CIIP Country Surveys

Finland

The Country Survey of Finland 2004 was written with the help of Mika Purhonen, Ilkka Kananen and Veli-Pekka Kuparinen, National Emergency Supply Agency (NESA) as well as Markku Haranne, Ministry of the Interior, Rescue Services Unit.

Finland

Critical Sectors

In Finland, critical information infrastructure protection (CIIP) is perceived as vital to the national interest. Therefore, at the national level, Finland aims at ensuring the ability of society to function in all circumstances by securing the functioning of both official infrastructures and those administered by individual citizens and businesses.[115] As an information society, Finland can only function smoothly if its critical infrastructure is fully operational, because any disruptions to them may result in dramatic consequences. Accordingly, the *Security and Defense Committee* has proposed a strategy for securing the vital functions of society. A new government whitepaper on security and defense policy will be issued in 2004.

Protective actions are based on both the *Security of Supply Act* and the order of the *National Emergency Supply Agency* (NESA) of 1992.[116] The Finnish government set the official goals for the development of security of supply in 2002. According to that act, the most critical sectors in Finland are:

- Banking and Finance,
- Energy Supply,
- Food Supply,
- ICT-Sector,
- Industry Related to Defense,
- Media,
- Public Health,
- Public Services,
- Rescue Services,
- Social Welfare,
- Transportation and Logistics,
- Water Supply.

Because modern society is now more complex, technical, and networked, the main goal is to secure the national critical infrastructure on which the functioning of society depends.

[115] Ministry of Defense. *Finnish Security and Defense Policy 2001.* Government report to parliament on 13 June 2001. http://www.defmin.fi/index.phtml/page_id/13/topmenu_id/7/menu_id/13/this_topmenu/7/lang/3/fs/12.

Finland's communication systems have traditionally been at a good level of preparedness. This is because the communications operators and providers have had a legal obligation to ensure the functioning of their services, regardless of whether the disturbances occur during normal times, exceptional situations, or in times of crises.

The Communications Market Act (2003) assures the operators that any extra expenses incurred through such preparatory measures will be reimbursed to the operators by the National Emergency Supply Agency (NESA).

Initiatives and Policy

Governmental Support for Information Society

Over the last couple of years, the Finnish government has worked continuously on new programs aimed at promoting the information society, its infrastructure, and the protection of the infrastructure. Several studies about the development of the information society were published in the 1990s. The Ministry of Transport and Communications published a report called *National Outline Policy for the Development of Information Networks 1995–1998*, which evaluated measures to upgrade the infrastructure for data exchange.[117] On the basis of such reports, various ministries produced action plans and provided funding for information society projects. The Ministry of Finance established a *National Information Society Committee* and an *Information Society Forum*. The Ministry of Transport and Communications concentrated on the creation of the technical prerequisites of the information society and on safeguarding network services.[118]

In 2000, the Ministry of Finance published the first report of the *Information Society Advisory Council* titled *Finland as an Information Society*. This report aimed at outlining the present stage of Information

[116] The Security of Supply Act (enacted in 1992) is the legal basis for ensuring supplies of various basic materials in the case of emergency situations. Based on the Act, the National Emergency Supply Agency (NESA), a subordinate agency to the Ministry of Trade and Industry, was formally founded in 1993 for the development and maintenance of security of supply. The NESA is the national stock holding agency of Finland (see below for more details). http://www.iea.org/pubs/reviews/files/finland/05-fin.htm.

[117] Ministry of Transport and Communications. http://213.138.148.10/finfo/english/ahoneng.html.

Society development and at evaluating the social and economic effects of the Information Society. The report also dealt with the domestic regulatory framework and with measures and programs in the public sector for the promotion and development of the information society.[119] The same ministry on 26 March 2001 published a report on *Finland in eEurope*[120], where the following areas were identified as important for Finland: facilitating the participation of all in the information society, the acceleration of e-Commerce, and e-Government and secure networks.

Finnish Security and Defense Policy 2001

The Ministry of Defense on 13 June 2001 submitted the *Finnish Security and Defense Policy 2001* report to parliament. The document states that the broader concept of national defense includes military, economic, and civil defense as well as social welfare and healthcare, the functioning of technical systems in society, public order and security, and defense information activities. This report also dealt with precautionary measures and the combating of threats confronting modern society: "The precautionary measures cover both military and civilian measures […] and are based on extensive cooperation as the activities in different sectors of society become more interdependent."[121] The *Security and Defense Committee* is responsible for defining the areas vital to the functioning of society and is in charge of drafting a national strategy for precautionary measures. The aim is to prevent situations that could undermine the functioning of society and to create mechanisms for managing such situations and their consequences.

The report states that telecommunications and information system security is becoming increasingly important for the uninterrupted operation of various sectors in society. Networking has increased and logistical systems have changed. The vulnerability of the technical infrastructure of society has increased, and disruptions can cause considerable harm to the functioning

[118] http://213.138.148.10/finfo/english/ahoneng.html.

[119] Information Society Advisory Board. *Finland as an Information Society. Report of the Information Society Advisory Board to the Government* (Helsinki 2000). http://www.vn.fi/vm/english/public_management/information_society.pdf.

[120] Ministry of Transport and Communications. *Finland in eEurope. Summary* (March 2001). http://www.mintc.fi/www/sivut/dokumentit/julkaisu/julkaisusarja/2001/16en_tiivistelma.pdf.

[121] Ministry of Defense. *Finnish Security and Defense Policy 2001. Government report to parliament on 13 June 2001*, p. 5. http://www.defmin.fi/index.phtml/page_id/13/topmenu_id/7/menu_id/13/this_topmenu/7/lang/3/fs/12.

of society. Therefore, those vital systems must be secured through national measures (CIIP). In precautionary measures to safeguard the operation of technical systems in society, the focus has been on telecommunications, public broadcasting, and major information and payment systems as well as energy supply, transmission, and distribution systems. A bill has been submitted to parliament on the subject of CIIP.[122]

Advisory Committee for Information Security (ACIS): Information Security Review and Strategy

The government has set up the *Advisory Committee for Information Security* (ACIS) as a point of contact for citizens, companies, organizations, and authorities on information security issues. ACIS belongs to the *Finnish Communications Regulatory Authority* (FICORA) (see below) and advances the general awareness of information security. It formulates proposals for information security strategy, makes suggestions on how to update the strategy, and oversees the implementation of objectives and measures within the framework of the development agenda. ACIS reports to the Council of State and provides a forum for handling information security issues that brings together various parts of society.[123]

The first stage of ACIS' work was the publication of the *Information Security Review*[124] in June 2002, which deals with the most important information security threats affecting Finland and recommends steps to be taken by all parties to promote information security. The committee expressed its vision – focusing on trust and to be attained by the year 2010 – as follows: "Finland will be an information-secure society that everyone can trust and that enables all parties to manage and communicate information safely." In November 2002, ACIS released its *National Information Security Strategy Proposal*,[125] which was approved by the government on the 4 September

[122] Ibid. Section IV: precautionary measures and combating threats to society.

[123] Rauni Hagman, Director-General, Finnish Communications Regulatory Authority (FICORA). *ICT Security – Finland's Strategy and Action Plan*. International Northern eDimension Forum in Pori, 11–12 November 2002. http://www.pori.fi/ned2002/esitykset/hagman_p.pdf.

[124] Finnish Communications Regulatory Authority (FICORA). *Information Security Review related to the National Information Security Strategy* (May 2002). http://www.ficora.fi/englanti/document/review.pdf.

[125] Proposal of the Advisory Committee for Information Security. *National Information Security Strategy Proposal* (25 November 2002). http://www.ficora.fi/englanti/document/infos.pdf.

2003. The paper states that information security risk management will be developed by improving society's ability to cope with disruptions as well as by advanced recognition of information security risks and by protecting critical infrastructure. The paper lists detailed policy objectives and measures to be implemented as well as the responsibilities of the various stakeholders.

E.finland

E.finland provides information on Finnish IT know-how and the Finnish information society, in particular e-Business, e-Government, e-Health, e-Environment and R&D in this field. E.finland is built and maintained in co-operation with the Ministry for Foreign Affairs, the Ministry of Finance, the Ministry of Transport and Communications, the Ministry of Education, the National Technology Agency (Tekes), the Finnish National Fund for Research and Development (Sitra), and the TIEKE Finnish Information Society Development Center.

Organizational Overview

Public Agencies

In Finland, the key authorities responsible for CIIP are located within the Ministry of Transport and Communications (FICORA) and the Ministry of Trade and Industry (NESA; NBED) on the one hand, and within the Ministry of Finance (VAHTI) on the other hand, as well as in the private sector (TIEKE).

Finnish Communications Regulatory Authority (FICORA)

The *Finnish Communications Regulatory Authority* (FICORA) belongs to the Ministry of Transport and Communications and continues the operation of the *Telecommunication Administration Centre*, which was established in 1988. FICORA's mission is to promote the development of the information society in Finland, which includes issuing technical regulations and the co-ordination of standardization work at the national level. FICORA also has duties concerning the protection of privacy and data security in electronic communications, and encourages national and international co-operation. An important objective of FICORA is to enhance knowledge of information security so that citizens, companies, communities, and the state administration are aware of how critical information security is.

Another task of FICORA is to ensure that the telecommunications operators are prepared for emergencies. The operators must report to FICORA significant information security incidents as well as any threats, faults, or disturbances in telecommunication networks and services.[126] FICORA checks operators for compliance with the *Communications Market Act* (393/2003) and the *Act on the Protection of Privacy and Data Security in Telecommunications* (565/1999) as well as for compliance with the relevant technical regulations and standards. In pursuing this task, FICORA collects information about the operators and carries out inspections.[127]

Two working groups focusing on information security had been set up by FICORA by the end of 2001:

- The COMSEC (communications security) group, whose main task is to ensure reliable telecommunications security and standardization, and
- the national CERT group as a joint group representing information technology organizations, especially in the field of computer emergencies (see below).

National Emergency Supply Agency (NESA)

The *National Emergency Supply Agency* (NESA) is the cross-administrative operative authority for the security of supply in Finland. NESA[128] serves to develop co-operation between the public and private sectors in the field of economic preparedness, in coordinating preparations within the public administration, and in developing and maintaining the security of supply. NESA has a growing role in assuring the critical national infrastructure by developing and financing the technical backup systems.

Finland's most essential communication and IT systems are located in the capital region; this is a very risky concentration. Therefore, the *National EDP Backup Center* was established to secure society's vital IT systems in various exceptional conditions. The center's actions have been evaluated, and there seems to be a growing need for its services. The *National FixedLine Telephone Backup Network* (built in the 1990s), is a digital and nation-wide separate network that was built to secure the vital public organizations' essential contacts, as well as those of other key subscribers in exceptional situations and crises. Both the Ministry of Transport and Communications

[126] FICORA. *Annual Report 2001*, p. 74: http://www.ficora.fi/2001/VV_vsk2001.pdf.

[127] Dependability Development Support Initiative (DDSI). *European Dependability Policy Environments,Country Report Finland* (version April 2002).

[128] http://www.nesa.fi.

and NESA are developing the network further so that it can also secure other telecommunication services in the future (e.g., e-mail and data).

In addition, NESA has financed several projects to secure the communication and broadcast systems. These projects and activities are related to emergency messaging, domestic and foreign broadcasting, protection against electromagnetic pulse (EMP), and the construction of circuitous routes for critical nodes of networks.[129]

National Board of Economic Defense (NBED)

Founded in 1955, the *National Board of Economic Defense* (NBED), under the auspices of the Ministry of Trade and Industry, supports and assists NESA activities. NBED also plans and co-ordinates economic preparations for implementation in the case of exceptional circumstances in Finland. It is the coordinating and expert organization that serves as a link between the authorities and various industrial branches, and includes many planning bodies in the area of information infrastructure, such as the Information Systems Section. The NBED produces reliable and necessary information for NESA activities.

Private sector enterprises and governmental organizations can develop the security of supply efficiently through preparedness and planning efforts. The NBED conducts these activities. Instructions and basic plans have been prepared for the ICT sector as well as for other vital branches of the infrastructure. In addition, the organization studies and follows up on risks and threats to the security of supply. Databases and methods have been developed to support and improve the level of readiness to act in exceptional situations.

Steering Committee for Data Security in State Administration (VAHTI)

The central government's data security and information management is steered and further developed by the Ministry of Finance. Guidelines are developed by the *Steering Committee for Data Security in State Administration* (VAHTI), a broad group of experts appointed by the Ministry of Finance ten years ago. For the central government, the issue of data security includes a number of sub-areas such as administrative data security, personnel security, physical security, data communication security, database security, and so on. The Ministry of Finance works in close cooperation with other ministries

[129] Information provided by a representative of the Finnish National Emergency Supply Agency (NESA).

and agencies and supports and facilitates co-operation in the development of e-Government and electronic services in the state sector.[130]

Public Private Partnerships

Finnish Information Society Development Centre (TIEKE)

The *Finnish Information Society Development Centre* (TIEKE) is a key player in the development of the public and private information society in Finland. TIEKE was launched in 1998 when the functions and the personnel of the *Finnish Data Communication Association* (FDCA) and the *Finnish Association for Interactive Network Services* (TELMO) were combined. It provides basic security information to small and medium-sized companies and has a key networking role as a neutral and non-profit organization in promoting the efforts of its members in the public and private sectors alike. TIEKE's goal is to contribute to the sustainable development of the knowledge-based information society by supporting networking, interoperability, and the distribution of information to all interested parties. TIEKE's membership includes more than one hundred organizations and companies involved in the information society that operate at the crossroads of trade and industry, public administrations, and individual citizens.

Information Society Advisory Board

The members of the *Information Society Advisory Board* are drawn from both the public and the private sectors. The Board is part of the Ministry of Finance, which also appoints the Secretary-General of the Board. The Board is responsible for developing the information society, and takes related opportunities and threats into consideration. Furthermore, it makes legislative proposals relating to the information society and follows international developments. Finally, the Information Society Advisory Board promotes dialog between government and the business sector in information society development projects.[131]

[130] http://www.financeministry.fi/vm/liston/page.lsp?r=2685&l=en.

[131] http://www.financeministry.fi/vm/liston/page.lsp?r=3724&l=en.

Early Warning Approaches

Computer Emergency Response Team Finland (CERT-FI)

Finland is devising a strong early warning and information-sharing network.[132] FICORA's CERT group (CERT-FI) began operations at the beginning of 2002, providing information and assistance to both organizations and individuals. CERT-FI works in co-operation with national and international organizations and receives reports from telecommunications operators on information security incidents and threats. CERT-FI functions include prevention and detection of these incidents, and providing information on them. The aim is to prevent and solve information security problems; supervising the communication networks through which viruses are spread is CERT-FI's responsibility. In the future, the duties of CERT-FI will include a 24-hour information security helpline. By the end of 2002, more than 800 individuals and companies had subscribed to the CERT-FI-ALERT mail service.[133]

[132] Dependability Development Support Initiative (DDSI). *European Dependability Policy Environments*, Country Report Finland (version April 2002).

[133] http://www.ficora.fi.

Center for Security Studies, ETH Zurich
Volume 2, Zürich 2004.

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Myriam Dunn and Isabelle Wigert

edited by
Andreas Wenger and Jan Metzger