/futures is required for good strategy.

2.1 Responsibilities

Futures studies are initiated and conducted in Finland through the **Government Foresight Report** and the associated processes and systems. The **Committee for the Future** contributes to the Government Foresight Report, providing cross-government input into the studies, ensuring the outcomes of the work are communicated to regional actors and providing a mechanism by which feedback from regional stakeholders is incorporated into the committee's response to the government (i.e. the parliament/government futures dialogue). **Research institutes, experts** (often from academia and industry) and **government ministries** also contribute to the Government Foresight Report. The **Finnish Environment Institute (SYKE)** is the national research and development institute within the environmental administration of Finland and works with other government ministries on futures-oriented studies to provide advice/input on environmental issues.

Once per electoral period, the Government Foresight Report task force in the Prime Minister's Office produces a foresight report on long-term future prospects and the government's targets, which should be submitted to parliament by the end of the second year of government. The government policy programme, which defines the main objectives and policies agreed between coalition partners, provides the general framework for the preparation of government foresight reports. The subject of the foresight report is selected by the prime minister in consultation with cabinet members. No special organisation for the reporting activity exists and usually the Prime Minister's Office appoints a steering group for the project, and hires a project

⁽¹⁾ Honkapohja, S. and Koskela, E., 2001, The economic crisis of the 1990s in Finland, *Economic Policy* 14 (29) pp. 399–436 (<http://www3.interscience.wiley.com/journal/119072938/abstract>).

⁽²⁾ See footnote 1.

manager to oversee preparation. Additionally, the Prime Minister's Office is responsible for commissioning overviews, statistics, surveys and studies directly from individual researchers, research institutes, etc., to serve as the basis of the foresight report. The report is the expression of strategic government policy, and is filtered down to the ministries and reflected in the strategic policies of the respective departments. Previous Government Foresight Reports are shown in Box 1.

The **Government Foresight Network** is an inter-ministerial forum for cooperation and exchange of information related to futures

thinking in government ministries. It contributes to the strategic planning and direction for the administrative sector as well as the government's decision-making. The network is used as a forum for discussing the results of futures work carried out in the administrative sectors, connecting specialists in each of the ministries to each other. In addition, the network seeks to develop ministries' foresight processes, and ensure that the outcomes of foresight processes are put to use in policymaking. The network's team, composed of members from all ministries, is appointed by the Prime Minister's Office and lasts for the government's term of office.

Box 1 Government Foresight Reports**Finland 2015 – Balanced development (2001)**

Finland 2015 – Balanced development (2001) is focused on the prospects for population, production and employment in Finland over the decade and a half from 2001–2016⁽³⁾. The time frame of 15 years was chosen in response to requests by the Committee for the Future and on the basis of a proposal by parliament for the inclusion of a population prognosis in the government report to parliament. The report was prepared by the Prime Minister's Office, ministries most likely to be affected by the issues and associated strategies, and experts from the Government Institute for Economic Research. The material included in the report comprises demographic predictions related to regional population and workforce figures.

The report focuses on regional development, discussing regional development in terms of population and workforce, and analysing how development and growth could be accommodated in growth centres, subregional centres and in rural areas. The report contains government strategies in response to the challenges identified.

Finland for people of all ages (2004)

Finland for people of all ages (2004) is concerned with how the changing age structure in Finland may potentially generate economic issues and opportunities. It is predicted that there will be an increase in the age of the Finnish population, and that this increase will result in increased economic costs, and more significantly, a decrease in the number of working-age persons capable of supporting these costs. The concern of the government, as communicated in the report, is that safeguarding the well-being of the population requires that policies are economically and socially sustainable for all generations in Finland.

The report describes a common perspective for all administrative sectors on preparing for the predicted changes to the age structure of the Finnish population. The aim of the report is to communicate coherent government policies on ageing, with a particular emphasis on seven policy areas.

1. Current demographic developments require modern population policy. The report discusses both ways to safeguard birth rate and to increase immigration.
2. The expected increase in the demand for services by elderly persons requires that greater emphasis be placed on promoting persons' functional capacity and health in different age groups.
3. Investments in children's and young persons' growth conditions and skills are needed.
4. Measures to increase both employment rate and productivity growth are also needed.
5. As it is impossible to precisely forecast demographic and economic developments, the report also stresses the need to reform social security.
6. From the viewpoint of regional demographic developments and safeguarding welfare services, it is essential to ensure the viability of municipal-level finances and to support cross-municipal cooperation and structural changes in service provision.
7. With its report on the future, the government also wants to attract and encourage interest in measures to grasp the opportunities generated by changes in the age structure. In the future, one person out of four will be aged 65 or more, so it is a prerequisite to support and utilise the resources and active participation of the ageing population.

Long-term climate and energy policy: Towards a low-carbon Finland (2009)

Towards a low-carbon Finland (2009) aims to help build the consensus required to shift Finland to a low-carbon society. It reviews the long-term challenges of climate and energy policy from global and national perspectives, and outlines targets and measures marking out the road to a thriving and low-carbon Finland. The time horizon of the report extends until the mid century and beyond as necessary, covering measures both to mitigate climate change and to adapt to its impacts. Besides energy production, the report discusses energy consumption, transport, forests and other themes central to climate protection. The preparation of the report included commissioning a number of studies on climate and energy policy issues as background material. Stakeholder panels and online discussions provided feedback for the preparation. The background scenarios included in the report are also based on a participatory approach. *cont.*

⁽³⁾ Please note that this is not the same study as FinnSight 2015.

In the report, the government sets its target to actively contribute towards limiting the rise in the global average temperature to 2 °C at the most. The report includes the following key policies.

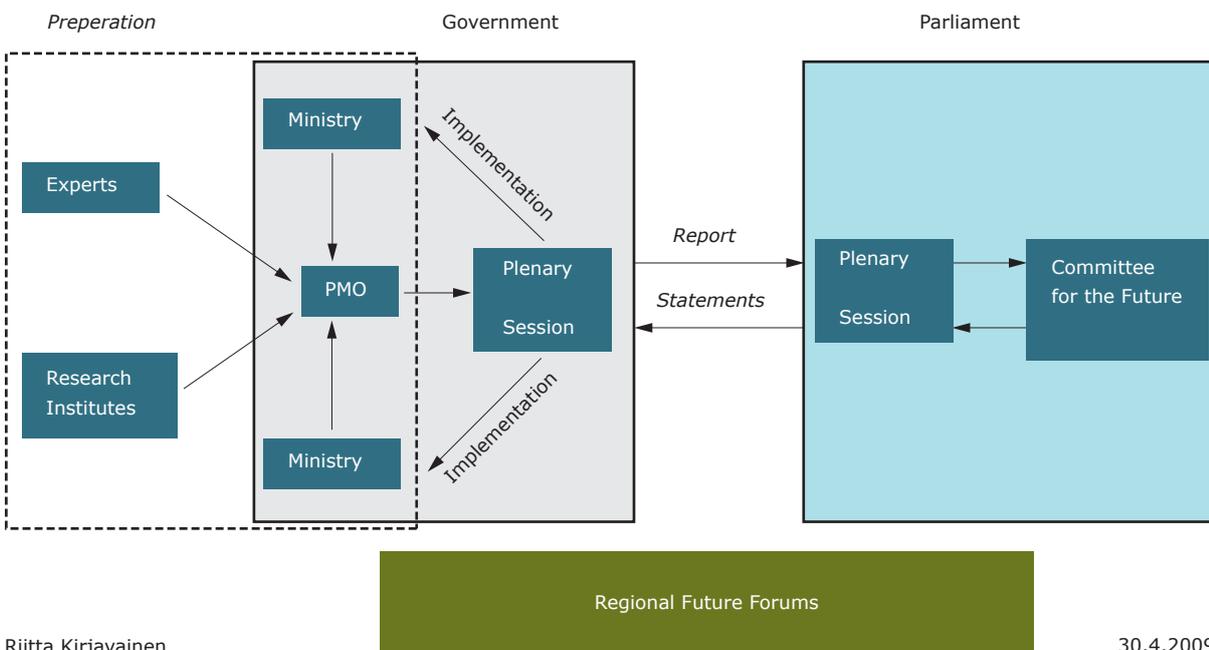
Vision: a low-carbon Finland in 2050:

- measures will be taken in order to limit global warming to 2 °C at the most;
- Finland's emissions will be cut by at least 80 % of the 1990 level by 2050, as part of a wider international effort the shift to a low-carbon society will be carried out in a way which promotes well-being;
- the targets will be revised as necessary as scientific information becomes more accurate and international cooperation progresses.

Targets towards a low-carbon society:

- in the long term, to shift to a virtually zero-emission energy system and passenger road traffic;
- to cut the energy intensity of the economy by at least 50 % by the year 2050 through radical improvements in energy efficiency;
- to improve the efficiency of energy use in buildings so that consumption is at least 30 % lower in 2030, 45 % lower in 2040 and 60 % lower in 2050;
- to gradually phase out the use of fossil fuels and peat in energy production as power plants are decommissioned, unless carbon-capture technology is installed;
- to continue raising the share of renewable energy so that it will reach at least 60 % of energy end use in 2050;
- to cut the average emissions from passenger cars to, at most, 80–90 g CO₂/km in 2030, 50–60 g CO₂/km in 2040 and 20–30 g CO₂/km in 2050;
- to gradually abandon the present method of landfilling waste.

Figure 1 Dialogue on future between parliament and the government in Finland



Riitta Kirjavainen

30.4.2009

Source: Riitta Kirjavainen, 2006, Practical experience in using foresight in policymaking, presentation at Ways to Future Europe, Prague, Czech Republic, 11 and 12 May 2006.

The **Committee for the Future**, appointed by parliament, prepares a statement in response to the report. Reporting to parliament facilitates a dialogue between the government and parliament on national future issues, allowing a consensus to be reached on emerging issues and the appropriate responses (Figure 1). After submitting the report to the Committee for the Future, a series of regional seminars are held to promote regional debate on the findings of the report. The seminars are organised jointly by the Prime Minister's Office and parliament, and include municipal organisations, local enterprises, etc. There is also extensive monitoring of the implementation of the recommendations of the report by the Prime Minister's Office. The Secretariat of the Economic Council of Finland may take on the follow-up of the report and make a report with further recommendations for further action. The government may also review the original report and subsequent reports/recommendations and make further decisions, which will also be followed up to ensure implementation.

The Committee for the Future, composed of approximately 17 members, is made up of members of parliament (MP). In addition to responding to the Government Foresight Network's report, the committee also undertakes its own projects for the future with the result that its members become very involved in the whole futures process. Example projects include exploration of the opportunities and risks of nanotechnology, the global challenges of food production and also the EU's eastern and southern neighbours. Many of the MPs who are members of the committee have become members of government, bringing extensive futures experience to government: the previous prime minister and minister of finance have been members of the committee and the minister of finance was the chair. The current chair is an MP from the National Coalition Party, and the vice-chair is an MP from the Green Parliamentary Group. A demand for a futures perspective may be generated by good awareness and knowledge of the benefits of futures thinking across government. The responsibilities of the committee are not limited to interacting with the government: its responsibility is to *conduct an active and initiative-generating dialogue with the government on major future problems and means of solving them* ⁽⁴⁾, specifically following and using the results of futures research to make policy on the future.

The Committee for the Future is tasked with the following:

- preparing parliamentary documents entrusted to it, such as parliament's response to the government's Report on the Future;
- issuing statements to other committees on matters related to the future when asked to do so;
- discussing issues pertaining to future development factors and development models;
- analysing research regarding the future, including methodology; and
- serving as the parliamentary body responsible for assessing technological development and its consequences for society.

The committee executes its tasks through many versatile networking activities with national and international researchers and experts (Box 2). The result is access to qualified expert resources and the opportunity to provide a discussion forum for central future-related themes. During the period 2007–2011 the committee is conducting strategic studies focusing on competence and expertise in the Finnish economy, the prospects of a welfare economy, and forests and the future of using them (as part the current Government Foresight Report on climate change and energy).

The **Finnish Environment Institute (SYKE)**, a separate institute with a separate budget, but

Box 2 Cooperation

The **Committee for the Future** cooperates with numerous different organisations during the course of its work:

- Finnish Government and ministries;
- research funding organisations, and research and development experts and organisations;
- various foreign parliaments;
- international parliamentary organisations such as EPTA, EPRI and the International Parliamentarians' Association for Information Technology;
- international institutions specialising in the survey of future development trends and options;
- civil organisations.

⁽⁴⁾ *Parliament of Finland Brochure — The Committee for the Future* (<http://web.eduskunta.fi/dman/Document.phx?documentId=np28107102024895&cmd=download>).

administratively directed by the Ministry of the Environment and the Ministry of Agriculture and Forestry, is the national research and development institute within the environmental administration of Finland. It provides strategic guidance, including futures thinking, to government ministries and also undertakes project work for other ministries as required. SYKE does not have a separate futures programme as such, but due to the nature of the work (strategic policy advice) there is an element of futures thinking in much of their work. There are links between SYKE and other futures programmes, but the degree of formal connections varies and may depend on the issue being considered.

The style of governance in Finland reflects the Nordic tradition (Perlitz and Seger, 2004) of low power distances, indicating a more equal distribution of power, and very low 'masculinity' index ⁽⁵⁾ indicating a more caring society. Finland is also noted as showing a relatively high avoidance of uncertainty ⁽⁶⁾, which complements the extensive use of futures studies in informing policy, as conceptualising the future serves to somewhat improve policy's ability to cope with uncertainty. Finns are also characterised by Perlitz and Seger (2004) as having a highly participative decision-making process, but it is worth noting that this is a generalisation and should not be considered the rule in all instances. Finland is quite decentralised, divided into six administrative provinces which function as divisions of state organisation. State services operate under their administration, and there is a degree of regional autonomy in allocating funds and shaping policy (i.e. in education). Finnish administrative culture is quite informal and it is easy to have contact with colleagues in other ministries. This extensive networking ensures that all civil servants have good contacts with their colleagues in other ministries and with their respective permanent secretary, and the most senior civil servants are well informed by foresight activities in their own ministries.

Finland enacted a new constitution in 2000 which shifted the country towards a more parliamentary system and curtailed presidential powers. Government power relative to the opposition has grown, and individual ministries within government have assumed greater decision-making powers at the expense of government-level decision-making. This has not reduced the collegial working method

of the cabinet, which is necessary to maintain a multiparty government. Futures studies are used to inform parliament and government. Prior to parliamentary elections, the ministries draft future reviews that provide a description of the central development issues and problems in the individual administrative sectors. These reviews analyse optimal solutions, applying a time span of 8–10 years. The future reviews are then made available to all the political parties represented in parliament, ensuring that both the government and the opposition are aware of the issues faced by the country at the level of individual ministries.

There are research agencies which provide strategic guidance, including futures thinking, to government ministries, for example SYKE. When the issue is cross-governmental, for example energy and climate change, there is a degree of convergence across ministerial policy areas that facilitates strong links between ministries. However, where ministries generate their own futures work, concerning issues specifically related to their own policy remit, there is a degree of divergence which can result in weaker links between ministries and their futures projects.

2.2 Resources, staffing involved

The Government Foresight Report group of the Prime Minister's Office (PMO), is a small unit of around five people. Included in this number is a special task force which prepares the government report to parliament and monitors the implementation of its recommendations. The members of the unit usually have other responsibilities in addition to their work on futures studies. The Committee for the Future is composed of approximately 17 members of parliament. The Government Foresight Network is an informal network, and as such has no permanent staff. Members of the network have other full-time roles across the Finnish administration.

There is some degree of futures work conducted in all 11 Finnish ministries, and all are responsible for drafting strategies for their own sectors. These strategies include an element of foresight as it is widely recognised that this is required for good strategies. The larger ministries, such as the Ministry of Social Affairs and Health, may produce one

⁽⁵⁾ The masculinity index describes the degree to which masculine values such as competitiveness and the acquisition of wealth are valued over feminine values such as relationship-building and quality of life.

⁽⁶⁾ Uncertainty avoidance measures a nation's preference for strict laws and regulations over ambiguity and risk.

Table 1 Resource allocation for key environment-related futures work in Finland

Programme	Established	Resources
Government Foresight Reporting	Since 1993, once every electoral term	c. five staff (not FTE *), special staff task force (three persons) included
Government Foresight Network	Since 2004, once every electoral term	No full-time staff members, each member usually has several other responsibilities; two members from each ministry.
Committee for the Future	Since 1993, granted permanent status in 2000	c. 17 members of parliament sit on the committee
FinnSight 2015	2005–2006	c. 100 panel members involved
Ministry of the Environment	—	—
SYKE	Since 1995	Specific projects in different policy areas such as water protection, waste policy, climate, water management, natural resources, etc. (several FTEs/year)
Others research institutes such as Agrifood Finland, the Finnish Forest Research Institute, Game and Fisheries Research Institute and the Finnish Meteorological Institute, and universities	Part of the institutes' core activity: universities have focused on specific programmes, for example the forestry futures programme of the University of Joensuu	Specific projects for their respective sectors (several FTEs/year)

Note: * full-time equivalent.

overall programme every five years in addition to strategies for specific issues. For example, the Ministry of Social Affairs and Health forecasts how costs and other factors relating to health are likely to change and uses a technical model for forecasting likely outcomes. Generally, ministry strategies are relatively short term, being 5–15 years into the future, although the time frame depends on the topic. The most recent foresight report prepared by the Prime Minister's Office is *Government Foresight Report on Long-term Climate and Energy Policy: Towards a low-carbon Finland*. It covers the period to 2050 and is the national foresight report for the current administration. The Ministry of Finance uses a model for prognosis until 2070 and prepares costs on budgetary terms depending on factors such as population/demographic change. Prior to parliamentary elections, the ministries prepare 'future reviews' which are sent to all political parties represented in parliament. The reviews include a description of the central issues and problems faced by the individual ministries, and an analysis of the potential solutions over the following 8–10 years. These reviews are used to increase the transparency

of the preparation of the government programme. The Prime Minister's Office recently published a description of the future to 2020, and how this could affect the Finnish policymaking environment. This document provides an exploration of global and Finnish developments to 2020 (?), and then describes five feasible visions of the future in 2020. The document is intended to be used by ministries when formulating policy. It is not intended as an official statement by the government or the ministries, but is intended to provide 'a thought-provoking and interesting vision that can offer alternative perspectives' for the future.

The Ministry of the Environment (MoE) has undertaken two sets of futures-oriented reviews. The first (1999) examined the potential impact on Finland's environment of globalisation, EU environment proposals/challenges and Russian challenges. This study led to recommendations that using futures studies to ensure the correct environmental pathways were being followed would improve strategy making within the ministry. The second study (2007 and still ongoing) involves

(?) Prime Minister's Office, 2010, *Together and independently — the world and Finland in the 2010s*.

a workshop/seminar to identify weak signals about the environment in the future. The signals identified are discussed within the department and across the ministry (including SYKE), eventually informing the ministry's strategy. The MoE is also using the results of the two studies to identify the areas of environmental policy where they should strengthen futures thinking.

2.3 Stakeholders and external relations

How engagement with stakeholders in Finnish foresight activities takes place is not immediately apparent, although Figure 1 describes where in the process consultation takes place. Some of the interviewees revealed that the operational nature of the study may preclude a wider breadth of stakeholders from being consulted. To clarify, although the experts consulted may come from a range of diverse backgrounds, they may still be considered 'insiders' and be representative of the status quo. Thus, the operational nature of the study may preclude the inclusion of 'outsiders' who could potentially contribute a radically different perception of the future. While experts do inform the eventual choice for the Government Foresight Report through work conducted in individual ministries, the eventual decision is down to the prime minister. The restricted time frame typically employed limits the scenarios to some degree, for example by reducing the range of possible outcomes. However, the most recent Government Foresight Report on achieving a low-carbon society in Finland included a long-term time frame to 2050, with complementary scenarios. To date, there has typically been extensive consultation with the public sector and experts, and representatives of non-governmental organisations were also invited to participate in the preparation of the latest foresight report. However, these stakeholders are involved when the remit or scope of the exercise has already been decided: therefore, while they provide valuable input into the study, they are excluded in determining the possible future scenario. As a result, the studies are very operational in nature, and prevent the consideration of wild card-type scenarios representing futures which may have a low probability of occurring but, if they did occur, would have a high impact.

Box 3 Communication

There is extensive communication between parliament and government, and also between government and regional stakeholders:

- **Final report** of the Government Foresight Network is the principal communication tool;
- **numerous workshops** are used to communicate findings to those who may be responsible for implementing the recommendations, this is a key stage;
- following the implementation of recommendations, **several reports** are prepared **based on monitoring** by the Prime Minister's Office (or the Secretariat of the Economic Council): these reports are used to **update and modify the recommendations.**

The Government Foresight Report, following a response from parliament, provides the basis for regional workshops used to discuss and communicate the findings/recommendations (Box 3). While this may be designated engagement with stakeholders, the extent of this engagement is limited as the scope of the report has already been finalised, and the findings have already been made. This engagement via regional workshops is not a consultation exercise but a platform to communicate to regional actors the operational changes they may have to facilitate to ensure that the recommendations of the report are realised. However, during the implementation stage of the recommendations, and the reporting associated with it, there is an opportunity for stakeholders to provide input which, upon review, may result in changes to the implementation of the reports original recommendations.

Submitting the Government Foresight Report to parliament offers the opportunity for a degree of stakeholder consultation, as members of parliament have the chance to evaluate and comment on the contents of the report. This evaluation by parliament ensures that the strategic direction being pursued is representative of the views of the electorate. It is also useful in stimulating a more general debate in Finnish society around the issues contained within the report ⁽⁸⁾.

⁽⁸⁾ Prime Minister's Office, 2007, *Improving the Government Foresight Reporting Procedure*.

2.4 Relative balance between quantitative and qualitative approaches

There is a mix of qualitative and quantitative approaches employed in Finnish futures studies. The balance between the two approaches depends on the topic area of the study, the motivations for the study and the stakeholders consulted. The nature of a study relates directly to the length of the future time frames considered, with shorter studies focusing more on the operational side of policy. This operational focus then informs the approach, qualitative or quantitative, as studies with a shorter time frame (that are operationally focused) facilitate a quantitative approach. Where the time frame is longer, and the focus of the study is less operational, there is the opportunity to take a qualitative approach. This is useful to ensure that a wider range of possible scenarios are considered, scenarios which would not usefully be informed

by quantitative data. During the interviews, it was noted that qualitative futures, with a time frame past 2020, may be viewed as more akin to storytelling which, in the minds of some ministries, do not fit well with the usual strategy-making processes and timescales (typically up to 5–10 years) and make for less useful futures studies as result. This does not mean that qualitative studies cannot be used at all but rather that some ministries, particularly the Ministry of Employment and the Economy, which is in charge of climate policies in the intermediate term, have wished to focus on 'hard facts' as far as possible as the demands set by EU are concrete and quantitative. There has, according to one interviewee, also been a neglect of more visionary solutions in the climate arena and a wish to focus on the near future without painting visions of the future. This is related to a more down-to-earth pragmatist style of policymaking in Finland that can be contrasted with, for example, the bolder visions frequently presented by neighbouring Sweden.

3 Analysis

3.1 Relationship between futures programmes

The relationship between futures programmes is complex, with many informal links strengthened by the acknowledgement of the benefits a futures perspective can bring to the policymaking process. There is obviously a formal link between the Government Foresight Report and the Committee for the Future, but there are also links between the individual ministries and the Foresight Network Report. The purpose of this report is to filter down to government departments and inform ministerial policymaking for the electoral term, both operationally and strategically. The ongoing futures work that is conducted in each ministry may inform the eventual selection of the topic of the Foresight Network's report, but it is likely that this selection is informed by various inputs. Nevertheless, these links, however informal, exist and contribute to the foresight programme.

The reporting procedure between the government and parliament on long-term issues, and the associated dialogue, is a unique feature of the Finnish system. Dialogue on the future between the Committee for the Future and the government has helped to build national consensus, which may have otherwise been obscured by day-to-day events, around long-term issues by facilitating the inclusion of opinions from across the political spectrum. However, it has been suggested ⁽⁹⁾ that too little attention has been paid to the statements issued by parliament in response to Government Foresight Reports. Ministries have *failed to give due consideration to the statements given by the Committee for the Future* ⁽¹⁰⁾. The general conclusion on the dialogue between government and parliament on foresight studies is that such processes are useful, but are still in the 'breaking-in' stage in terms of the full potential, and there is room for improvement in methodology and procedures.

Futures studies are also commissioned by individual ministries. In Finland, there is a tradition of policies, plans and strategies being made on an ongoing basis, and futures studies commissioned by individual ministries provide the conceptual framework to these policies, plans and strategies. They provide the backdrop for the policies, ensuring an element of future-proofing is contained therein, and that progress towards long-term goals is maintained.

There is a relatively established practice for the futures work across individual ministries and government research agencies to become operational and influence policymaking, but the extent of this varies from ministry to ministry. Futures work from these organisations sets out an agenda for a policy area, which is then filtered down and communicated to the relevant sector/department. Once approved, the sector/department implement new policies which take account of the futures work, and therefore are effectively incorporating futures thinking into policymaking. There is, however, some debate around the effectiveness of the policy/programmes/strategies informed by futures studies, and also around the extent to which they are either operational in nature or truly forward-looking (more details are provided in Section 4.1).

According to an interviewee, the MoE is keen to embed a futures-thinking perspective into its policymaking process and is seeking to make futures thinking, and the participative processes involved, part of the normal policy planning and strategy process at the ministry. The MoE is represented in the Government Foresight Network, and plans to use the framework employed by the network to assist in developing futures thinking within the ministry. The need for more cooperation with other ministries was highlighted during the preparation of the two previous futures studies by the MoE. An interviewee stated that there was not a great deal of

⁽⁹⁾ Prime Minister's Office, 2007, *Improving the Government Foresight Reporting Procedure*.

⁽¹⁰⁾ See footnote 9.

contact with other ministries on the issues raised, and that this lack of contact between ministries contributed to issues identified not being reflected in new policies.

While the MoE is involved when other ministries are shaping foresight for environmentally relevant topics, such as energy policy, the Ministry of Employment and the Economy appears to have been in the driving seat with respect to climate change matters.

There are links between ministerial/departmental futures programmes, but the degree of formal connections varies and may depend on the issue being considered. When the issue is cross-government, for example energy and climate change, there is a degree of convergence across ministerial policy areas that facilitates strong links between ministries. However, where ministries generate their own futures work, concerning issues specifically related to their own policy remit, there is a degree of divergence which can result in weaker links between ministries and their futures projects. Thus, the Finnish approach to (environmental) futures is generally a decentralised, department-driven process in which projects are conducted to address specific operational requirements, and to ensure a futures perspective is brought to the policymaking process. There is also the highly centralised Government Foresight Report (adopted in the government's plenary session), which seeks to address future issues and obtain consensus on the future direction of Finnish policymaking, what it should be addressing and how. There are links and ongoing dialogue between the work of the Government Foresight Report and departmental futures studies. In addition to its work in responding to the Government Foresight Report, the Committee of the Future is responsible for conducting dialogue on future issues more generally and liaising with — and indeed challenging — government ministries and the PMO in this respect. The Government Foresight Report has served to offset the effects of the fragmentary ministerial foresight activities. The horizontal approach employed has raised a number of issues and offered new perspectives which might have been overlooked in the reports and plans specific to individual sectors ⁽¹¹⁾.

The Economic Council of Finland facilitates cooperation between the government, the Bank of Finland and major interest groups. The Secretariat of the Economic Council of Finland operates in the

Prime Minister's Office as part of the Policy-analysis Unit, and is involved in futures-oriented work, preparing reports on the future. The Secretariat monitors economic policy developments and has also been tasked with the follow up of the Government Foresight Report, including potentially making recommendations for further action. The government may also review the original report, and in combination with the recommendations of the Secretariat, may make further decisions related to the original futures report.

The links between other foresight programmes, such as the one-off FinnSight 2015 project, are less clear-cut. While the general acceptance of foresight as a mechanism to generate new ideas and respond to issues faced by the country may provide for links between ministries and ad hoc programmes, it is difficult to identify these links explicitly. The FinnSight 2015 project was used to identify emerging issues faced by Finland and the findings informed the appropriate response. The response took the form of innovative networks or new groups tasked with preparing Finland for the challenges identified. Although the distinctive links may be difficult to identify, it is clear that a similar mindset to the Government Foresight Report is employed, and that there is a general acceptance of the veracity and robustness of foresight studies to inform policy responses.

3.2 Relationship between programmes and environmental policymaking

It is difficult to determine the exact nature of the relationship between futures programmes and environmental policymaking, but due to the widespread use of futures across Finnish administration, there is a high probability that futures' thinking is applied in environmental policymaking. For example, in addition to operational tasks related to maintaining environmental quality, SYKE works with other government ministries on futures-oriented studies to provide advice/input on environmental issues. There is not a separate futures component to the work or policy prepared by SYKE, as due to the strategic nature of their work there is a futures aspect to all of it. To date, none of the Government Foresight Reports have looked at environmental issues instead focusing on demographics and development. However, the current report is focused on energy and climate change and as such contains recommendations relevant to environmental

⁽¹¹⁾ Prime Minister's Office, 2007, *Improving the Government Foresight Reporting Procedure*.

policymaking. It can be reasonably assumed that the relationship between environmental policy and the outcome of the Government Foresight Report will be similar to what happens typically in that it will be debated with parliament, and then communicated to

regional organisations and government ministries. Any recommendations for changes to policy would be likely to happen in a similar fashion too, being closely monitored and changes made where appropriate.

4 Conclusions

4.1 Success factors

The Committee for the Future, and its functions in debating and reviewing the Government Foresight Report, is a key success factor in the successful uptake of futures thinking into (environmental) policymaking. The issues raised by the Government Foresight Report are bigger than the government of the day, and the temporal scale they cover demands a response that will necessarily span over the term of more than a single government. The Committee, through its debate on future priorities for Finland, builds consensus on what are important strategic priorities to the people of Finland. The Government Foresight Reports are used to set the context for strategic policymaking across the ministries, and thus it is important that there is a sense of ownership from across the political spectrum. Failure to obtain this sense of ownership could serve to undermine the policymaking process and weaken any policies associated with it, as a change of government could result in different strategic priorities and appropriate responses.

Another key success factor related to studies, especially those of the Government Foresight Report, are the explicit links to the operational side of policymaking. The time frames for foresight studies are variable, with futures thinking usually done in normal departmental strategy making which typically includes a 10–15 year timescale. Although this 10–15 year time frame does not always fit well with the longer-term perspective of futures studies, and may not suit government decisions related to long-term investments, it provides a mechanism by which the futures considered (however temporally limited) can be incorporated into policymaking. The futures envisaged match the policymaking cycle, providing targets and goals that can be realistically and practically delivered. The 10–15 year time horizon also informs the stakeholders consulted. Those stakeholders are usually closer to the operational activity and, consequently, identify issues and suggest recommendations that are pertinent to address and practical to implement. This operational focus ensures that the recommendations made

are relatively straightforward for administrative staff to employ, facilitating effective uptake of futures studies into policymaking. However, this operational focus can have drawbacks, particularly the disjunction between operational practice and longer-term futures thinking: this is discussed further in Section 4.2. Other success factors of the Government Foresight Report include:

- widespread use of futures thinking across government departments and organisations;
- cross-parliament discussion of futures studies ensuring widespread support;
- formal recognition of the benefits of futures thinking across government;
- standing committee of MPs (Committee for the Future) involved in foresight studies, ensuring a demand for foresight at the heart of government;
- links between strategic foresight helping set national strategy, and this informing the individual strategies of government ministries;
- effective follow-up, review, and changes to foresight recommendations to ensure policy implementation is effective;
- stakeholders consulted (e.g. as government ministries, government research agencies, and other state bodies) generally have experience of using futures thinking.

It is more difficult to account for success factors within other Finnish organisations undertaking futures work due to the embedded nature of futures thinking. It is an inherent part of the Finnish policymaking process, explicitly recognised as valuable and useful, and therefore difficult to account for success factors directly linked to futures thinking. The extent of the links between people undertaking futures work in different government departments/organisations leads to extensive cross-fertilisation of ideas and also facilitates effective communication between different sectors when a horizontal approach (such as the Government Foresight Report) is employed. Due to the widespread use of foresight in government ministries, there are experts in each sector who have experience in futures studies and the implications for their sector. The Committee for

the Future is composed of politicians who have foresight experience, and thus is capable of engaging with the Government Foresight Report and facilitating dialogue between different sectors. This inclusion of multiple sectors, and consideration of their respective positions, results in policy that may be more likely to cope with unexpected events. The success factors of Finnish futures studies could, therefore, be due to the cross-sectoral communication they necessitate, and the communication channels they facilitate, although, according to one interviewee, this may be very dependent upon the sector. The discussion and work related to climate change adaptation does appear to have raised issues, probably helped avoid some mistakes and has strengthened robust solutions. In forest policy, the force of the status quo and actors with a strong position has been so dominant that novel thinking seeps in very slowly. The situation could, of course, have been even worse if there had been no futures work at all.

A common theme to emerge from futures studies in Finland is that they are generally commissioned for a specific reason, that is to answer a particular question and provide specific (practical) recommendations. There does not appear to be any formal horizon scanning activities, either within the organisations conducting futures work or linked to the Government Foresight Report. This practical focus ensures that the futures envisaged have the remit of providing realistic scenarios and results, in practical recommendations, which make their way into policy. A good example is provided by the FinnSight 2015 project. The project was tasked with identifying future challenges for Finnish business, industry and society, and the areas of expertise necessary to address these challenges and foster well-being in society and the competitiveness of business and industry. The findings of the study were used to lay the foundations for the Strategic Centres for Science, Technology and Innovation, research organisations which work in conjunction with other research bodies in Finland to address the challenges identified.

The shortened time frames, however, also inform the stakeholders directly involved in the process, and help maintain an operational focus with practical scenarios. Stakeholders often appear to include an appointed committee of 'insiders' who

may construct futures that are supportive of the responsible authority. The shortened timescales mean futures envisaged stay within the political arena and plausible alternative scenarios may be discounted as they do not fit with current government thinking, which may be especially acute for sensitive topics. However, future outcomes do not care for government sensitivity, and excluding them from futures studies could potentially reduce the effectiveness of any recommendations made.

4.2 Barriers to success

The operational focus of the futures work in Finland, and the relatively short time frames usually employed, is likely to curtail the consideration of more divergent potential futures. This could result in policy that is less able to cope with the future, and due to its focus on the status quo, misses key emerging trends. The futures work identified during this study, either that occurring in government organisations or in the Government Foresight Report, usually does not include timescales longer than 20 years⁽¹²⁾. The apparent lack of a formal long-term horizon scanning activity reflects this approach.

Another feature of employing a restricted time frame is that it may result in future scenarios that are not removed from political territory, resulting in the consideration and discussion of issues, and their relative importance, from political perspectives. This may preclude certain stakeholders from providing input to the study as they might not represent current political ideology, or it may limit the input of stakeholders involved in the process who do not want to offend the current/incumbent government.

This politicisation of future scenarios could serve to narrow the focus of a futures study, thus undermining the veracity of its conclusions. To date, there has been a lack of wide-ranging, storytelling-type futures conducted in Finland, and also a lack of futures which consider more wild card-type outcomes. It is difficult to tell if this has hindered the successful uptake of futures studies into (environmental) policymaking, as drawing conclusions on something that has not happened depends on assumptions. However, it does point to an institutional culture that has does not envisage or

⁽¹²⁾ An exception is the current energy and climate change study being prepared by the Government Foresight Network, which is looking ahead to 2050. However, the longer timescale included in this study is due to the nature of climate change, and the length of time it will take for any significant effects to manifest. This long time frame could, therefore, be said to be operational in nature.

respond to long-term trends, at least not explicitly linked to foresight processes. While the difficulties related to utilising longer-term projections may be complex, there may be benefits in attempting to do so. Emerging trends which fall outside the remit of current institutional arrangements in Finland may not be identified until they have taken root as the operational nature of the studies, and the lack of horizon scanning, could prevent their early identification. This may reduce the effectiveness of Finnish foresight activities over the long term. Another issue may be related to the relatively

narrow focus of the principal foresight work of the once-per-term futures project. A review conducted by the OECD (2010) ⁽¹³⁾ (at the request of the Finnish Government) into the ability of the Finnish administration to respond to horizontal challenges found that the current approach for forecasting future issues was deficient. It notes that studying a single issue across the government mandate 'lacks sufficient flexibility to address possible new issues as they arise'. This could reduce the relevance and effectiveness of foresight projects used to inform strategic government priorities.

⁽¹³⁾ OECD, 2010, Public Governance Reviews – Finland – Working together to sustain success – Assessment and recommendations.

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- The Committee for the Future (<http://web.eduskunta.fi/Resource.phx/parliament/committees/future.htm>).

Appendix 1

Approaches to futures studies

Country: Finland	
Title of futures programme(s):	
Government Foresight Report Committee for the Future	
1. Overall governance culture of country	<p>Description</p> <p>Finland is a democratic parliamentary republic with its central government based in Helsinki, and local governments in over 300 municipalities. The municipalities are the fundamental administrative divisions of the country accounting for half of all public spending.</p> <p>Historically, government agencies have formulated policies alone (<i>silo mentality</i>). Recently, there has been greater cooperation between the ministries, especially with policies relating to research and innovation. For example, the Ministry of Education and Culture, responsible for science policy, and the Ministry of Employment and the Economy, responsible for technology policy, have cooperated in issues related to science and innovation.</p>
	<p>Nature of futures organisation(s)</p> <p>The Government Foresight Report is a permanent feature of the Prime Minister's Office but there is no special organisation for preparing the report itself. Instead, the Prime Minister's Office usually appoints a steering group for the project and hires a project manager to oversee the preparation. The research that informs the work is not performed in-house but is commissioned from individual researchers, research institutes, etc. The issue covered by the report is decided by the prime minister or is decided by the government's programme. Projects undertaken by the Policy-analysis Unit of the Prime Minister's Office are horizontal, cutting across government sectors. It is a small unit, responsible for futures work and for preparing the government's report to parliament.</p> <p>FinnSight 2015 was a joint foresight project between the Academy of Finland and Tekes, the National Technology Agency of Finland. It was conducted 2005–2006 and examined the change factors that may impact on Finnish business and industry and Finnish society. It identified future challenges of innovation and research activity, and analysed the areas of expertise that would foster the well-being in society and the competitiveness of business and industry by means of scientific research and innovation activities. The focus of the foresight was social and global issues that could potentially influence these things.</p> <p>This foresight study was used to lay the foundations for the Strategic Centres for Science, Technology and Innovation, and also to reinforce strategy work at the Academy of Finland and Tekes. The foresight project consisted of 10 expert panels, each of which was composed of 12 experts.</p> <p>Foresight is also used in government departments to inform policy but, in this case, the foresight is done by a dedicated team that only provides input to the department in question. For example, there is a Foresight and Strategy Unit in the Ministry of Employment and the Economy that is responsible for the efficient functioning of the strategy process and also leading and coordinating the drafting of corporate strategy. The unit also develops the strategic planning system for the administrative sector of employment and the economy.</p>

Country: Finland

There is a Government Foresight Network, an inter-ministerial forum for cooperation and exchange of information in issues relating to the anticipation of the future. The anticipation activities undertaken by the ministries serve the strategic planning and direction of the administrative sector as well as the government's decision-making. The Government Foresight Network is a forum for discussing the results of the anticipation work carried out in the administrative sectors. The Foresight Network also connects specialists in each of the ministries to each other.

The Networks team is appointed by the Prime Minister's Office and lasts the length of the government's term of office. The Network includes members from all ministries, and its presidency rotates among ministries. Duties of the Government Foresight Network include:

- addressing major-impact change factors, development trends and weak signals in cooperation with other parties involved in anticipation activities, whenever possible;
- sifting through anticipation data and drawing attention to possible overlap between the ministries' anticipation work, variations in results and blind spots and introducing initiatives to promote cooperation between administrative sectors;
- improving the effectiveness of anticipation data in political decision-making;
- serving as a ministerial contact forum for the preparations of the Government Foresight Report;
- preparing a joint operating environment description to be used as background material for the ministries' future reviews.

The Ministry of the Environment has undertaken two sets of futures-oriented reviews. The first (1999) looked at the potential impact on Finland's environment of globalisation, EU environment proposals/challenges and Russian challenges. The recommendations from the study proposed that strategy making would be improved by using futures studies to ensure that the correct environmental pathway was being followed. The second study (2007 and still ongoing) involved a workshop to identify weak signals about the environment in the future. Signals identified were discussed within the department and across the ministry (including with SYKE) and eventually informed the ministry's strategy.

The Ministry of the Environment is looking at making this type of futures thinking a part of the normal policy planning process and ministry strategy process, and is using the results of the study to identify the areas of environmental policy where they should deepen futures thinking.

SYKE works with other government ministries on futures-oriented studies, which often relate to operational studies. The futures thinking related to these operational studies is usually fairly short in its futures perspectives (usually 5–10 years) and thus precludes some of the more wild card considerations that a longer time frame might allow. This shorter time frame also informs the stakeholders consulted in that the closer to operational activity, the less broad and open the participation. Often, when there is participation on operational studies, it is more organised, for example there may be an appointed committee, and does not offer more radical alternatives but instead protects the responsible authorities as the study remains a political arena.

The negative effect of a reduced time frame, and narrow consultation, is highlighted by the Climate and Energy Strategy which has been reviewed three times since 2001. An interviewee stated that wider engagement would be beneficial to help make the reviews more robust and longer lasting. As the reviews excluded wild cards, and a longer-term futures view, they need more regular reviews as the outlook is limited in the first instance. More traditional 'futures' thinking could make the strategy more resilient to changing circumstances.

Country: Finland	
<i>Date programme(s) introduced</i>	<p>The FinnSight 2015 project ran 2005–2006.</p> <p>The Foresight and Strategy Unit of the Ministry of Employment and the Economy is a permanent feature of the ministry.</p> <p>The Government Foresight Report has been initiated at the beginning of every government term since 1992, and the Committee for the Future received permanent status in 2000.</p>
<i>Responsibility</i>	<p>The FinnSight 2015 project was managed by the Academy of Sciences and Tekes, the National Technology Agency of Finland.</p> <p>The Foresight and Strategy Unit is under the control of the Minister of Labour.</p> <p>The Office of the Prime Minister initiates the Government Foresight Report at the beginning of the term of government and manages the preparation and coordinates the implementation.</p>
<i>Resources</i>	<p>Resources were allocated from both of the Academy of Sciences and Tekes for the FinnSight 2015 project, and both organisations had people on the expert panels, in addition to the experts from other organisations.</p> <p>Assumed that the Government Foresight Report is funded by the Prime Minister's Office; the team is comprises five people, but these people also have other responsibilities. The Secretariat of the Economic Council of Finland is also involved in futures-oriented work.</p> <p>SYKE is a separate institute with a separate budget, but is administratively directed by the Ministry of the Environment and the Ministry of Agriculture and Forestry.</p>
<i>Tradition</i>	<p>The Foresight and Strategy Unit is a permanent organisation providing continuous input into policy.</p> <p>The FinnSight 2015 project was a one-off.</p> <p>The Government Foresight Network is continuous, but the members of the network change every government term.</p> <p>The Government Foresight Report is conducted every parliamentary term, but the topic is different each time.</p> <p>Futures thinking in policy/strategy-making may be considered to be operational versus forward-looking; the difference between the two gives rise to a difference in emphasis of the policy. Studies may be quantitative or qualitative, or a mix of both. (At SYKE, there is not a strict separation of the two, with a combination used wherever possible. This has to be tempered with policymakers' desire for numbers, or a quantitative approach.)</p>
<i>Parliament</i>	<p>The Minister of Labour has responsibility for the Foresight and Strategy Unit; the Prime Minister's Office for the Government Foresight Report.</p> <p>The Government Foresight Report is initiated by Prime Minister's Office which is delivered to the Committee of the Future in parliament, which then prepares a statement in response following a consultation process coordinated by the PMO.</p>
<i>Advisory councils</i>	<p>It is unclear the extent to which stakeholders are involved with the Foresight and Strategy Unit of the Ministry of Employment and the Economy.</p> <p>The FinnSight 2015 project involved a wide range of stakeholders, but the extent to which 'outside' opinions were included is unclear. Scientific advice was provided by the steering groups of the different national research and development programmes launched by the Academy of Finland and Tekes, and not restricted only to the public sector or administration. For example, scientific advice was provided by the steering groups of the different programmes launched by the Academy of Finland and Tekes. These steering groups consisted of experts from the research organisations and also from leading enterprises.</p>

Country: Finland

Legal framework	<p>The Government Foresight Report must be prepared once per parliamentary term. Its recommendations are binding, but are usually general enough to be interpreted in multiple ways by individual ministries.</p> <p>There does not appear to be any legal framework to provide long-term analysis.</p> <p>It is not strictly a legal duty, but is more of a concept introduced in the 1990s during a recession; the country was trying to find ways out of the recession and central to that was thinking about the future.</p> <p>The report to parliament is about creating a dialogue between government and parliament on national future issues.</p>
Political framework	<p>Not explicitly, although Finland has adopted (2006) a national strategy for sustainable development 'Towards sustainable choices. Nationally and globally sustainable Finland'. This sustainable development policy enshrines the participation of various social stakeholders, in both the definition of the contents of the policy and in the implementation of the measures. It is a broad-based, multi-stakeholder participation, combined with high-level political leadership that, by its very nature, is concerned with long-term trends.</p> <p>Futures studies are also commissioned by individual ministries. In Finland, there is a tradition of policies, plans and strategies being made on an ongoing basis, and futures studies commissioned by individual ministries provide the conceptual framework to these policies, plans and strategies. They provide the backdrop for the policies, ensuring an element of future-proofing is contained therein, and that progress towards long-term goals is maintained.</p> <p>There is a relatively established practice for futures work across individual ministries and government research agencies to become operational and influence policymaking. Futures work from these organisations sets out an agenda for a policy area, which is then filtered down and communicated to the relevant sector/department. Once approved, the sector/department implements new policies which takes account of the futures work, and, therefore, is effectively incorporating futures thinking into policymaking. There is, however, some debate around the effectiveness of the policy/programmes/strategies informed by futures studies, and also around the extent to which they are either operational in nature or truly forward-looking.</p> <p>The key success factor is the link to the long-term operational concerns of the ministries to find a way to broaden the reflection on fairly concrete action. Broad, general scenarios are often found not to be useful; they are seen as just a story and often don't connect to the means at the disposal of the ministry to deliver.</p> <p>While futures studies might have had some contribution to policymaking, there is a risk that they were too many of the storytelling variety and too few that are somewhere between this and operational work. To facilitate effective incorporation for futures thinking, they could bring in alternative futures, but it may be that the exclusion of futures thinking is due to the consequences of a highly political environment. Civil servants have a survival mentality and as futures beyond 2020 generate targets that are too difficult to deliver, the basic requirements of, long time frames are more difficult to include. The culture in Finland is strong on the concrete level, the operational aspects of strategy, into the future — but crucially not too far into the future.</p>
Role of environmental research/ foresight programmes in providing futures thinking	<p>No evidence of any specific environmental futures thinking, except for work related to sustainable development and climate change/energy of the Government Foresight Network in 2009.</p> <p>SYKE provides strategic policy advice to government ministries upon request, this advice usually has a futures perspective.</p>

Country: Finland

Actors

The Ministry of Employment and the Economy oversees Finland's technology policy, and Tekes sets the technological research priorities, promotes and coordinates R&D projects and programmes, as well as maintaining cooperation within international networks.

The Academy of Finland funds the basic research of individual researchers and research units of universities and research centres, working through a system of research councils. As well as funding extramural research, the Academy of Finland also launches and runs research programmes. The objectives of the research programmes are defined by the Academy of Finland, and may also include Tekes, ministries or foundations when they are jointly funding the research programme in question. The Academy of Finland is structured into four research councils, which are nominated for four-year terms. These are the Research Councils for Biosciences and Environment, Culture and Society, Health and Natural Sciences and Engineering.

FinnSight 2015 was a joint foresight project of the Academy of Finland and Tekes. The project was led by a steering group composed of representatives of the Academy and Tekes management. The Academy of Finland's president and Tekes' Director-General took turns in chairing the steering group meetings. The core group was composed of experts from the Academy of Finland, and Tekes was responsible for the planning of the project and supporting the panel's work. The core group was chaired by the FinnSight 2015 project manager. There were 10 panels comprising 10 experts each, with representatives from business and civic organisations.

The 10 expert panels looked at:

- learning and learning society
- services and service innovations
- well-being and health
- the environment and energy
- infrastructures and security
- bio-expertise and bio-security
- information and communications
- understanding and human interaction
- materials
- the global economy.

The Government Foresight Report is prepared once per electoral period, and addresses long-term issues and is then submitted to parliament. This is discussed by the government in plenary and then submitted to parliament. The theme is decided by the prime minister, or government as a whole, or is already decided in the government's programme. There is a high demand for futures-understanding in government/parliament. The Committee for the Future (granted permanent status in 2000), appointed by Parliament, prepares a statement in response (the Committee for the Future is responsible for dealing with factors affecting future development, research on the future and the impacts of technological development). The committee deliberate the parliamentary documents referred to it, and when requested to do so, make submissions to other committees on futures-related factors and development models of the future. The committee conducts research associated with futures studies, including their methodology.

There is also the **Secretariat of the Economic Council of Finland** — chaired by the Under-secretary of Economic Affairs in the PMO which is also involved in futures-oriented work — and this group prepares and commissions futures-oriented reports.

The foresight report, is an expression of the government's views on long-term issues selected for evaluation. The report includes the government's long-term objectives and policies to support the realisation of the prescribed goals.

Country: Finland

After submission of a report to parliament, it goes to the Committee for the Future (CoF) in parliament which prepares parliament's statement. The PMO then holds, in cooperation with the CoF, regional seminars, including municipal organisations, local enterprises, etc., and holds a dialogue on the core issues. Within the PMO, the implementation of recommendations of the last report (which was on ageing policy) is monitored. The Secretariat of the Economic Council of Finland may take on the follow-up of a futures report, and make a report with further recommendations for further action. The government may also review the original report and subsequent reports/recommendations and make further decisions. These decisions, and any related policies, may be monitored further — decisions on this are included in the following report to parliament.

There is **futures work in all 11 ministries**, and all are responsible for drafting strategies for their own sectors. These strategies include an element of foresight as it is recognised that this is required for good strategies. The larger ministries, such as the Ministry for Social Affairs and Health, may produce one programme every five years and also special strategies for specific issues. For example, the Ministry of Social Affairs and Health has staff for forecasting on how costs and other factors relating to health are likely to change, and use a detailed model for forecasting (more technical input). Generally, ministry strategies are 5–15 years into the future, though the time frame depends on the topic. The climate change and energy report (currently being prepared within the PMO) covers the period up to 2050. The Ministry of Finance uses a model for prognosis until 2070 — it prepares costs on budgetary terms depending on factors such as population/demographic change.

Sitra, the Finnish Innovation Fund, launched a national foresight network in the summer of 2005. The objectives of the network were to identify future challenges and opportunities available to Finnish society, intensify cooperation between Finnish foresight organisations, and to assist Finnish decision-makers in making more efficient use of foresight data.

The Ministry of the Environment has conducted some futures-oriented work, and is keen to embed a futures-thinking perspective into its policymaking process. The ministry is represented on the Government Foresight Network, and is keen to try and use the network's framework to assist in developing futures thinking within the ministry. A certain amount of futures thinking within the ministry involves following international processes such as the IPCC, and also financing scientists to become involved. The ministry recognises the opportunity for more cooperation with SKYE (and other ministries) in the area of futures studies. The need for more cooperation with other ministries was highlighted by two previous futures studies conducted by the MoE, as there was not a great deal of contact with other ministries on the issues raised.

The Finnish Environment Institute (SYKE) is involved in providing strategic guidance on research, including futures thinking, to government ministries. It is classed as a government research and development centre, but it also does project-based work for other ministries as required. It works under the Ministry of the Environment, is resourced by them, but also has wide independence.

There is not a separate futures programme within SKYE as, due to the nature of the work (strategic policy advice), there is an element of futures thinking in all of their work, with some projects being more futures-oriented than others.

There are links between SYKE and other futures programmes/work, but the degree of formal connections varies. When the piece of work is 'all government', there is a degree of convergence, for example the climate and energy strategy. In certain cases, there may be a degree of divergence where ministries may generate their own futures work.

Country: Finland		
	Perceived institutional need	<p>The need for a general futures perspective in policy was highlighted in the early 1990s when Finland found itself in a deep economic recession for which it was completely unprepared. This, combined with factors such as the rate of technological change and the increasing importance of strategic planning, resulted in foresighting gaining ground in Finland in recent years. Foresighting is undertaken on an ad hoc basis, although certain procedures may be used frequently.</p> <p>The FinnSight 2015 project was organised to examine the change factors that are likely to have an impact on Finnish business, industry and society, focusing on social and global issues. The project was used to identify future challenges of innovation and research activity and analyse the areas of expertise that have the potential to facilitate well-being in society and ensure the competitiveness of business and industry by means of scientific research and innovation activities. In addition to reinforcing the strategy work at the Academy of Finland and Tekes, a principal motivation behind the project was to lay the foundations for the Strategic Centres for Science, Technology and Innovation.</p> <p>The Strategic Centres are to assist Finland achieve world-class expertise and internationally important innovations and discoveries in specific sectors. The plan is to establish the centres in sectors that are considered to best meet the long-term needs of Finnish industry and society, with the objective of promoting the growth and renewal of the economy and create jobs. The cluster for energy and the environment was established in late 2008 and aims to provide long-term interdisciplinary research programmes by companies, research institutes and universities.</p> <p>The government programme of the present government highlights the importance of anticipation (futures studies), especially when it comes to anticipating future needs concerning employment and education. In accordance with this, the Ministry of Employment and the Economy and the Ministry of Education and Culture have, in cooperation, improved the employment and education prognosis process and model.</p>
2. Institutional structure for environmental policymaking	Relevant government departments, ministers, agencies, etc.	<p>Environmental policy in Finland is formulated by the Ministry of the Environment. The ministry defines environmental policies, sets administrative controls, makes strategic plans at the national level, sets targets for environmental protection, drafts and develops environmental legislation. The Ministry of the Environment conducts its work in conjunction with numerous other actors.</p> <p>The Finnish Environment Institute (SYKE) produces and compiles environmental data, and develops environmental protection measures. The institute also provides experts to participate in the drafting of environmental legislation.</p> <p>Finland has 13 regional environmental centres that implement environmental protection measures, enforce environmental legislation, and allocate environmental permits to medium-sized industrial units. There are also Environmental Permit Authorities that deal with permits for larger industrial plants.</p> <p>In addition, Finland cooperates with its neighbours in the field of environmental policy, for example within the framework of Baltic Sea negotiations.</p>
3. Foresight/scenario culture traditions	Approach to futures thinking	<p>Normative: predicts and describes the future as it may look like (FinnSight 2015)</p> <p>Other reports unavailable in English.</p>
	Thematic or issue	<p>Thematic, sectoral (FinnSight 2015)</p> <p>The Government Foresight Network's most recent report is on climate and energy policy (thematic/sectoral).</p>

Country: Finland

4. Summary of programme(s) as a whole, including within agencies

Foresight work in Finland is characterised by a weighting towards innovation and the associated benefits for society. Foresight seems to have a central role in formulating policy, with formal foresight groups at the heart of central government. This reflects the high value that is placed on foresight projects, and the esteem in which their findings are held. In addition, foresight was used as a key mechanism to rationalise and facilitate the setting up of new Strategic Centres for Science, Technology and Innovation. None of the reports from the Government Foresight Report have dealt with environmental issues to date. The last report adopted by Government in 2009 is focused on energy and climate change, and is contains recommendations relevant to the environment.

Regional future forums were organised (by the Prime Minister's Office and the Committee for the Future) in parts of Finland during 1998, 2000, 2002 and 2005 and 2010. These forums addressed the major challenges and opportunities in the region involved. The objective of these forums was to promote open dialogue concerning national and regional challenges, opportunities and lines of action.

There is no central strategy on futures work, thus the links between various programmes which might exist are informal. Only the climate strategy, which was provided to all ministries, could be considered a central strategy, but this was not truly a piece of futures work as it did not consider wild cards and the like, and was much more of an operational exercise.

There are some sectoral/policy communities which lend themselves to futures thinking. For example, the Ministry of Employment and the Economy has used forward-thinking but in an operational sense, but is in fact somewhat hostile to more broad speculations — they regard energy and infrastructure as operational. In the Ministry of Agriculture and Forestry, there is a long tradition of forestry programmes and until recently at least, was quite operationally focused.

- In the ministries, if work involves long-term investment, they will naturally look to the future but think of the future largely in operational terms, that is they will focus on what they need to deliver, and how to deliver it, rather than open up to more radical alternative visions of the future. Success factors identified for the Government Futures Report include the Committee for the Future in parliament, a standing committee (c. 17 members, all MPs). The Committee for the Future also runs its own projects for the future (in addition to responding to Government Foresight Reports) so members are very involved in the whole process. Many MPs who are members of the Committee for the Future become members of government and, therefore, bring their good training on futures-thinking to government.
 - The previous prime minister and minister of finance were members of the Committee for the Future and the minister of finance was the chair. Therefore, they demanded good foresight and understood how important it is — strong policy demand for futures perspective is therefore generated by good awareness and knowledge of the benefits of futures-thinking.
- Finnish administrative culture is quite informal, it is easy to have contact with colleagues in other ministries and thus networking is very easy in Finland. All civil servants have good contacts with their colleagues in other ministries and their respective permanent secretary. The highest civil servants are well informed by foresight activities in their own ministries.

There are some barriers to networking as, in spite of the above, sector lines are still strong and so may still create barriers to effective communication.

Appendix 2

Examples of futures studies

Country: Finland	
Futures programme(s): FinnSight 2015	
1. Description/ characteristics of future study	<p>Examples of specific studies FinnSight 2015: the Outlook for Science, Technology and the Environment</p> <p>Exploratory/ normative? Normative, describes the future as it is likely to be.</p> <p>Qualitative/ quantitative? Qualitative</p> <p>Thematic focus? Thematic, focuses on: <ul style="list-style-type: none"> • learning and learning society • services and service innovations • well-being and health • the environment and energy • infrastructures and security • bio-expertise and bio-security • information and communications • understanding and human interaction • materials • the global economy. </p> <p>Specific issue focus? Specific issue focus on how science and innovation in the above can, and are likely, in influence Finnish society.</p> <p>Spatial/ temporal scale Finland, to 2015</p> <p>Ad hoc/ongoing established futures process? Ad hoc, organisational structure established for the sole purpose of this study. No indication if it disbanded soon after completion of project, but assumed to be the case.</p> <p>Sector/cross-sector-based? Sector-based (see topic areas above)</p> <p>Science-based/ multiple stakeholders? Multiple stakeholders, expert committee members. Unclear the extent to which other organisations were included.</p>
2. Original purpose and application	<p>For what purpose? <i>To lay the foundation for Strategic Centres for Science, Technology and Innovation, and also to reinforce the strategy work at the Academy of Finland and Tekes. In addition, to identify challenges of innovation and research activity to foster the well-being in society and the competitiveness of business and industry.</i></p> <p>Requested by a specific entity? <i>Unclear. Assumed to have been requested by the Ministry for Employment and the Economy.</i></p> <p>How used? <i>Used as the basis to set up the Strategic Centres for Science, Technology and Innovation. These centres are being established in Finland with the aim of achieving world-class expertise and internationally important innovations and discoveries. The centres will be established in the sectors that are considered to meet the long-term requirements of Finnish industry and society, with the objective of promoting the growth and renewal of the economy.</i></p> <p>By whom? <i>Those involved in setting up the centres described above.</i></p>

Country: Finland		
3. Outcomes (immediate and long term)	Where and how used in policy (if at all)	<p>The FinnSight 2015 project was used to establish Forestcluster Ltd, an organisation responsible for the operation of the Strategic Centre for Science, Technology and Innovation for forest-related activities. It initiates research and innovation programmes to ensure that Finland's forest-based industry is a global leader.</p> <p>TIVIT Oy, (the Strategic Centre for Science, Technology and Innovation for ICT) and CLEEN Oy (the energy and environment cluster) were both established in 2008.</p>
4. Evaluation	Any formal evaluation of effectiveness or updates	None available
	Success factors/drivers	<p>The study provided the basis for the establishment of Strategic Centres for Science, Technology and Innovation. These research organisations are intended to work with other Finnish research bodies to address the challenges identified during FinnSight 2015.</p> <p>To date, Forestcluster Ltd, TIVIT Oy and CLEEN Oy have been established, which are responsible for forestry, ICT, and energy and the environment respectively.</p>
	Barriers to success	The relatively short timescales considered may undermine the institutions established to help Finland cope with the challenges Finland is predicted to face.
5. References	Academy of Finland and Tekes, 2006, FinnSight 2015: the Outlook for Science, Technology and Society (http://www.finnsight2015.fi/).	

European Environment Agency

Annex 2 — Finland country case study

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