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Contents

Finland: Paving the Way toward a Social Contract for Sustainability

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Introduction

Finland's sustainable development path

Finland draws considerable praise not only because it features the typical assets of a Nordic welfare state, but also because it is a pioneer in establishing sustainable development strategies by European and global standards alike. Beginning 25 years ago with a clear vision, Finland's decision-makers and stakeholders have succeeded in integrating sustainable development throughout the country's institutional framework. Along the way, those driving the country's sustainable development (SD) strategy forward have been innovative in their approach, cultivated an inclusive policymaking process and generated bottom-up activities. As a result, they have been able to foster commitments at the local level while at the same time securing high-level political commitment.

At the moment, there is a spirit of a fresh start in the air: The Finnish National Commission on Sustainable Development (FNCSD) initiated a review process in 2012 and is scheduled to introduce toward the end of 2013 a revised SD strategy in the framework of a "Social Contract for Sustainability." This new strategy is designed to bring together under one roof key government programs, the action programs of business and civil society organizations, and various institutional arrangements. Having identified the need to strengthen its position as a pioneer in the sustainable economy business, Finland has developed measures targeting this goal.

Woods, winters, wars and wealth

Finland is one of the northernmost countries in the world. Encompassing 338,000 square kilometers, it is the EU's fifth-largest country, after France, Spain, Sweden and Germany. One-quarter of its total area lies north of the Arctic Circle. Ten percent of its area is covered by lakes,

68 percent by forests and 11 percent by open land. Agricultural land accounts for only 8 percent, and built-up areas for only 3 percent. Nearly 5.4 million people live in Finland, making it the most sparsely populated country in the EU (17 inhabitants per square kilometer). Most of the population lives in the country's southern regions, primarily in the Helsinki metropolitan area (1 million).

Finland's climatic conditions are harsh: During winter, which lasts nearly 100 days in the country's south and 200 days in the north, average daily temperatures remain below 0 °C, and temperatures of –20 °C are not uncommon in many areas.

Finland's political history has been marked by struggles for independence from both Sweden (1809) and Russia (1917). Having fought against the Soviet Union during World War II, which resulted in the loss of one-tenth of its territory, Finland's relationship with its large and powerful neighbor to the east, with whom it shares a strikingly long border (1,200 km), has not always been easy. Officially neutral during the Cold War, the country faced pressures from both Western powers and the Soviet Union.

Unlike most other countries bordering the Soviet Union, Finland succeeded in maintaining its democratic institutions and open economy while balancing its need to cultivate good relations with the Soviet Union during the Cold War. Indeed, Finland's leaders managed to sign a free trade agreement with the European Economic Community in 1973 while at the same time reaching a trade agreement with the Soviet Union. Finland's complex relationship with Russia continues to shape decisions made in the country today, including those regarding nuclear power. Nonetheless, Finland signaled its westward leanings in 1995 as it joined the EU.

Finland began pursuing the Nordic welfare model in the 1930s, introducing health, social and education measures for a strong social safety net (Hjerppe 2010). A relative latecomer to

industrialization, Finland was a largely agrarian country until the 1950s, when demand for machinery products and trade liberalization brought about an economic boom. Following the collapse of the Soviet Union, which was one of Finland's key trading partners (representing 20 % of all foreign trade), Finland's economy was hit by a deep recession in the early 1990s. It managed to recover fairly quickly and, by 2000, economic diversification in Finland was similar to those of most OECD nations, with agriculture contributing 5 percent to the nation's GDP, industry 32 percent and services 63 percent.

Today, Finland numbers among the world's wealthiest nations. According to some, including the Economist Intelligence Unit's "Learning Curve" report (EIU 2012), it has one of the best educational systems in the world. Performing well on several other metrics, including employment and health, Finland's quality of life is ranked among the world's highest (OECD-BLI 2012). Finland also numbers among the top countries within the OECD in terms of the quality and performance of its political institutions and administration (Anckar et al. 2011).

Sustainable development policies and strategies in historical context

Early policy developments

Finland's success with regard to sustainable development didn't come overnight. Like many countries, Finland built its subsequent sustainability policies on the foundation of its conservation and public health efforts. In 1923, a progressive Nature Conservation Act was adopted (Joas 1997: 122). With rising awareness in the 1960s and early 1970s about environmental issues, environmental policy became institutionalized, which included the establishment of an Environment Ministry in 1983 (ibid.: 124).

Since the 1970s, Finland has become an environmental pioneer (Jänicke and Jacob 2006: 56). A major push on environmental policy and implementation came in the late 1980s and first half of the 1990s, partly spurred by Finland's EU membership (OECD 1997: 2). For example, Finland established Regional Environment Centers, designated nature protection areas and strengthened environmental enforcement capacity at the local level. In 1990, Finland was the first country to introduce a carbon tax on fossil fuels (Tews and Busch 2002). A wide range of economic instruments have followed, giving incentives to industry and consumers to reduce their environmental impact (OECD 2009).

Finland has also done well on the social side of sustainable development. As one of the Nordic welfare states, many measures have been introduced in social policies, inclusiveness is engrained in the culture, and Finland scores as one of the best countries on the Gini coefficient on income inequality (Anckar et al. 2011).

Evolution of sustainable development policies

In 1990, three years after the release of the Brundtland Report, the Finnish Council of State presented its report "Sustainable Development and Finland." In 1993, a year after the United

Nations Conference on Environment and Development in Rio, also known as the Earth Summit, Finland became the first European country to form a National Commission on Sustainable Development, a multistakeholder body established to work on national commitments made in Rio. The Finnish NCSD (FNCSD) became the core governance structure for the country's sustainability efforts.

Recommendations by the FNCSD in its 1995 report "Finnish Action for Sustainable Development" led to the development, beginning in 1996, of a comprehensive SD strategy. This strategy was prepared by a horizontal "strategy group" composed of several national ministries. In 1998, Finland adopted its first SD strategy, the "Government Programme for Sustainable Development."

In 2000, the FNCSD published "Signs of Sustainability," a set of SD indicators prepared by a group of stakeholders, experts and government representatives. Two years later, a FNCSD subcommittee evaluated progress toward SD over the previous two decades. A few years later, the SD strategy was reviewed in order to bring it in line with the EU SD strategy, and, in 2006, the FNCSD and the cabinet approved a revised national SD strategy along with 34 revised SD indicators.

In addition to the SD strategy, many other government strategies have emerged over the years in key areas relevant for sustainable development. In 2001, for example, Finland issued its "National Climate and Energy Strategy" (revised in 2005, 2008 and 2013) and the "Strategy for Renewable Natural Resources." As a forerunner in both areas, Finland has demonstrated its readiness to tackle the challenge of climate change and embrace resource efficiency – all the more pressing because of the country's high energy use and strong dependency on natural resources.

In 2004, Finland established a National Committee on Sustainable Consumption and Production (SCP) to prepare a 10-year program. Adopted in 2005, the "Getting More and Better from Less" program was one of the first responses by a national government to the agreement on SCP struck at the 2002 World Summit on Sustainable Development. Finland updated the program in 2012.

The year 2006 brought the National Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity in Finland, covering the period between 2006 and 2016. The 2010 strategy "Natural Resources – An Opportunity for Change" is another forerunner example: It was one of the first strategies of a nation coordinating all natural resources under a common strategic framework. Its predecessor, the "Strategy for Renewable Natural Resources," which had been introduced in 2001, was very restricted in scope, covering only those natural resources governed by the Ministry of Agriculture and Forestry and ignoring, for example, water, minerals and peat.

In keeping with good governance practices, Finland has reviewed these strategies regularly and has strived to link them with its overarching vision for sustainable development. These efforts have succeeded particularly well in the case of the SCP strategy.

Another SD instrument attracting increased attention among actors engaged in sustainability are the Government Foresight Reports. Prepared once every electoral period, the reports focus on issues that will impact key government policies over the coming 10 to 20 years. Parliament participates in the report process, which is designed to encourage broad public debate. In October 2009, the government adopted the Foresight Report "Long-term Climate and En-

ergy Policy," which, as part of an international effort, set the target of reducing Finland's greenhouse gas emissions from the 1990 level at least 80 percent by the year 2050. The government is currently working on "Sustainable Growth and Well-being," a Foresight Report with particular relevance for the SD agenda.

"Markets are in themselves very good instruments for allocating resources. But markets alone are too slow and ineffective to drive transformational change. This will require support by public policies to drive such changes. Otherwise, they won't happen. Lately, leaders in the global business community have outlined their support for an increased pace of change toward sustainable development. This is the first time the business community has specified the stronger policy signals needed from governments to support business actions."

Björn Stigson
Chair of the Peer Review on Sustainable Development Policies in Germany

Conceptual design and goals of the SD strategy

Established in 2006, Finland's current SD strategy, "Towards Sustainable Choices – A Nationally and Globally Sustainable Finland," is based on a holistic understanding of sustainability. Both a framework for government action and a guide for civil society and business stakeholders in search of sustainable solutions, the document is less a program than a story meant to inspire and create conditions for what it calls "well-being within the limits of the carrying capacity of nature nationally and globally" (FPMO 2006: 3). This SD strategy emphasizes that sustainable development requires innovative solutions, a process of transition and changes in procedures and behavior. It formulates goals and qualitative objectives for each of the three dimensions of sustainable development and, as key themes, it identifies natural resources, sustainable communities, citizens, the economy, international cooperation, education, research and innovation (Figure 1). Given that the strategy is not considered a political negotiating process, it issues no quantitative targets beyond obligations and commitments agreed upon at the EU and international levels. In fact, only government programs and sectoral strategies are thus far committed to such legally binding targets.

A two-year review cycle was set to correspond with the reviews of the EU SD strategy. In 2010, however, the "Europe 2020 Strategy" emerged as the European Commission's overarching strategy, defining the EU's development goals and armed with a governance mechanism (the European Semester) for assessing progress. The European Commission sees the "Europe 2020 Strategy" as the core document, defining the guiding principles also on the field of sustainability.

Figure 1: Vision and objectives of the Finnish SD strategy (2006)

Vision:
Assuring well-being within the limits of the carrying capacity of nature nationally and globally

Objective: A good life in a sustainable society

Balance between the use and protection of natural resources	Sustainable communities in a sustainable regional structure	Citizens – well-being throughout the entire life span
• Limiting greenhouse gas emissions • Increasing energy efficiency and the use of renewable energy • Adapting to the adverse effects of climate change • Safeguarding biodiversity • Promoting sustainable production patterns • Changing consumption habits • Improving the state of the Baltic Sea • Maintaining the cultural significances of natural resources	• A polycentric and networked regional structure • Functionally diverse and structurally sound communities and a good living environment • Ensuring a vital rural region and the necessary services • The transport system and information society services are a precondition for a functional society and interaction	• Balance between individual and societal responsibility • Quality of working life • Cohesion between different generations • Preventing social exclusion and poverty • Promoting healthy lifestyles and functional capacity and preventing health threats • The national identity and a multicultural Finland • Promoting civil activity
The economy as a safeguard for sustainable development	**Finland as a global actor and bearer of responsibility**	**Supporting sustainable choices**
• Ensuring employment and Finland's competitiveness • Ensuring services and income transfers that are essential to the welfare society	• Finland's operational principles in international cooperation • Development of neighboring regions • Influencing European Union policy • Finland as a global bearer of responsibility	• Education to promote sustainable development • Research and development, know-how and innovations • Economic policy instruments

Source: FNCSD 2006: 6.

Whereas its antecedent, the so-called Lisbon Strategy, was seen as a sectoral strategy bound to the overarching SD strategy, the weight shifted clearly with the birth of "Europe 2020." As a result, the weight of the EU SD strategy has decreased and it was subjected to a limited review in 2009. A new revision is still pending. Also in 2009, the Finnish strategy was subject to an external review; a new review and renewal process is currently underway (see "Implementation process").

The international sustainability agenda and related commitments have both inspired and spurred Finland to act. By the same token, the country stewards SD principles in international organizations, including the Baltic, Nordic and Arctic councils. Indeed, Finland's SD strategy devotes a section to "Finland as a global actor and bearer of responsibility" (FPMO 2006: 117–123), urging that Finland exert "as much influence as possible on the decisions made in

international relations and processes, which reflect on Finland and the security and well-being of Finns" (ibid.: 117).

Implementation process

Institutionalizing sustainability

The key body to "promote, evaluate and monitor" the implementation of the Finnish SD strategy is the FNCSD. Since its establishment in 1993, it has been chaired primarily by the prime minister, an indication of how high SD sits on the country's political agenda. The commission's 45 members, in the last term, included ministers and high-level civil servants from ministries that address sustainable development issues, parliamentarians from all political parties and a wide spectrum of representatives from Finnish civil society, business and industry, academia, trade unions, churches and scientific institutions. These members cherish their opportunities for direct dialogue with high-level government officials.

The FNCSD meets quarterly, with subcommittees meeting more frequently to work on, for example, SD strategy and its follow-ups, along with related topics, such as local policies, consumption, trade and education. Separate bodies are formed when it comes to more direct programming (e.g., the action plan for sustainable production and consumption). These bodies typically proceed in cooperation with the FNCSD, and membership in these groups as well as in the FNCSD often overlaps.

An interministerial network secretariat prepares and supports the work of the FNCSD on a day-to-day basis and convenes about 10 times per year. The network secretariat now comprises about 20 members from 11 ministries as well as new players from other institutions (i.e., the Finnish innovation fund Sitra, the Finnish funding agency for technology and innovation Tekes, the military headquarters and the defense administration), each taking the lead in preparing themes within their area of expertise. The Ministry for Environment, which is responsible for steering the SD process, aims to improve the participation of ministries, in particular those whose commitment to the SD agenda has lagged.

This arrangement has facilitated horizontal coordination, and where fragmentation has become palpable, action has been taken to adjust coordination accordingly. In the 2002–2003 SD strategy evaluation process, for example, the FNCSD established a subcommittee that brought together members from the relevant ministries and from those stakeholder groups that had developed their own SD strategies in order to improve streamlining.

Yet, over time, the number of strategies for specific policy areas have mushroomed somewhat. These individual "silo-type" strategies have too seldom achieved synergy with the SD strategy – even though all policy sectors were involved in the drafting of the 2006 SD strategy as part of a concerted effort to find common ground. Individual ministries had established coordinating mechanisms for SD issues, for example, by creating a "green office."

However, government programs of coalition governments – which constitute the heart of Finnish politics and policymaking – have grown, and with that, the operating space of indi-

vidual departments has shrunk. This, combined with reduced staff capacity in the departments, has resulted in an overloaded administration lacking sufficient resources to pay attention to overarching strategies or to coordinate intersectoral work. In short, these developments exacerbated silo effects. The need for a new arrangement grew, including the realized need to align with the Government Foresight Reports, in particular the one currently in preparation on "Sustainable Growth and Well-being 2030."

In a 2009 external evaluation commissioned by the Finnish Ministry of the Environment, the authors note that whereas the contents of the SD strategy have grown in importance in public administration, "as a governing instrument the strategy has lost rather than gained ground." This disjuncture, they continue, can be attributed "to the central themes of sustainable development being steered through other strategies, while the strategy's contents are determined by decision-making processes steered separately from the strategy itself." As a result, the SD strategy's importance lies primarily "in the strategy processes' provision of a forum in which actors can discuss the related themes" (FME-RMC 2009: 5).

Another issue demanding attention in recent years has been the question of targets and indicators for measuring progress. The current SD strategy only includes internationally agreed-upon quantitative targets. A typically Finnish network of experts developed indicators, revised and completed them, and aligned them with the cycles of SD strategy reviews. Finland used the same approach in developing its "Findicator" service, a set of about 100 statistical indicators that measure trends in Finnish society. Developed in response to growing demands for indicators that complement GDP as a measure of progress, the Findicator service provides more accurate information on human well-being and the state of the environment. Launched in 2009, it is available online and updated regularly.

Addressing problems with the SD strategy's realization of target-setting, the 2009 evaluation of the SD strategy drew upon the set of 34 SD indicators agreed to in 2006. According to

the authors, target-setting within the strategy has been vague, allowing "the interpretation of a wide array of measures as promoting sustainable development." In fact, they continue, target-setting is "so general that all actors are able to identify elements in the strategy that are also pursued by their own organizations." Ultimately, they conclude, this "kind of sustainable development strategy as such has no steering effect on sectors" (FME-RMC 2009: 5).

Critics say the 2009 evaluation came too quickly on the heels of the 2006 SD strategy to measure the success of implementation. But it did launch a new round of reflection and led to work conducted in 2012 in preparation for a renewal of the SD strategy. This included a critical look at Finland's vertical coordination, which is generally lauded for its emphasis on ownership, bottom-up action and commitment. The FNCSD found room for improvement in this area, identifying enforcement and coordination problems in the relationship between the national government and regional administrations as well as in the setup of the new regional joint centers of environment, traffic and industries.

In 2012, as the FNCSD's term wound down, the Gaia Group (a Finnish sustainability consultancy), in collaboration with the FNCSD, reviewed the performance and functions of the commission with an eye to re-evaluating its longstanding format. In December 2012, at the last meeting of the FNCSD term, the commission debated potential new models inspired by earlier member feedback and the results of Gaia Group's evaluation (Gaia Consulting Oy 2012).

The 2012 work in advance of the strategy review involved reflections on the future concept of the SD strategy with the goal of strengthening its umbrella functions, bringing competing strategies into closer alignment and revising the issue of quantitative targets. The FNCSD secretary general and coordinator of the network secretariat described the starting point and aim of the review as: "Sustainable development is a collaboration between the government and other social actors. How can they commit themselves to a shared vision, as well as common goals, targets and actions?" (Rouhinen 2012). Action in this area had already been taken. In fact, the network secretariat has, since 2012, been discussing with departments how they are integrating aspects of sustainable development into as many as 46 strategies.

The FNCSD's review has revealed some limitations of its conceptual and innovative capacity. But even if the commission's effectiveness leaves room for improvement, it suffers from little of the stakeholder fatigue that plagues comparable bodies and processes in other countries. On the contrary, FNCSD members are actively engaged in deliberations over the commission's future.

Inspired by the work of the German Advisory Council for Global Change, which in 2011 began advocating "a social contract for sustainability" (WBGU 2011), the FNCSD has adopted the concept as a framework for the current renewal process. This social contract approach, which aims to bind together "strategies, programs and policies in the state administration with various functional commitments of other players in society," resonates well in Finland (Rouhinen 2012). The strategy renewal process was officially launched by the FNCSD on December 20, 2012.

Following the FNCSD's December 2012 meeting, a strategy group was formed with representatives of the relevant ministries, two funding agencies for the green growth and sustainable innovation program (Tekes and Sitra), and some stakeholder members of the FNCSD. This strategy group is now deliberating on options for the future of both the FNCSD and the country's SD

strategy, with an agreement expected in 2013. With its ongoing revision process, Finland is demonstrating its capacity for self-reflection and adaptation. Once again, Finland shows that the rallying cry "If in doubt, innovate!" draws on deep cultural roots (The Economist 2013: 10).

Participation

It bears repeating that participation is inseparable from the arts of policymaking and implementation in Finland. Taking a broad participatory approach seems also to be deeply embedded in Finnish culture. Indeed, several interviewees have pointed to numerous examples of multistakeholder committees and participatory processes using a network approach.

A crucial player in Finland's participatory political culture is the local level of government, and the national administration actively and successfully fosters action and commitment in communities throughout the country. Corresponding with the strong emphasis on bottom-up engagement, local communities are indeed very active in Finland's sustainable development approach. Outstanding examples of local commitments include the carbon-neutral municipalities joined in the HINKU project and other communities focused on sustainable urban planning, energy-efficient or zero-energy buildings, and demand-responsive transport.

Outcomes and achievements

Finland was a clear forerunner in stressing the importance of governance in the international drive for sustainability. As soon as the Brundtland Commission advanced its concept of sustainable development in 1987, Finland erected the EU's first structures devoted to SD governance and has maintained a rigorous cycle of review and adjustment ever since.

Finland has remained active internationally, also by assuming a co-leadership position in the European Sustainable Development Network (ESDN). In concert with international partners, Finland has helped define the key elements of SD governance: policy coordination and coherence, leadership, ownership and an emphasis on the bottom-up approach. Having the prime minister chair the FNCSD has raised the profile of sustainability in Finnish politics and society, and the commission's multistakeholder composition reflects the country's underlying predilection for network governance. The 2012 evaluation by the Finnish Gaia Group, which was commissioned by the Finnish government to review the FNCSD, credited the commission with:

- raising awareness of environmental and economic realities among NGOs and industries;
- promoting sustainable development priorities among numerous policy sectors and organizations;
- contributing to government programs;
- exerting "soft influence" (e.g., in discussions between the Secretariat and third parties); and
- taking practical educational measures and conducting seminars with wide participation.

From the outset, it was understood in Finland that sustainable development requires society, government, business, civil society and the research world to engage in a learning process that demands stamina, self-reflection and periodic adjustment.

In the country's consensus-oriented political culture, operating in networks is a common approach. Finns have cultivated the patience, incrementalism and diplomatic skills that the search for consensus requires and are aware that progress is slow at times. In other countries, this kind of network-based policymaking often generates frustration among the stakeholders involved, and processes sometimes fall apart. However, in Finland, network-based policymaking has fostered the capacity to bear seemingly endless discussion, faith in the long-term benefits of iterative processes and a willingness to try new things. Elsewhere, this kind of "soft" approach is often considered a second-best option for issues for which there is no "strong" majority. Finland's success underscores the fact that a challenge as complex as achieving sustainable development requires not only fundamental changes for government, industry and individuals, but also the sense of ownership a network approach can distribute throughout a society.

Countries like Finland with governments that cultivate consensus-building have been role models for others pursuing sustainable development, and Finland now finds itself ahead of the curve, having explored governance research on "transition" (Grin, Rotmans and Schot 2010) and the transformation of societies toward sustainability with a new social contract. Finland has led the way in putting that concept into practice, modeling a common understanding of the urgent need for change.

A social contract – a common understanding of the urgent need for change

The new social contract is an agreement for change.
Citizens and other social actors commit to innovations that link normatively to the goal of sustainability and, in exchange, agree to let go of established practices.
The guarantor in this virtual contract is a proactive state that involves its citizens in decisions required to meet sustainability targets.
Achieving these goals requires a culture of:

- attentiveness (born of a sense of ecological responsibility);
- participation (as a democratic responsibility);
- obligation toward future generations (future responsibility); and
- a common understanding of the need for a "one planet" policy.

Source: Rouhinen 2013

In addition to the network secretariat's achievements in centralizing information and maintaining capacity for horizontal coordinating efforts across ministries, other examples of success in this area include:

- the effective linking of the SCP strategy to the SD strategy;
- the Strategy for Education and Training for Sustainable Development and Implementation Plan 2006–2014, which was prepared by an FNCSD subcommittee and includes an action plan;

- the preparation of SD strategies by individual government departments, including the Ministry of Social Affairs and Health's 2011 "Socially Sustainable Finland 2020" strategy (FMSAH 2011); and
- the 2009 policy for sustainable public procurement, which set a goal of 100 percent by 2015 (FME 2009).

A pioneering sustainable-procurement program by the Ministry of Defense – which has "greened" its buildings, land use and other assets and activities – has yielded a multiplier effect as these sustainable practices influence young people during their military service (FMD 2013). The ministry has further demonstrated its commitment to sustainability with its participation in the renewal of the Finnish SD strategy (see "Implementation process").

Finland invests 3.4 percent of GDP in innovation – the highest percentage in the world. What has come to be known as the "Finnish innovation model" stresses cooperation, trust, efficiency, open and accessible governance, and dissemination of information online.

Tekes, the Finnish agency that funds technology and innovation, is a key player in the country's sustainability investment, with a € 500 million budget for support-, seed- and research funding for the private sector and universities (fostering collaborations between large and smaller enterprises).

Sitra, the Finnish Innovation Fund, with its € 70 million budget, has similar governance and goals, but it also focuses on training decision-makers on issues such as the knowledge economy. Both agencies are instrumental to Finland's new "Green Growth" agenda, which was launched in 2011 by Tekes and targets "energy and material efficiency of production and service chains over the entire life span of products" (Tekes 2013). Both agencies also participate in the SD strategy renewal process.

Finland ranks high in international indices for environmental sustainability performance. The country ranked No. 1 in the Environmental Sustainability Index for the three years it was calculated (ESI 2001, 2002 and 2005). In the succeeding Environmental Performance Index (EPI), however, which uses outcome-oriented indicators, Finland's ranking fell from No. 3 in 2006 and No. 4 in 2008 to No. 12 in 2010 and No. 19 in 2012 (EPI 2012). One should hesitate to draw conclusions from a composite index comparing the group of high achievers without closer examination of the data, but the lower rank of Finland in the EPI might be an indication of challenges addressed in the following section.

In the Sustainable Society Index (SSI), a similarly aggregated index, Finland ranked No. 4 in 2008, No. 5 in 2010 and No. 8 in 2012 (van de Kerk and Manuel 2012). In the Human Development Index, Finland has always ranked in the top 20 (UNDP 2013), and it has ranked consistently higher in the inequality-adjusted version of the index, which correlates with the country's outstanding Gini coefficient of 26.8 (CIA Factbook 2008). Since 2009, Finland has moved up one rank in the Bertelsmann Stiftung's Sustainable Governance Indicators, and the 2011 report on the country stated that: "At rank 3, Finland's status performance is top-notch" (Anckar et al. 2011).

Despite enormous pressures by Finnish industry on the environment (see "Challenges ahead"), the country's early environmental policies have paid off. The OECD's 2009 "Environmental Performance Review of Finland" concluded that the country has made crucial progress

on air and water quality (e.g., helping lakes recover from acidification), noise pollution, municipal waste and renewable energy. The report lauded the innovative METSO program to protect biodiversity in forests, but it noted that conservation challenges persist, with the number of endangered species increasing. The report also cited gaps in Finland's protected areas network (OECD 2009: 6).

To conclude: Finland was an early mover with environmental and sustainable development strategies and measures, and its efforts have shown remarkable endurance over the last four decades. The country's culture of participation and cooperation have smoothed its path toward sustainable development, paving the way for success in mainstreaming, in local commitment and action, in innovative approaches to fostering sustainable business and in generating measurable outcomes. At the same time, Finnish sustainability efforts have battled fragmentation and the challenge of coordinating an abundance of strategies. Today, Finland is showing once again its capacity to take on the challenge.

Challenges ahead

As one of the Nordic welfare states, Finland has an excellent social policy record. It has been an environmental policy pioneer with respect to instruments such as green taxes, which have proven particularly successful. However, more needs to be done to render the economy more sustainable and lower the county's very high energy intensity, which is driven by the cold climate and energy-intensive industries.

Finland's industrial structure poses significant challenges to any "greening" of the economy. Pulp and paper production and basic metals processing, all highly energy-intensive industries, make up a large share of the industrial sector. However, the country has taken steps to improve energy efficiency and reduce water and air pollution. It has done so by introducing environmental regulations and incentives for research and development programs. Effort has come from the private sector, as well.

Rising energy prices in the 1970s induced pulp and paper companies to develop technologies for energy efficiency; the resulting innovations have enabled these firms to reach a high level of energy self-sufficiency, making the sector a leader in this technology area and providing a clear example of first-mover advantage. This achievement is partially responsible for the high share of renewables in the country's final energy consumption (around 30 %, compared to an EU average of around 11 %) as well as for the very high share (around 80 %) derived from biomass sources (e.g., industrial wood fuels, black liquor, other biofuels).

However, per capita energy consumption in Finland remains at a level higher than that observed in most other Western nations, and it is almost double the average seen in the EU-27 (6.9 metric tons of oil equivalent, or TOE, per capita as compared to 3.5 TOE for the EU-27 as a whole in 2010; EEA 2013). The industrial sector accounts for the largest share of this consumption: around 50 percent of the whole, as compared to the EU-27 average of 30 percent, with the paper and metal sectors alone consuming 35 percent (figures from Statistics Finland 2012, FME 2012 and EEA 2013).

The country's climate also plays a crucial role in this demand. The average number of heating degree days (HDD) per year – a measure of how often and how far the temperature varies below a standard base temperature, with higher numbers corresponding to more energy needed to heat buildings – is Europe's highest, at more than 5,000, compared to an EU average of 2,800. Indeed, Finland's number of HDDs is even higher than that of regional neighbors Norway, the Baltic states and Sweden, the last of which averages 4,300.

The country has undertaken significant efforts to reduce energy consumption. Finland is the world leader in combined heat and power use, with around 37 percent of its gross electricity generation deriving from this model, compared to an EU average of around 10 percent. It also has a very large share of district heating (almost 50 %, compared to an EU average of around 10 %), power stations that demonstrate very strong thermal efficiency in international comparison and a government energy research and development budget that is the OECD's largest as a percentage of GDP. As a result of these steps, total energy consumption has today dropped back to its 2001 level.

These reductions are perhaps best understood in comparison with those of Finland's Nordic neighbors. Although Norway has a lower number of heating degree days, for example, its per capita energy intensity is as high as that in Finland (6.9 TOE). In Sweden, by contrast, this figure is a relatively lower 5.5 TOE per capita, a difference that may be due to the countries' differing industrial structures. With respect to annual reductions in total energy intensity, Finland ranges in the middle of the Nordic group, with an average annual reduction of 0.7 percent over the 1990–2010 period.

This figure is highest in Sweden (an average of –1.7 % annually) and lowest in Norway (–0.4 %). Looking solely at the more recent 2005–2010 period, Sweden continues to show the highest average annual reduction (–1.7 %), while Finland shows a slight average increase (+0.1 %) and Norway a significant one (+3.3 %). Both Sweden and Norway belong to a group of EU countries that showed increases in their energy intensity of more than 4 percent in 2010 (EEA 2013).

The continued use of peat as fuel and for electricity production represents another environmental and sustainability problem. Moreover, the OECD (2009) has reported that overall biodiversity is declining in the country, that the amount of hazardous waste is increasing and that eutrophication in the Baltic Sea is continuing. Finland's greenhouse gas emissions were above its Kyoto Protocol commitment levels and continue to be a challenge. Despite the comparatively high share of nuclear power, which accounts for 18 percent of total energy production, and 26 percent of the electricity supply (the EU-27 average for the former is 13.4 %; EEA 2011), and which is often considered climate-friendly, per capita CO2 emissions are 20 percent higher than in nuclear-free Denmark (World Bank 2009; Statistics Finland 2012).

While the concept of sustainable development certainly extends beyond energy alone, the use of nuclear power is often regarded as unsustainable when taking the whole production chain into account. Transition toward a sustainable economy is possible without relying on nuclear power, and even using 100 percent renewable energy is possible on the global scale (WBGU 2011: 125–129). In 2002, Finland decided to expand nuclear-based energy production through the construction of a new reactor, the first in the EU after the Chernobyl catastrophe.

Plans for additional expansion were laid in 2010. Arguments in favor of this course are partly comparative ("Sweden has more hydropower"), partly fiscal ("Gas is too expensive"),

partly grounded in an appeal to a belief system ("We Finns believe in technology") and partly rooted in the relationship with Russia. In this latter regard, defenders of the country's energy policies argue that the alternative to building domestic nuclear plants would be to import electricity from Russia, which itself engages in nuclear-based energy production and has lower safety standards.

Finland shows little sign of reconsidering this policy, even though construction time and costs have increased and public opinion is deeply divided, with nearly half the population opposed to building new nuclear plants (Anckar et al. 2011: 19). That said, the country is also addressing the long-term consequences of its actions, with Finland currently constructing the world's first permanent repository for nuclear waste.

The country's progress on the indicators approved in its 2006 SD strategy has been disappointing. According to the 2009 evaluation, "Development of most target areas has been either negative or nonexistent" (FME-RMC 2009: 67). The overall verdict was neutral, boosted somewhat by the acknowledgement that Finland's sustainable development record was good in international comparison.

Against this background, the OECD's recommendation that Finland "must do more to green its economy by reducing the amount of energy and materials used per unit of GDP" – and, in particular, the suggestion of means for promoting eco-innovation – fell on receptive ears (OECD 2009). The network secretariat of the SD strategy began reflecting on "transition management" and subsequently succeeded in setting the key actors in motion.

The two funding agencies already responsible for making the "Finnish innovation model" famous were reoriented toward meeting this challenge. Tekes has launched a large Green Growth program for the 2011–2015 period and today spends around half its quite significant budget on research related to "radical eco-innovation." The aim is to establish a "happy mar-

riage of environment and economy" so as to create a "new normal," according to the director of the program. The "think-and-do tank" Sitra is providing venture capital as well as stimulating and conducting experiments, with all its activities now required to fall under the framework of sustainable development.

Once again, the approach being taken here involves learning and collaboration. Experience with the older ClimTech program, in which the Finnish private sector was provided with incentives to engage in sustainable business practices, is being taken into account. It is generally acknowledged that such activity must be spurred on a much broader basis, that all economic sectors need to be involved and that more collaboration is needed.

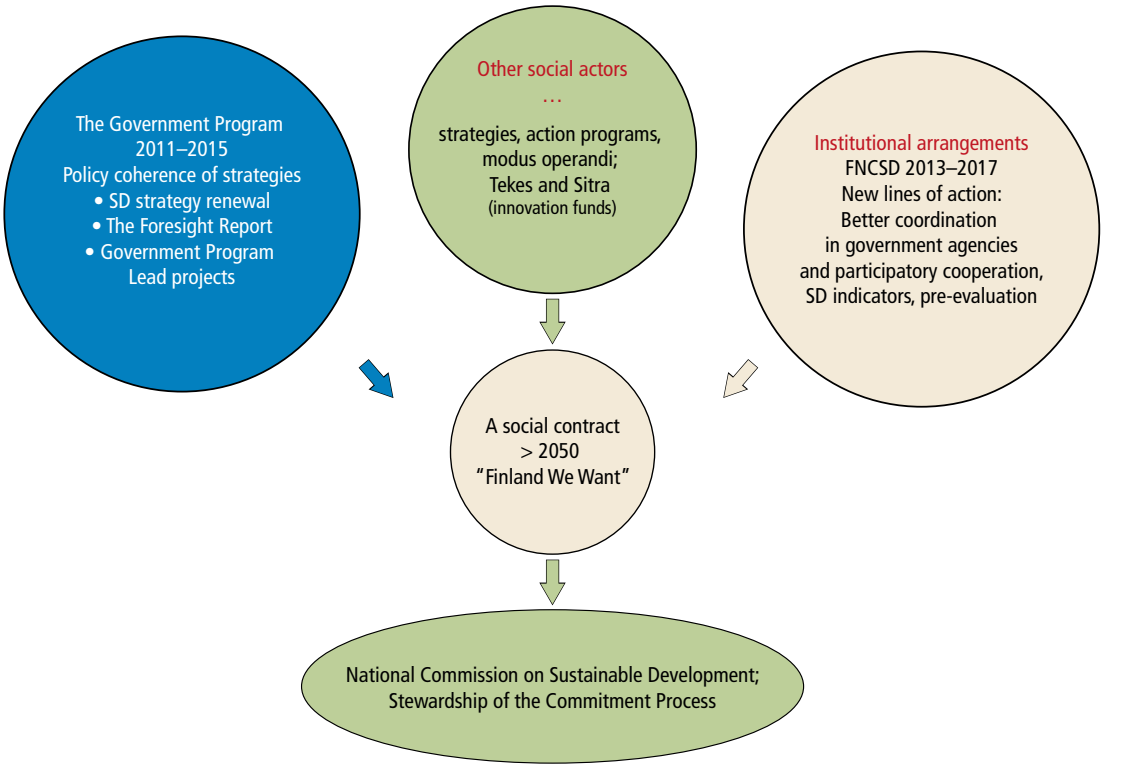
One result has been the creation of "Cleantech Finland" as a brand and network that has grown to include an increasing number of companies over time. Both Tekes and Sitra have also become players in the process of renewing the SD strategy to render it a "social contract for sustainability." As a Tekes-supported research project presented at the Green Growth Summit in June 2012 concluded, Finland has not maximized its potential in this regard, but "has unique green potential." Bottlenecks are process-based rather than technological, said project leader Jan Rotmans, a University of Rotterdam professor. Rotmans (2012) further called for "top-down and bottom-up approaches" that require "courage and leadership." In short, governance challenges must be addressed if Finland is to improve in the green economy area. However, the Finns have shown ample ability to innovate in this respect.

Seen in a global context, Finland closely resembles other European countries in terms of the contextual aspects that influence sustainable development, such as history, cultural background and political and administrative settings. In many respects, it is closest to the other EU member states, as it has signed the EU treaties and has transposed the EU's acquis communautaire into its own law.

However, the country also differs substantially from many of its European peers. Finland is the EU's most sparsely populated country and, hence, has fewer environmental challenges than do highly populated areas. Furthermore, its culture and traditions are characterized by a strong underlying orientation toward consensus-driven governance, as is typical throughout the Nordic countries. This style can prove advantageous in tackling complex problems of sustainability that involve numerous trade-offs, both big and small.

Finland is currently working on a renewal of its SD strategy, casting it as a broad-ranging social contract. The aim is to inspire renewed commitment by the government and all societal actors to a common vision and a common set of goals, targets and actions. The renewal process is driven by conditions similar to those in all (Western) countries that have taken a leadership role in fostering program ownership and stimulating bottom-up activity: A large variety of programs are ongoing with many groups seeking to make their activities sustainable. Over time, many people involved lose sight of the big picture. This is true within the government, as well. Strategies multiply without being well aligned, often failing to take all aspects of sustainability into account, which in turn renders them unable to address needed trade-offs in a comprehensive way. This can lead to frustration and a decline in momentum, a situation exacerbated if policies become fragmented or begin to contradict each other. This situation requires a strengthening of the overarching framework so as to ensure that SD principles continue to structure and drive all activities, and that all stakeholders are committed to innova-

Figure 2: A social contract



Source: Rouhinen 2012, 2013

tions with a normative link to sustainability. As previously noted, this new approach has been inspired by the German Council for Global Change's concept of "great transformations" (WBGU 2011). Finland is using and adapting the idea's fundamental principles, which include a culture of attentiveness, a culture of participation, a culture of obligation and a common understanding that planetary limits need to be accepted. In Finland, this great transformation is understood as a "virtual contract for which a proactive state is the guarantor, involving its citizens in future decisions that are required to agree on sustainability targets" (Rouhinen 2013). Indeed, the social contract in Finland refers to a "common understanding [of] the need for a crucial change" (ibid.).

It is not surprising that the idea of a social sustainability contract resonates well in a country like Finland, with its deep-rooted network-based approach to governance. In opting for a social contract, Finland seems to be moving away from flexibility toward more binding decisions, with the government seeking citizen agreement on sustainability targets and renewed commitment for its own actions. This also means that trade-offs will need to be addressed more directly, a process that will surely be interesting for countries seeking to learn from Finland's experiences. It remains to be seen what mechanisms for coordination and societal commitment will be developed in Finland under this new framework. Figure 2 illustrates the thinking so far.

What we can learn from Finland

Finland has a very good record with respect to key elements of governance related to sustainable development. This has kept the country on the sustainable development path for about 25 years, providing examples from which others can learn. Key aspects include the following:

- *Leadership and ownership; combining bottom-up and top-down activity:* Finland's sustainable development strategy has been characterized by high-level political commitment for more than 20 years. Indeed, with the exception of only a few years, the FNCSD has always been chaired by the prime minister, with key ministers from successive governments serving as additional members. While different models for this type of commission have been discussed by scholars and practitioners since the 1990s, and most countries have in fact opted for models more independent of government, Finland has always been proud of this highest level of political leadership in the FNCSD. This has contributed to continuity within SD programs as well as to the broad-based stakeholder membership, both factors that have afforded the commission political weight. Countries with SD councils based on a similar mixed model, as in Eastern Europe and elsewhere, can surely learn from the Finnish experience.
- *Creating ownership* has also been a key feature for sustainable development activities in Finland. The activities and commitment of a wide range of societal groups, civil society organizations and private-sector bodies have been encouraged and fostered. Finland has a strong tradition of stakeholder involvement in policymaking, and civil society and business organizations participate routinely in the preparation of strategies, programs and policies. In general, top-down and bottom-up elements within Finland's policy process are well balanced.

- *Bindingness and flexibility:* The Finnish approach to sustainable development is clearly process-oriented. Virtually all national actors recognize that sustainable development is a very lengthy learning process, which contributes to the country's demonstrated ability to persist in its aims over the long term. In other countries, this lesson was learned somewhat later, or in some cases is still being learned, and Finland can show how to overcome challenges in this respect. The country's preference for a network governance style led to initial doubts as to the utility of targets as a means; however, policymakers recognized that indicators were needed in order to assess progress, and the current SD strategy renewal process is finally tackling the issue of setting quantitative targets. In this way, Finland is moving toward a higher degree of "bindingness" (Niestroy 2005).
- *Reflexivity and learning:* Finland's debate over the use of targets illustrates how a country can shift from a preferred governance style to one that includes elements of other styles. The prerequisite for doing so – an ability to engage in reflexive social and institutional learning – is present in Finland.
- *Policy coordination:* In Finland, horizontal coordination functions well on the whole. Key coordination mechanisms include a network secretariat at the working level as well as the FNCSD, which – as all relevant ministers and groups are members – combines elements of government coordination with stakeholder involvement. In addition, individuals within the administration act as "SD champions," another important element contributing to program success and continuity. Vertical coordination is also structurally well-supported given the considerable emphasis on ownership and bottom-up activity. However, the recent SD strategy review concluded that improvement is needed here in the future.

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