Comprehensive security
prof, LtCol, Juha Mäkinen FNDU

sisu

know-who

know-how

know-that

Higher Command Studies Course, 29th January 2019

Agenda

1) Introductions and basic information

2) Winland (and also Failand)

3) Fundamental ISS questions
	- threats, risks and hybrid warfighting: Winland

4) Sectors of the security
	- how to implement several societal/national security strategies
	- with whom etc

5) Climate change and sustainable security

6) Learning with Winland: educating these themes and learning?

Who am I?

international, global, JAIST
PhD in knowledge science (2006)
DEEP, Nato
Editorial board, EuroISME

military sciences
military pedagogy
systemic models
and concepts
since 1920s
professor of military pedagogy

glocal
theoretic-practical
since 2015-> 2019-> Winland
human-in-society-in-nature

since 2000 studying the
principles and practices of the CHAT
(=cultural-historical activity theory)

a citizen of Finland and have born/living in Lahti, Finland
since 1983 serving at the FDF: LtCol (G.S.)
since 2000 serving at the FNDC/FNDU

Citizen-soldiers doing what?

The Defence Forces fulfils the duties given by society as based fundamentally on **the security needs** of individual citizens and the communities formed by them.

Source: Ojala 1995; 1999; Limnell 2004; Heinänen 2008

Basic information of the FDF

Tasks of the FDF – threath oriented
- the military defence of Finland
- giving support to other authorities
- participating in international activities: providing help if needed
- participating in international military crisis management and in mmilitary duties in other international crisis management

Constript service – citizen-soldiers
- ~ 70 % of male group complete their service
- on a voluntary basis for women also
- all the conscripts and almost all of the reservists are trained in the companies of the FDF
- Conscipts annually ~ 23 000

Since 1956 UN peacekeeping – globally oriented on a voluntary basis

Since 1994 NATO PfP partner and since 2014 NATO's Enhanced Partner

SSR: ongoing security sector reform in practice
- since 1995 the security and defence policy reports
- since 2003 national "Societal security strategies"
- since 2004 Internal Security Programmes
- in 2007 the Crisis management centre (CMC) was founded
- in 2008 Finnish Centre of Expertise in Comprehensive Crisis Management was founded with the FINCENT of the FDF
- Finland's Comprehensive Crisis Management Strategy (2009)
- 2012-2014 a Defence Reform
- since 2013 Security Committee currently placed at the Ministry of Defence
- since 2015 FINCENT has been part of the FNDU
- in 2014 "Kanerva's committee" and proposal for "Defence Reform" II
- in 2017 Government's Defence Report
- in 2019 Parlamentary elections for next 4 years
- since 2000 new constitution: <u>duty to defend Finland</u>

Vocabulary of comprehensive security in Finland (2017)

concept for comprehensive security; **comprehensive security**
societal endstate vs. threats and risks
comprehensive security refers both to the comprehensiveness and to the
"cross-sectoral security"

resilience
the competence/ability to sustain action competencies while coping with the effects
of the disturbances and crisis

Comprehensive security: the Winland approach
prof Juha Mäkinen
FNDU

FROM FAILAND
TO WINLAND

winlandtutkimus.fi

twitter.com/WinlandFI

Juha Mäkinen
@makinen1964

Where we are from?
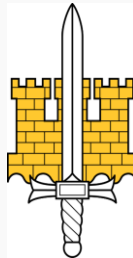
Winland: themes and processes

THEMES

PROCESSES

Energy security

Food security

Water security and climate change
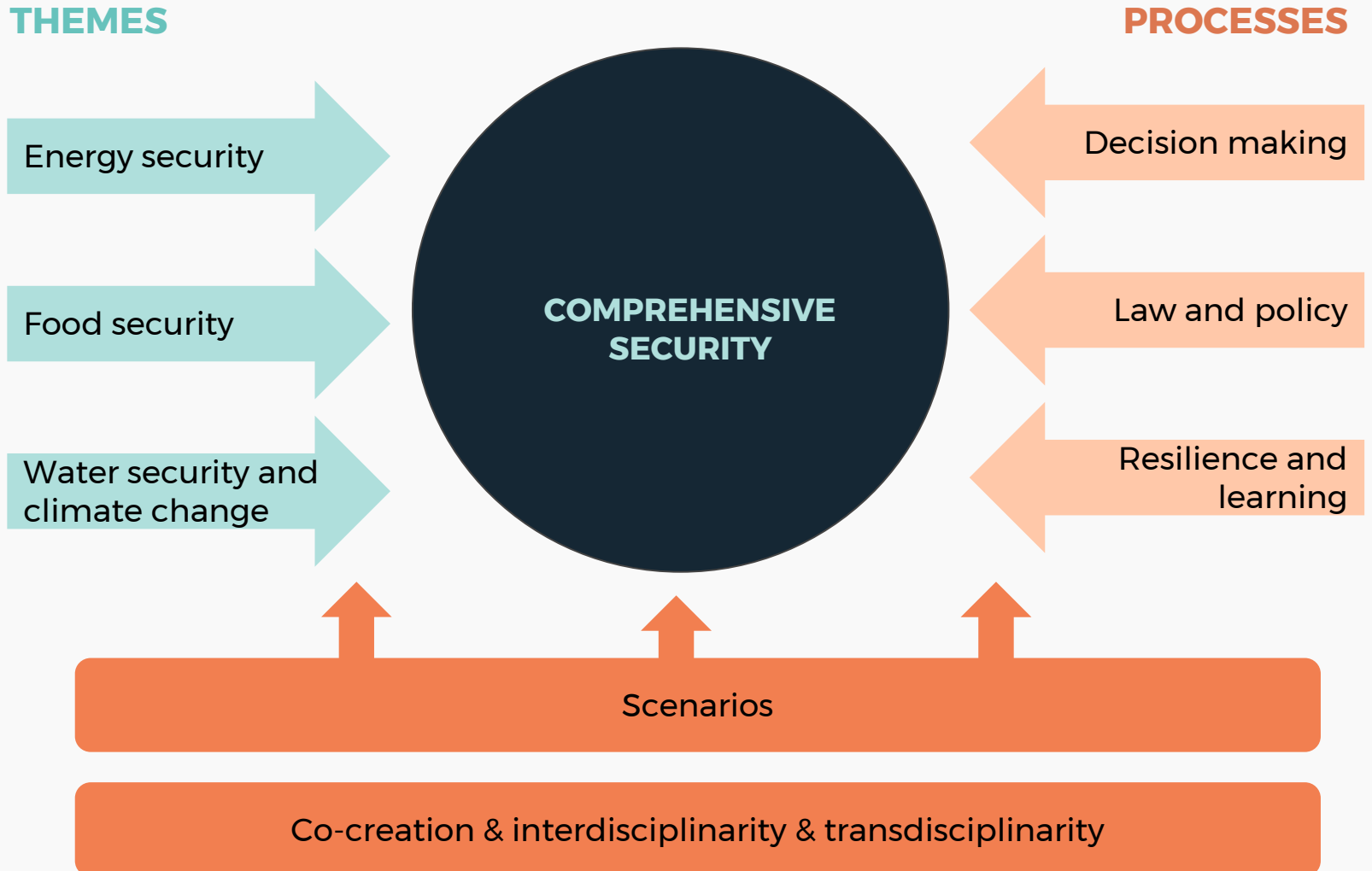
COMPREHENSIVE SECURITY

Decision making

Law and policy

Resilience and learning

Scenarios

Co-creation & interdisciplinarity & transdisciplinarity

RQs of the Winland (as if in 2016)

RQ1. How may **climate change**, water scarcity and other global and regional resources-related shocks **decrease water, food and energy security in Finland?**

RQ2. **How vulnerable** is Finland to global and regional food and energy shocks? How could Finland survive under emergency situations where our boundaries are closed or in the case of e.g. extensive storm damages?

RQ3. How resilient current security-related systems and policy-making processes are to food and energy security related threats? How do key stakeholders define resilience? How can we improve resilience?

RQ4. What is the economic, social, technical and juridical feasibility of different policy responses and adaptation measures? Which are the key legal (in Finland and in EU) and preparedness mechanisms in safeguarding food and energy security?

RQ5. How can scenario planning, problem structuring and decision analysis methods applied through a co-creation process enhance Finnish institutional capacities to respond to emerging security threats?

RQ6. What kind of practical recommendations are needed to increase our institutional capacity to respond to water, food and energy security-related risks and threats? And importantly, how do such recommendations translate into policy actions?

RQ7. How do our global and regional analyses on climate + water, food and energy security link to immigration? Are there some 'hotspot' regions where increasing resource scarcities or climate change are expected to trigger immigration?

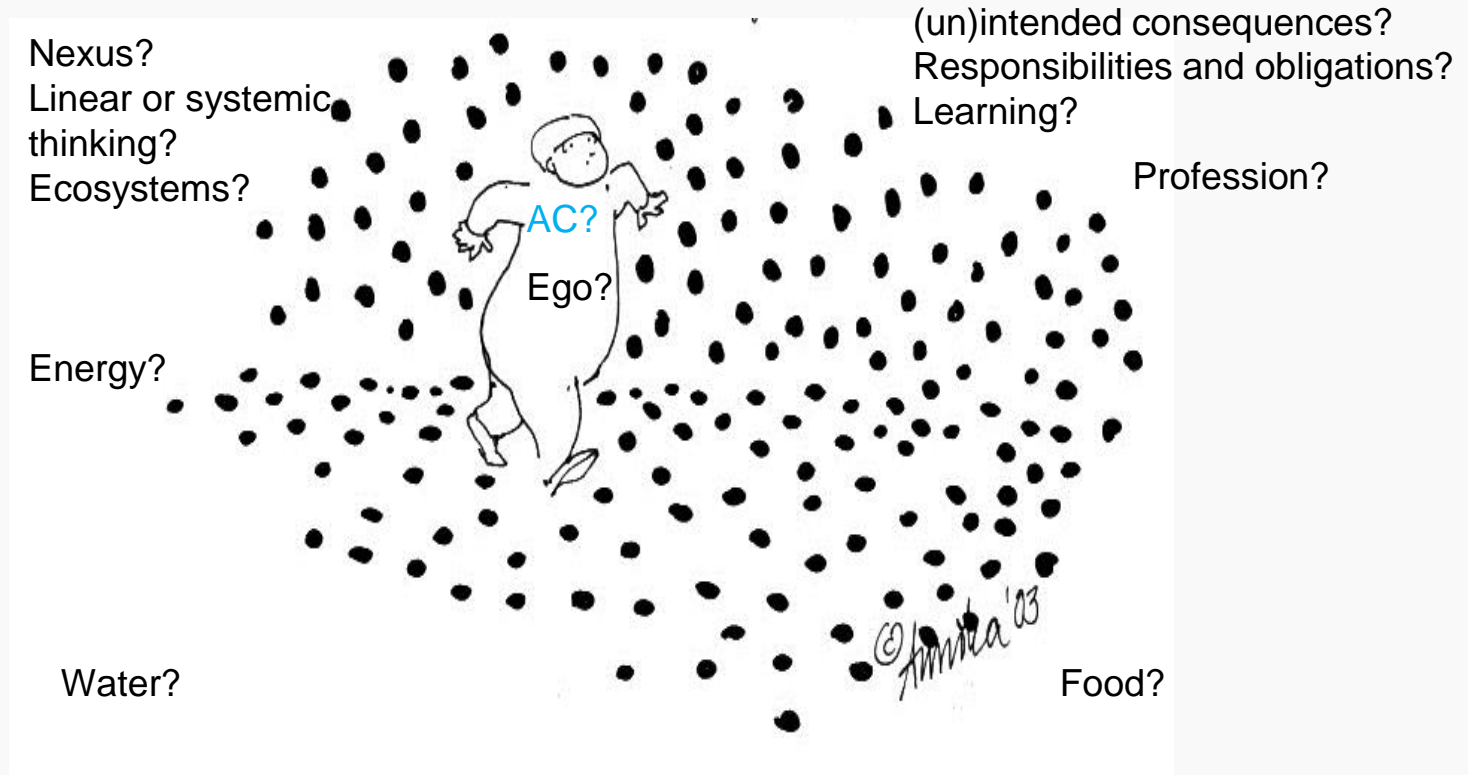# Citizen-soldiers doing what?

The Defence Forces fulfils the duties given by society as based fundamentally on **the security needs** of individual citizens and the communities formed by them.

Source: Ojala 1995; 1999; Limnell 2004; Heinänen 2008

Who you are?

both citizens and professional soldiers or citizens and professionals/experts of.?

Earth? Europe, EU? Estonia or other? State vs society?

Nexus?
Linear or systemic thinking?
Ecosystems?

(un)intended consequences?
Responsibilities and obligations?
Learning?

Profession?

AC?

Ego?

Energy?

Water?

Food?

AC = action competence

Fundamental ISS questions

- the referent object?
  - **what** needs to be secured?
  - including e.g. values
  - remember also the boundary crossing critical (information)infrastructure

- **threats** and **crises**: both internal and external?
  - objective, subjective and discursive conceptions see Buzan & Hansen 2009, 34

- **means** at our disposual?
  - military means and use of force but something else also?
  - see e.g. New framework for security analysis by Buzan et al. 1998
  - funds for means?
  - remember also human agency

- non-politicised <-> politics <-> securitized: **why**?

- **what epistemologies** and **methodologies** should be brought to the study of security?
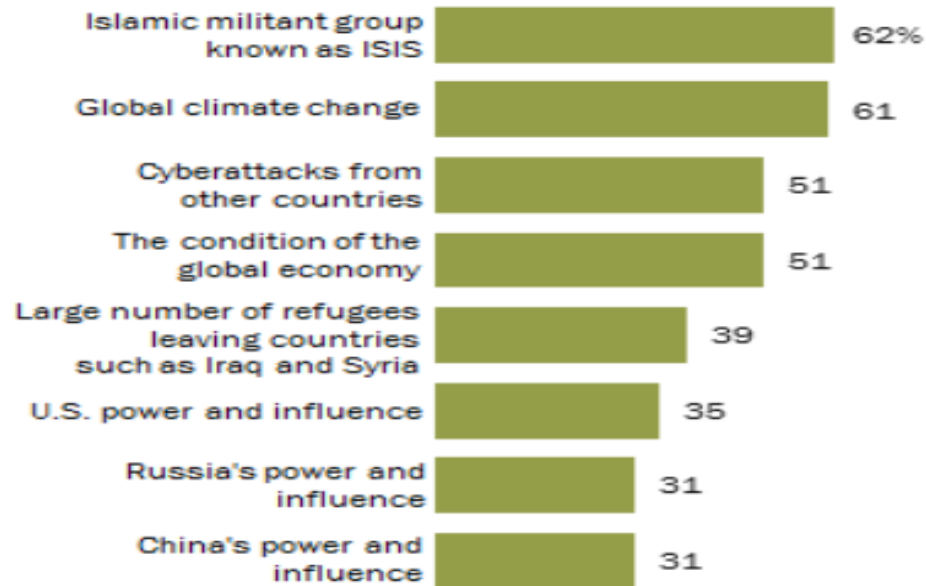
The threats of our times

ISIS and climate change seen as among top threats around the world

___ *is a major threat to our country*

Threat	%
Islamic militant group known as ISIS	62%
Global climate change	61
Cyberattacks from other countries	51
The condition of the global economy	51
Large number of refugees leaving countries such as Iraq and Syria	39
U.S. power and influence	35
Russia's power and influence	31
China's power and influence	31

Note: Figures represent global medians across 38 countries. ISIS not asked in Turkey, U.S. power and influence not asked in U.S, and Russia's power and influence not asked in Russia.
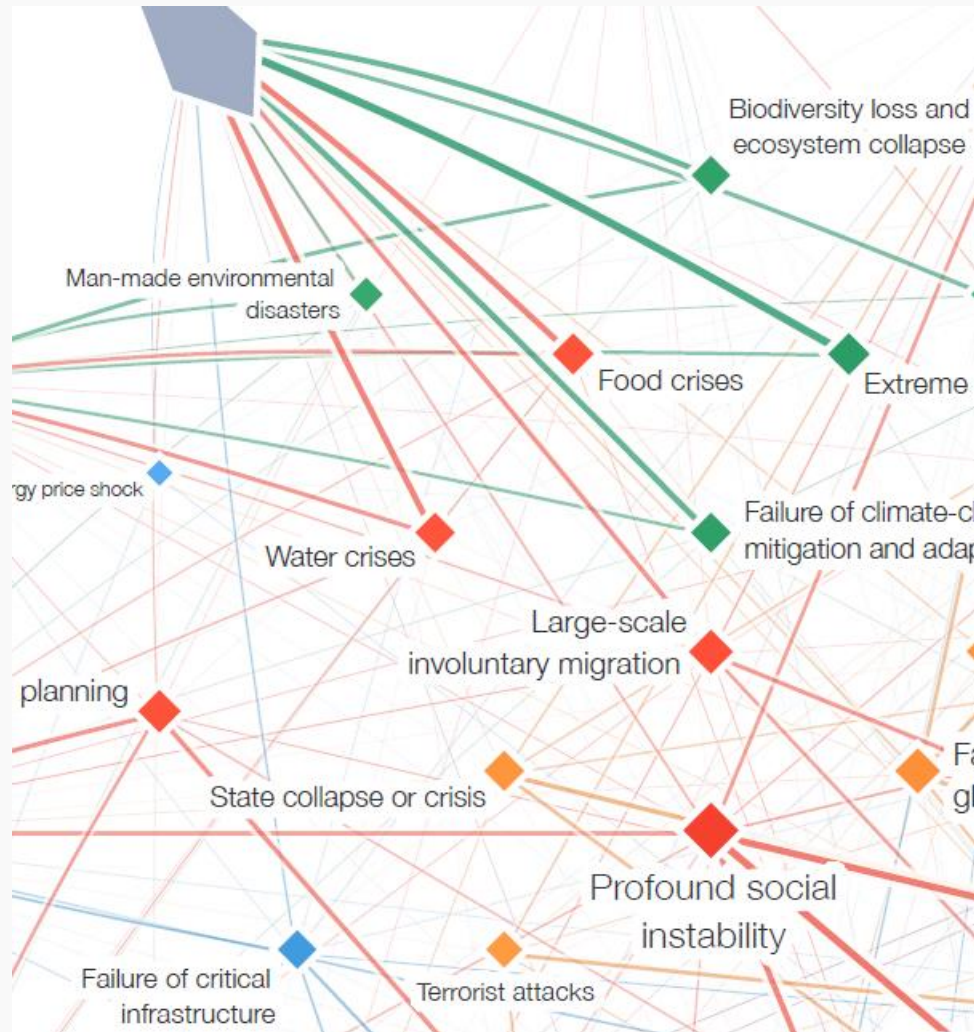Source: Spring 2017 Global Attitudes Survey. Q17a-h.

PEW RESEARCH CENTER

http://www.pewglobal.org/2017/08/01/globally-people-point-to-isis-and-climate-change-as-leading-security-threats/

Water-food-energy -> nexuses-> economy and society

The threats (and risks) of our times

Climate change and ecocrisis

WMD, weapons of mass destruction

War in e.g. Eastern Ukraine

AI, AL vs. human beings

Global

Threats that primarily concern the Earth and its populations security in the future

Society

A serious disruption to food supply

A serious disruption in the community infrastructure

A serious disturbance affecting the health and wellbeing of the population

A significant disruption in the financial market

A problem in government liquidity

Major accidents and natural catasrophes

A serious disruption in logistics

Terrorism as well as organized and other serious crime

A serious disruption to telecommunications and information systems

Threats linked to migratory flows

Political, economic and military pressure

A serious failure of the power supply

Individual

Threats that primarily concern the individual

The use of military force

Securing the functions vital to society

Hybridithreats
- **information..**
- **cyber..**
- **etc**

Ebolas

Sources: YETTS 2006; Security strategy for society of Finland, 2010; "Hallberg committee", 2010; see doctrine of the FDF (2014); Värri (2018): in Finnish but..

Defeat the Enemy without Military Force vs Winland thinking

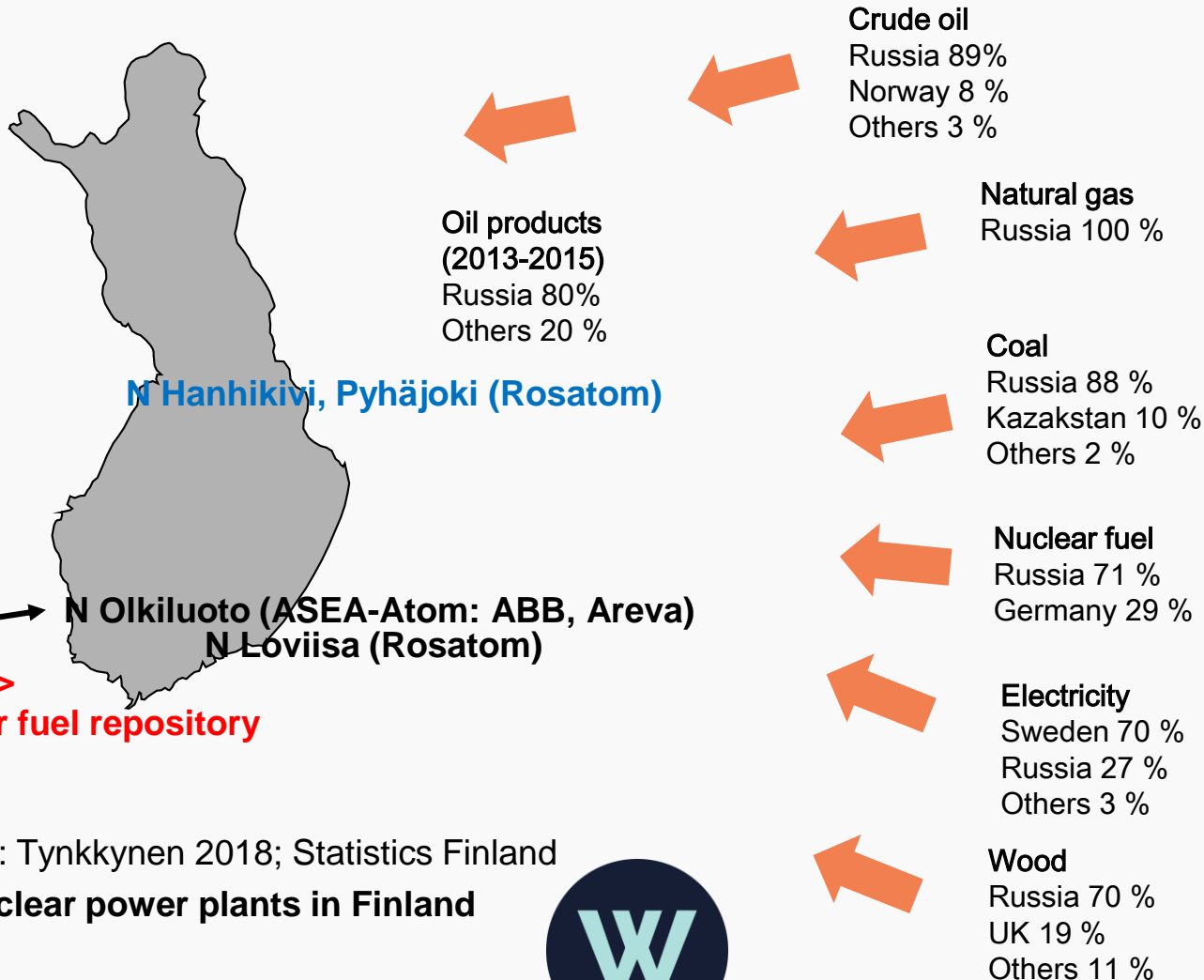Ongoing, unconventional, multi-dimensional **hybrid warfare**:

– **diplomatic and political pressure**: spheres of influences? Geopolitical situation?
– espionage: objects such as critical (information) infrastructure?
– **economic influence and pressure** (e.g. **electricity** prices, taxes)
– border activities and **illegal immigrants**
– **cyber warfare** (intelligence and attacks to vulnerabilities) objects such as critical (information) infrastructure?
– preparation of physical locations such as civilian harbors, airfields, factories, houses: objects such as critical (information) infrastructure?
– information warfare (e.g. psychological operations, social media campaigns, targeted influence): lifelong education of the citizens? Action competencies?
– **criminal activities**, use of civilian companies and special forces (e.g. gang networks, raids, terrorist attacks, green men): see e.g. Ministry of the Interior: Internal security strategies and programmes
– **culture and history** (sport events, cultural and religious activities, violations against symbolic targets) see e.g. Ministry of the Education and Culture
– **military pressure** (snap exercises, show of force)

PREPARE THE BATTLEFIELD **BEFORE A POSSIBLE CONFLICT**

ACHIEVE THE END STATE **WITHOUT A WAR** (E.G.CRIMEA)

"Weaponized" energy in 2016
45 % of energy consumption and 70 % of energy imports from Russia

Crude oil
Russia 89%
Norway 8 %
Others 3 %

Natural gas
Russia 100 %

**Oil products
(2013-2015)**
Russia 80%
Others 20 %

Coal
Russia 88 %
Kazakstan 10 %
Others 2 %

N Hanhikivi, Pyhäjoki (Rosatom)

Nuclear fuel
Russia 71 %
Germany 29 %

N Olkiluoto (ASEA-Atom: ABB, Areva)
N Loviisa (Rosatom)

Electricity
Sweden 70 %
Russia 27 %
Others 3 %

**Onkalo 2020->
Spent nuclear fuel repository**

Wood
Russia 70 %
UK 19 %
Others 11 %

Source: Tynkkynen 2018; Statistics Finland
N = nuclear power plants in Finland

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TO WINLAND

Future Warfighting vs Future Societal security activities including e.g. "deterrent", "cross-domain deterrence", "threshold" & "restraint"

= Unconventional + Conventional

– **Combined effects** of the **civilian** and **military** tools: comprehensive+integrative approach?

– **Embedded forces among the society** (e.g. civilian companies, facilities and capabilities)

– All-encompassing **intelligence** – OSINT, cyber, satellites, UAVs, special forces: awareness of our own present state of..including histories/paths to the present and to the alternative futures?

– Intensive firepower – long-range, precision strikes: many kinds of tools and means

– **Joint**, maneuver warfare – rapid deployment of forces directly to the goal: interagency etc?

– Urban warfare and new technologies – robots, mini-UAVs, artificial intelligence, destroyed communications and **leadership**.

PARALYZE **POLITICAL** POWER AND
DESTROY HIGH-VALUE **MILITARY ASSETS** AND **INFRASTRUCTURE**

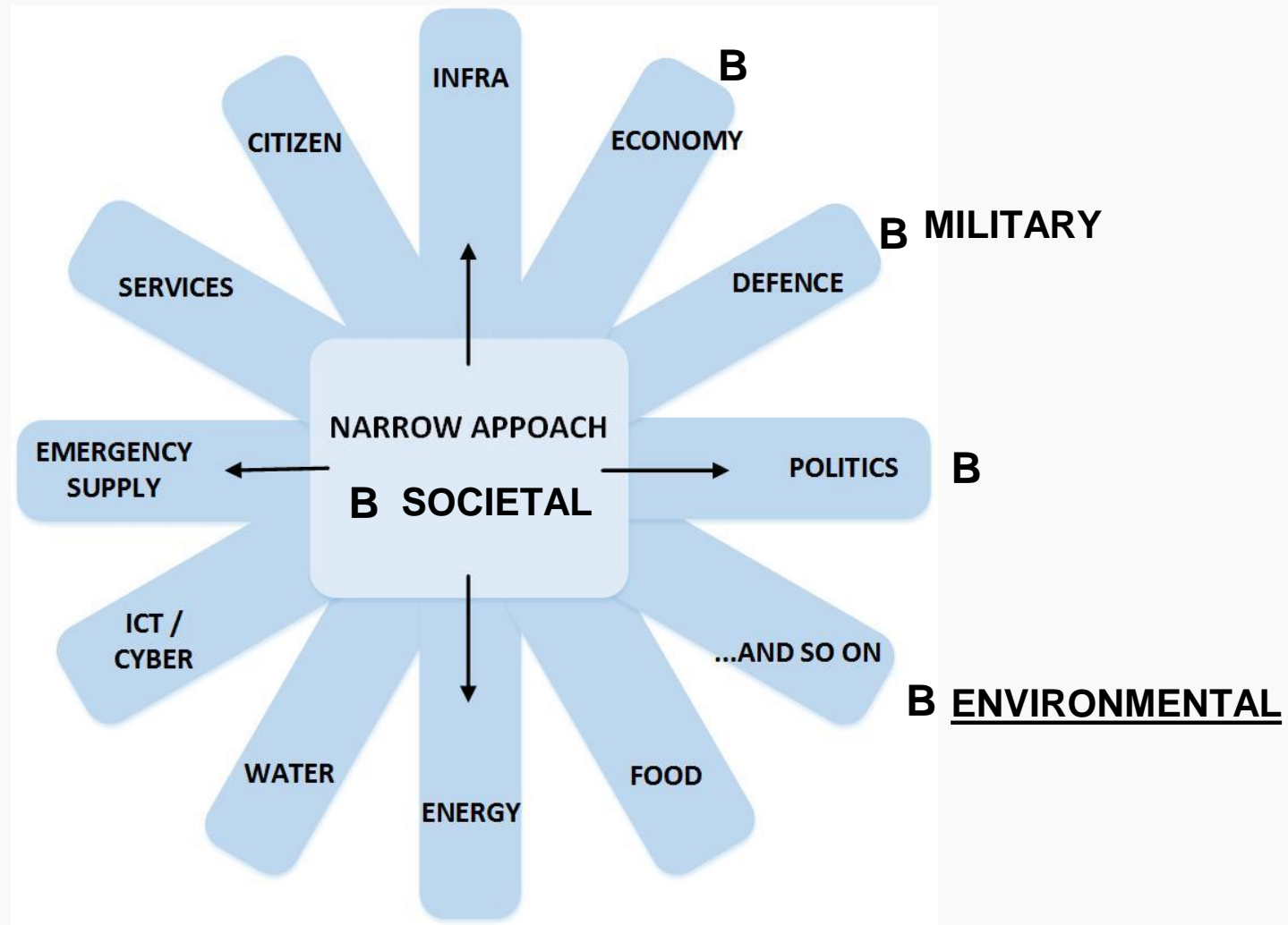DENY COMMUNICATIONS, **LEADERSHIP** AND COUNTER-MEASURES OF
THE ENEMY

Towards comprehensive security

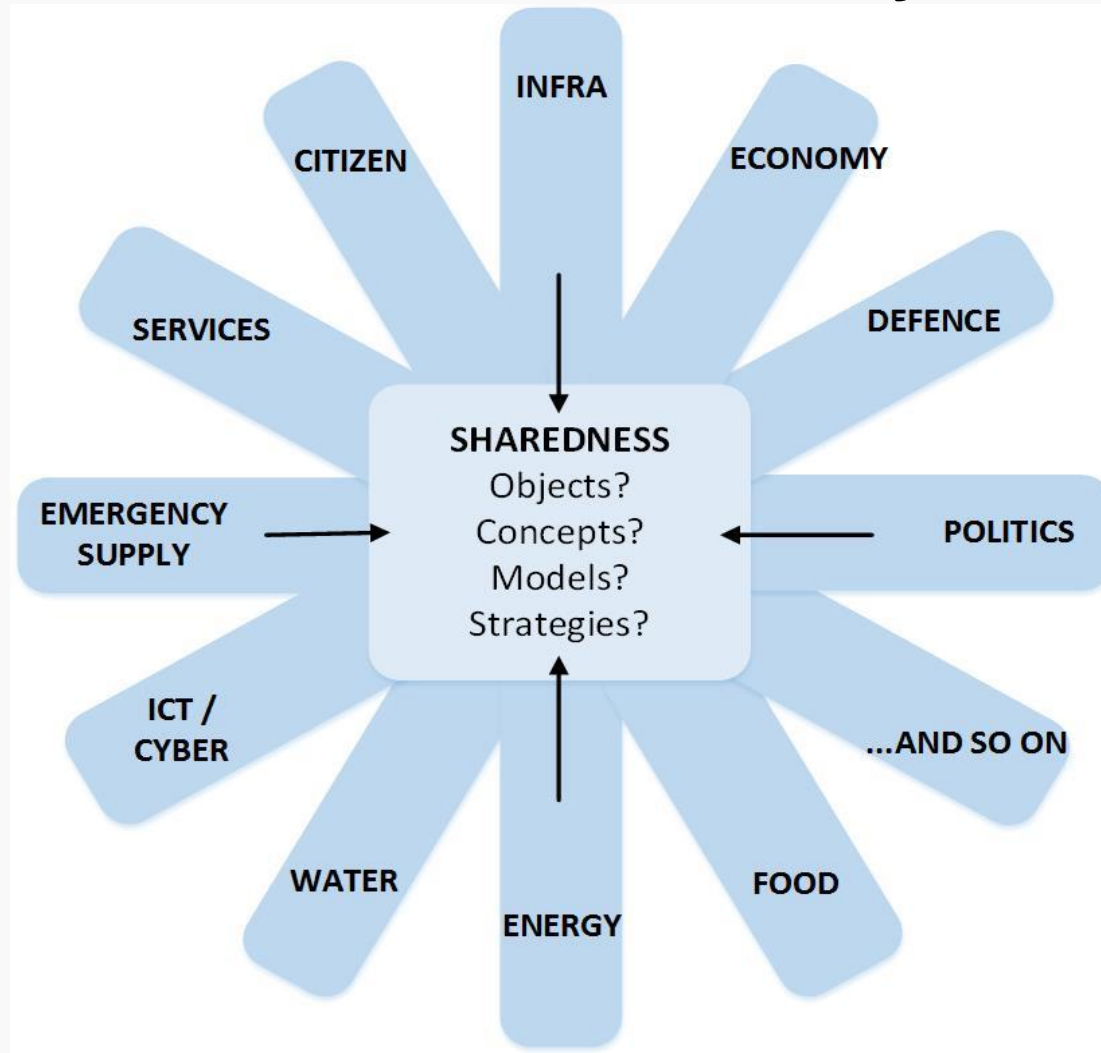Adapted: Keskinen et al. 2017 (in Finnish)

A "new" framework B of Buzan et al. 1998

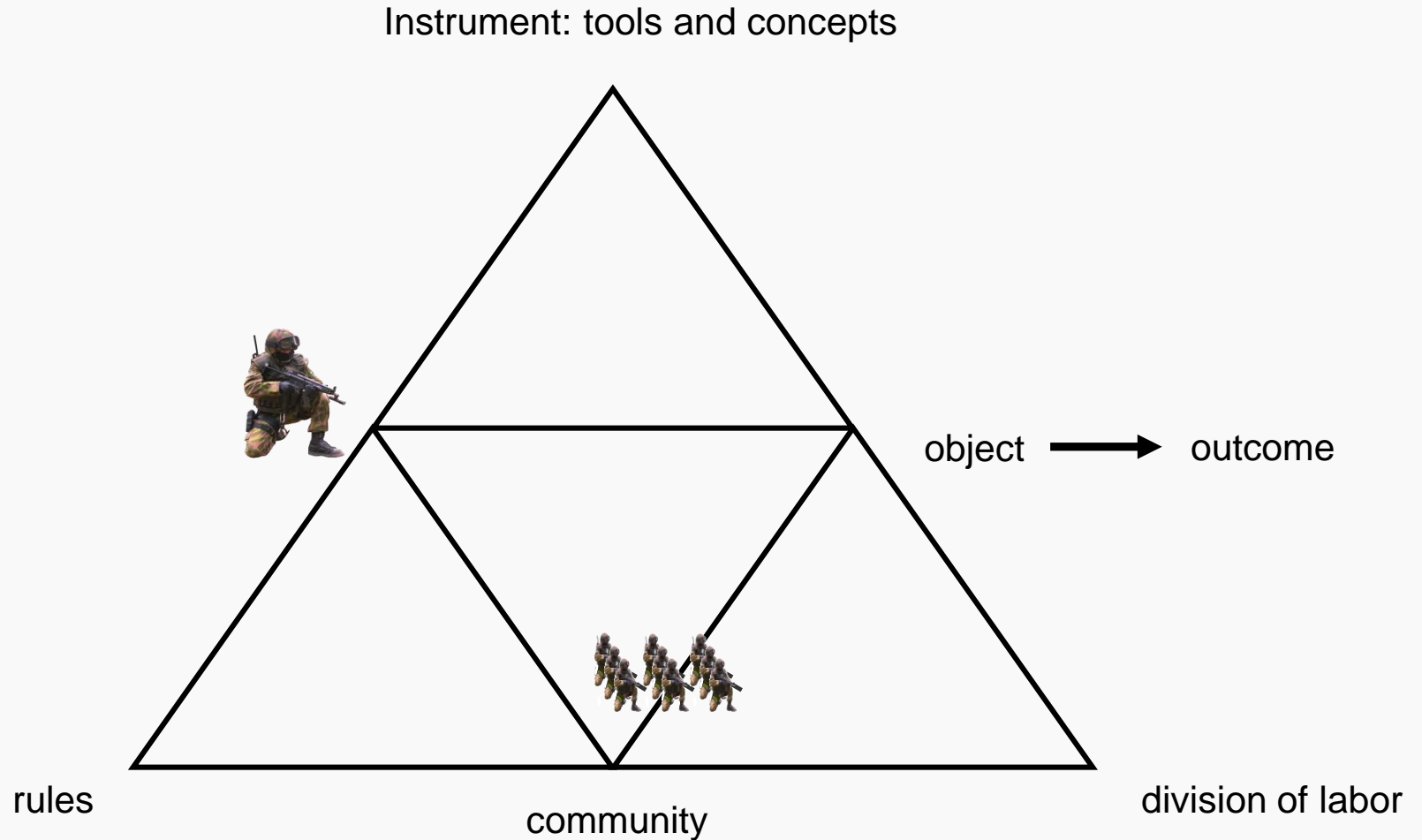Adapted: cf. Keskinen et al. 2017 (in Finnish)

Implementation of the security strategies

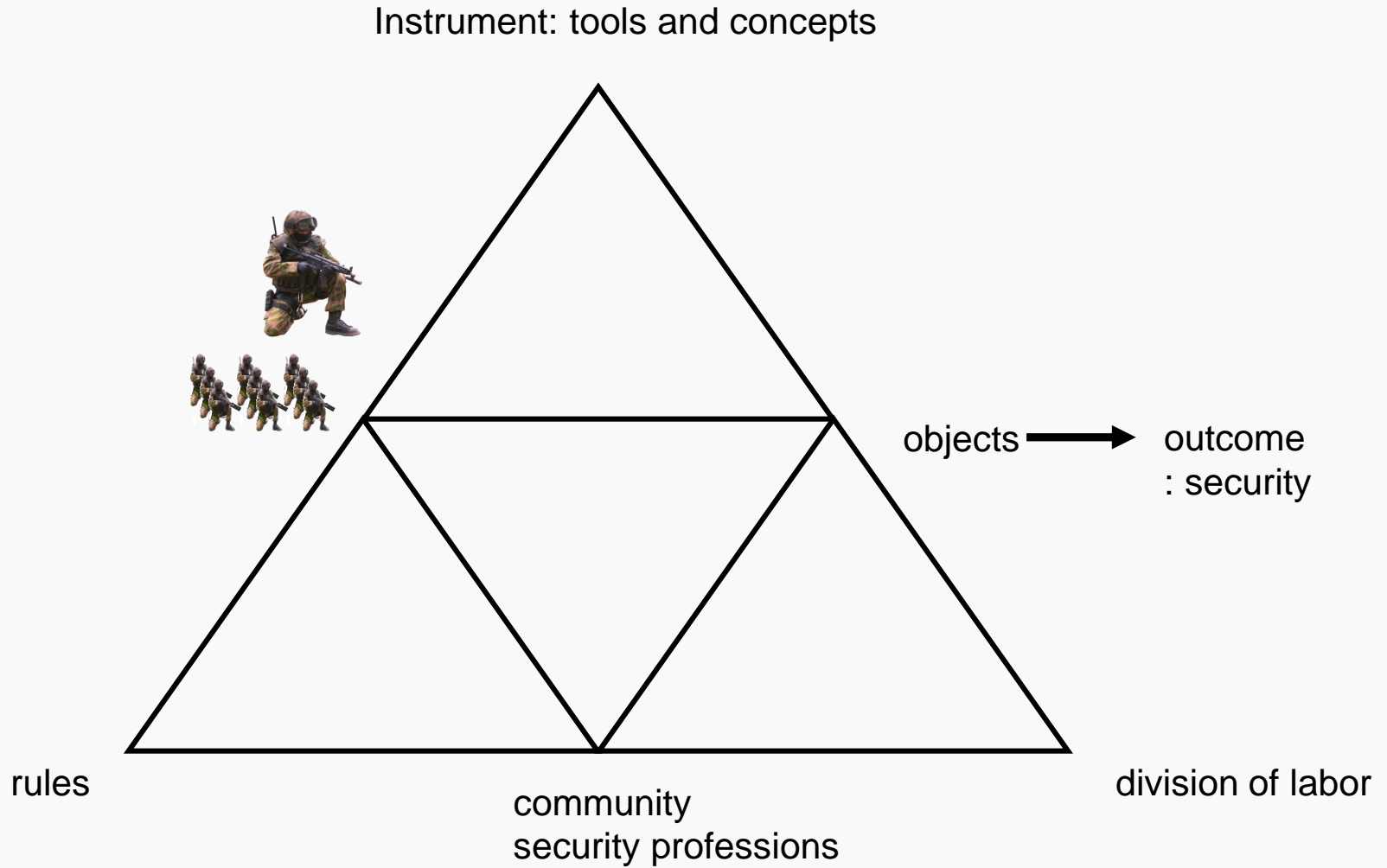Adapted: Keskinen et al. 2017 (in Finnish)

The structure of human activity

Instrument: tools and concepts

object ➔ outcome

rules

community

division of labor

Sources: Engeström 1987: 2015; Mäkinen 2006; see Keskinen et al. 2017.

The structure of human activity applied to the security oriented activities

Instrument: tools and concepts

objects ➙ outcome : security

rules

community
security professions

division of labor

Adapted: Engeström 1987: 2015; Mäkinen 2006; see Keskinen et al. 2017.

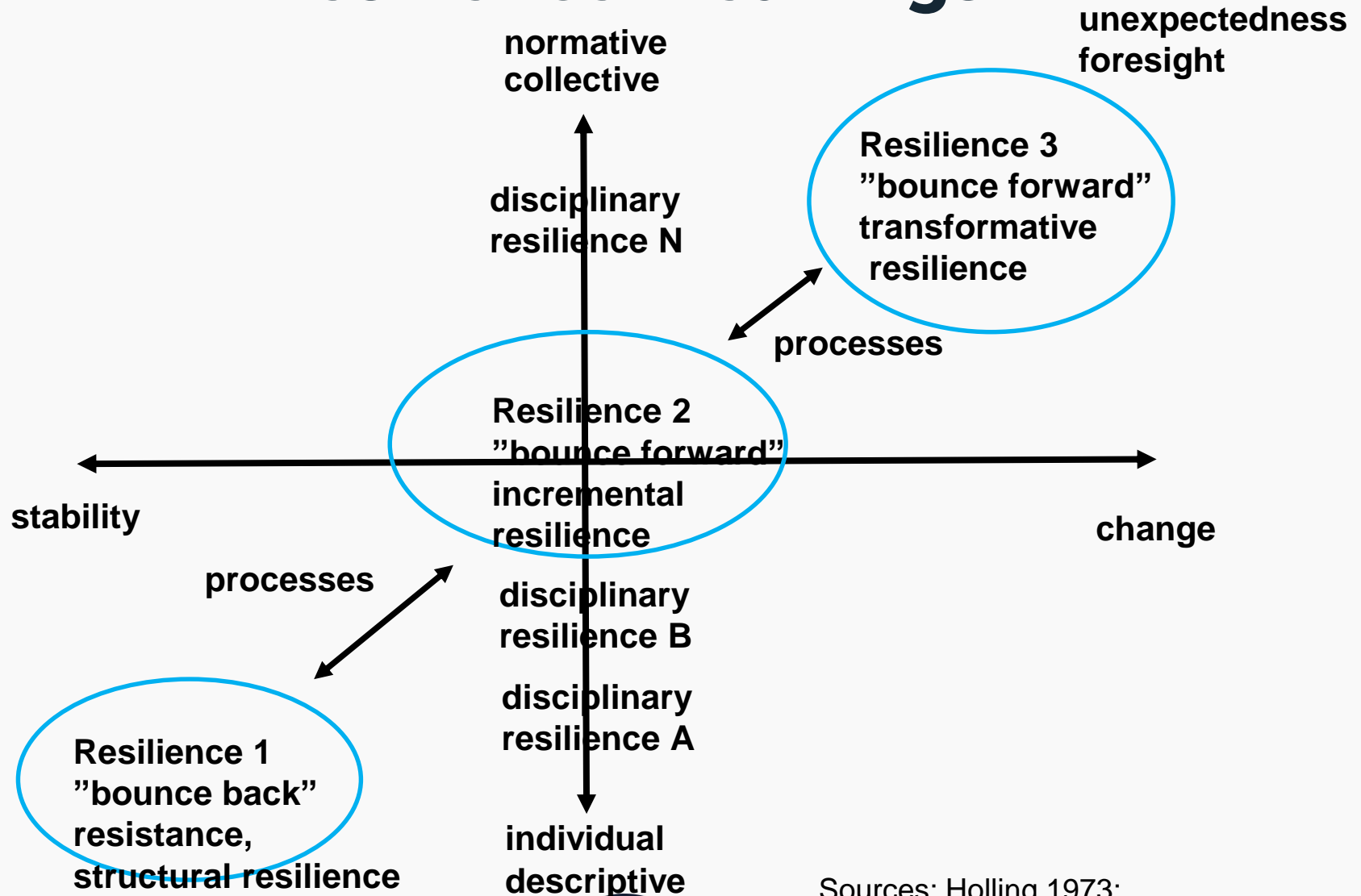# Resilience-concept in EU Global strategy (2016)

Resilience mentioned 35 times. The strategic priority.

The EU will support different paths to resilience, targeting the most acute cases of governmental, economic, societal and climate/energy fragility, as well as develop more effective migration policies for Europe and its partners.

Resilience – the ability of states and societies to reform, thus withstanding and recovering from internal and external crises.

Resilience meanings

normative
collective

unexpectedness
foresight

Resilience 3
"bounce forward"
transformative
resilience

disciplinary
resilience N

processes

Resilience 2
"bounce forward"
incremental
resilience

stability

change

processes

disciplinary
resilience B

disciplinary
resilience A

Resilience 1
"bounce back"
resistance,
structural resilience

individual
descriptive

Sources: Holling 1973;
Brand & Jax 2007; Bourbeau &
Ryan; FIIA 2018; WEF 2018;
Winland 4.12.2018;
Adapted from Engeström 2018, 256.

Triangular relationship of security, resilience, and non-security politics

security

resilience
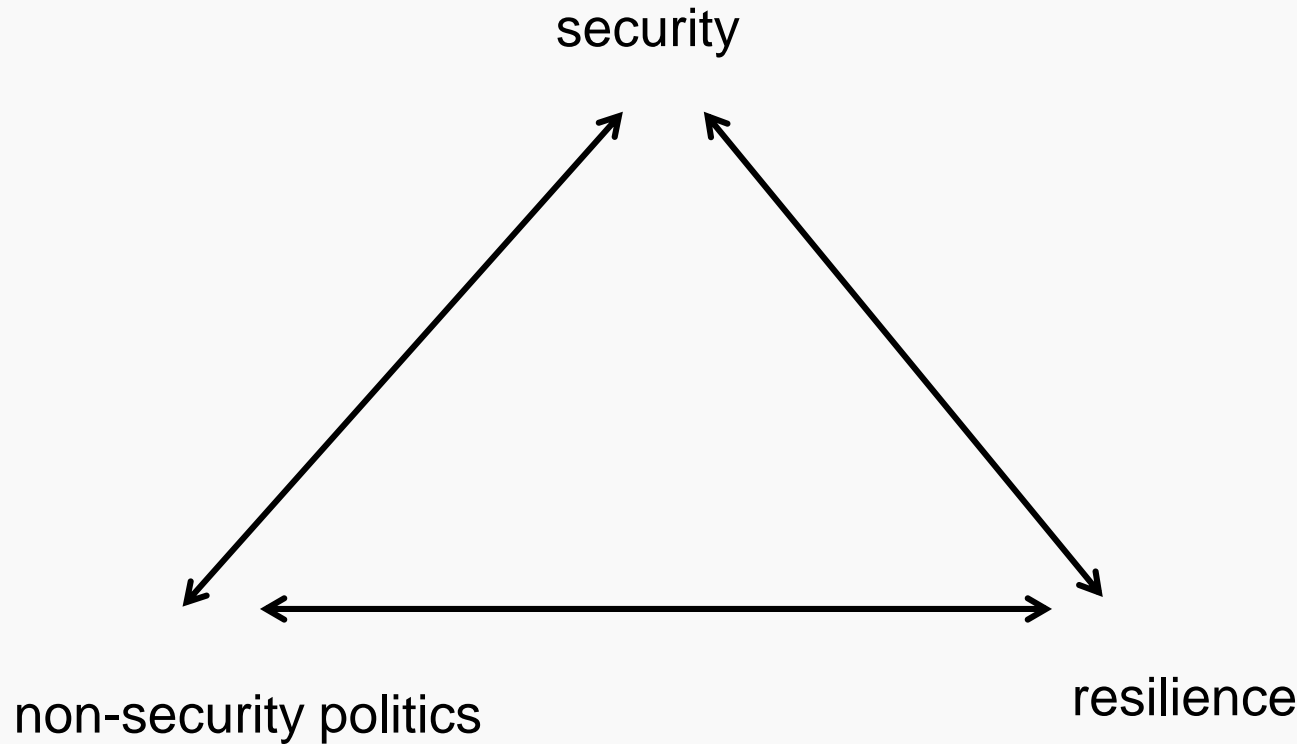
non-security politics
- **citizen?**
- human agency?
- empowerment?
- democracy?
- values?

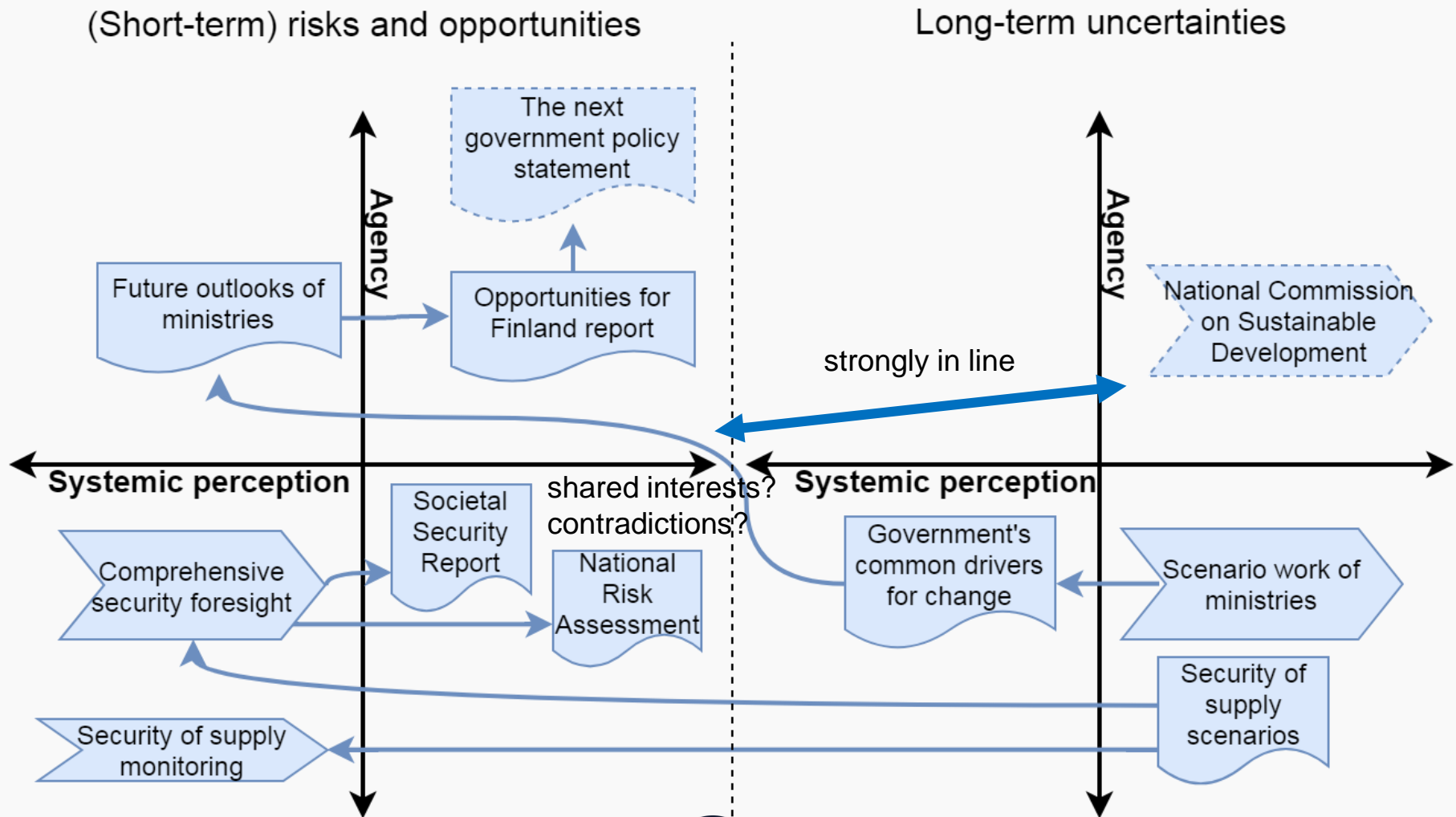Source: ks. Bourbeau & Vuori 2016; see Mikkola ym. 2018 (FIIA with KOREHA/ CO-RESONANCE).

Finland Agenda 2030 GAP (2016):
GAP analysis by Demos Helsinki and SYKE

Various comparisons indicate that Finland's particular strengths lie in good education and competence (Goal 4 in particular) and societal stability (Goal 16 in particular). Particular attention must be paid to these subject areas in order to maintain and improve on the current good status. In education, methods must be found of securing equal learning opportunities for all. To ensure social stability, Finland requires improved foresight with respect to rapidly changing internal and external threats – and opportunities.
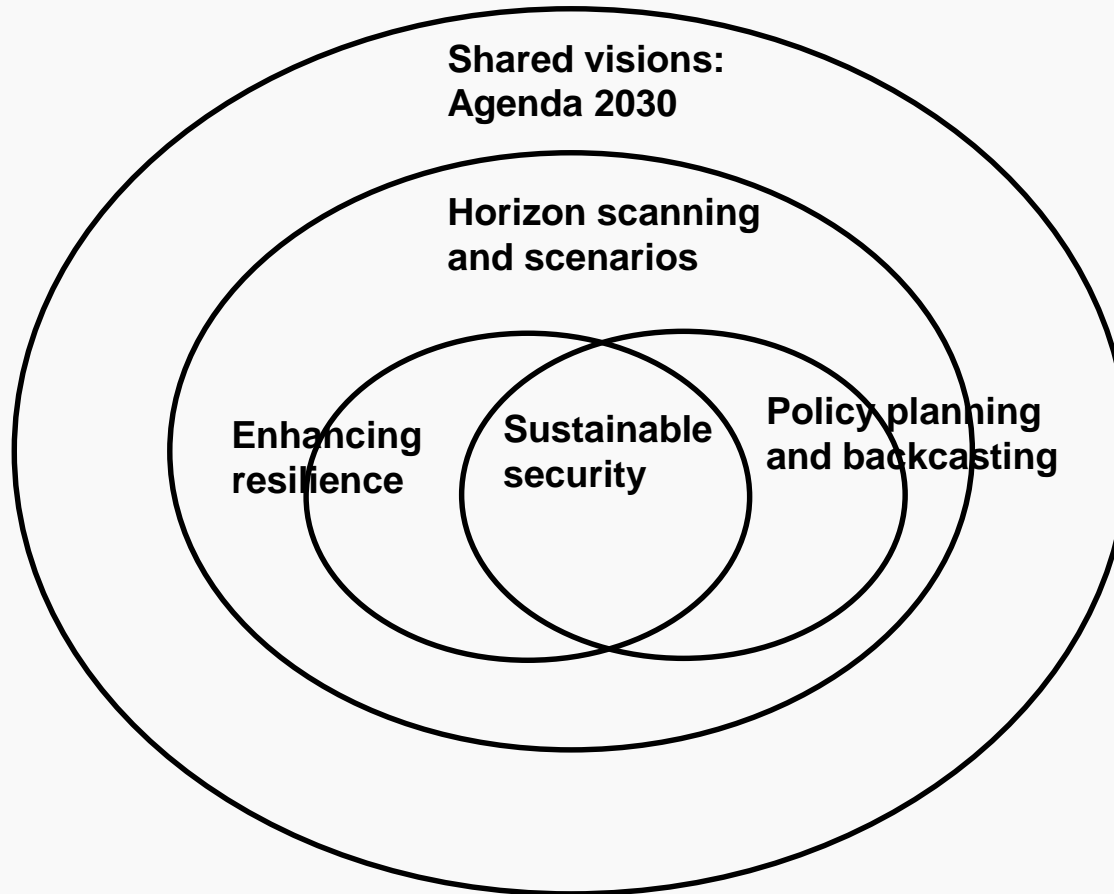
National foresight activities

(Short-term) risks and opportunities

Long-term uncertainties

The next government policy statement

Agency

Future outlooks of ministries

Opportunities for Finland report

Systemic perception

Societal Security Report

National Risk Assessment

Comprehensive security foresight

Security of supply monitoring

strongly in line

National Commission on Sustainable Development

Agency

shared interests? contradictions?

Systemic perception

Government's common drivers for change

Scenario work of ministries

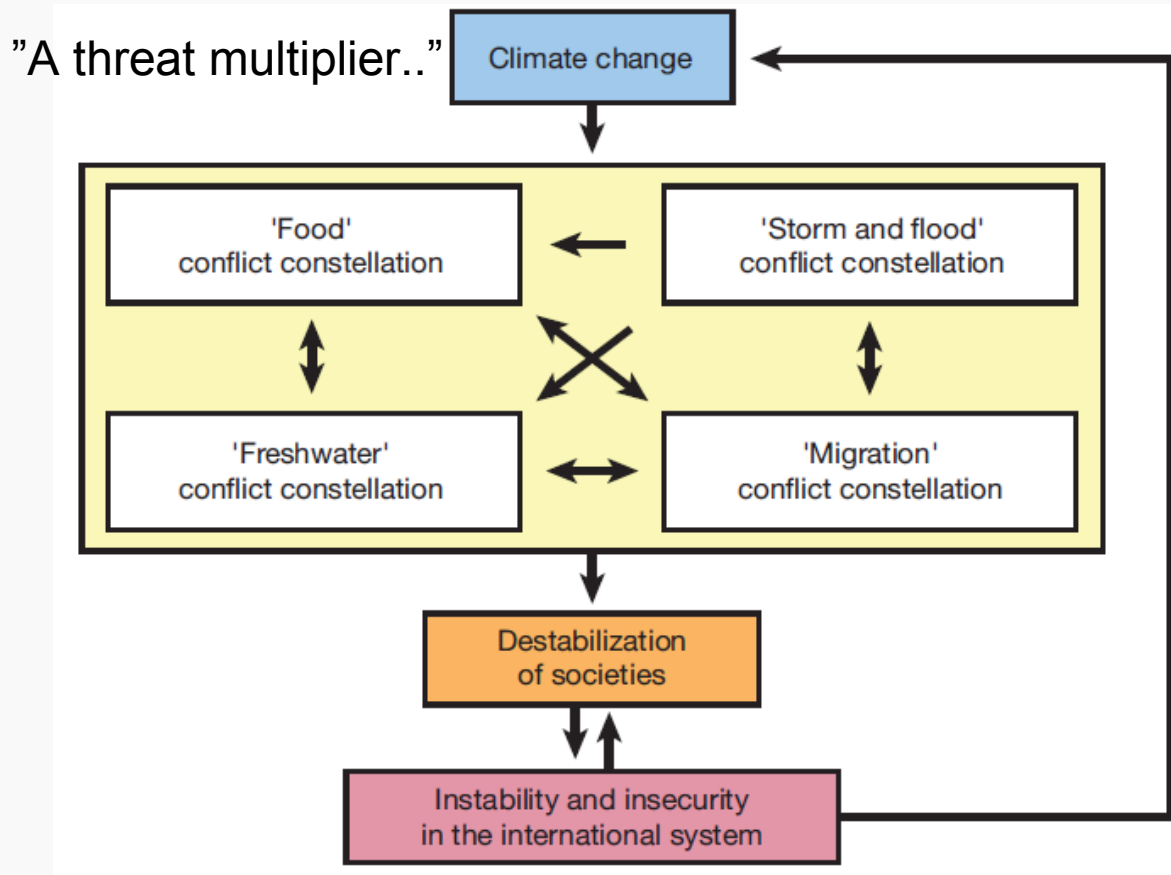Security of supply scenarios

W
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3) Fundamental ISS questions
        - threats, risks and hybrid warfighting: Winland

4) Sectors of the security
        - how to implement several societal/national security strategies
        - with whom etc

5) **Climate change and sustainable security**

6) Learning with Winland: educating these themes and learning?

Sustainable security

**Shared visions:
Agenda 2030**

**Horizon scanning
and scenarios**

**Enhancing
resilience**

**Sustainable
security**

**Policy planning
and backcasting**

See: e.g. Suri & Valentino (Eds.) (2016): Sustainable security: rethinking American National Security Strategy

Climate change and security

"A threat multiplier.."

Climate change

'Food' conflict constellation ← 'Storm and flood' conflict constellation

'Freshwater' conflict constellation ↔ 'Migration' conflict constellation

Destabilization of societies

Instability and insecurity in the international system

Source: WBGU 2006; Scheffran 2009; 2010 in Security in Futures, Turku.

Climate change and security

NATIONAL SECURITY IMPLICATIONS OF CLIMATE-RELATED RISKS AND A CHANGING CLIMATE

The UK Ministry of Defence's Global Strategic Trends is a long-term horizon scan, which provides a context for policy-makers to make long-term decisions.

Work on the sixth edition of Global Strategic Trends is maturing and key trends are emerging from the research that will have a major impact in the decades ahead. For example, the global population will continue to grow from around 7.6 billion today to around 9.8 billion by 2050. Artificial intelligence is coming of age and the inexorable growth in computing power, connectivity and available data will mean that many mid-skilled jobs are being automated. Machines will become more capable, more efficient and cheaper. Last year China became the world's leading purchaser of industrial robots underlining the shift of economic power away from Europe and America towards Asia.

By 2050 the effects of climate change are likely to be keenly felt, with virtually ice-free summers in the Arctic, rising sea levels and catastrophic droughts in many parts of the world. Renewable energy offers the prospect of abundant, cheap, clean energy but, despite its rapid adoption, it alone will not halt climate change in the coming decades.

CLIMATE CHANGE
A RISK ASSESSMENT

David King, Daniel Schrag, Zhou Dadi, Qi Ye and Arunabha Ghosh

Project Manager: **Simon Sharpe**

Edited by **James Hynard** and **Tom Rodger**,
Centre for Science and Policy

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Climate is changing due to our overconsumption

DoD recognizes the reality of climate change and the significant risk it poses to U.S. interests globally. The National Security Strategy, issued in February 2015, is clear that climate change is an urgent and growing threat to our national security, contributing to increased natural disasters, refugee flows, and conflicts over basic resources such as food and water.[1] These impacts are already occurring, and the scope, scale, and intensity of these impacts are projected to increase over time.

The wicked sustainability problems of today can be understood as the results of ignorance of the consequences of consumption, inattention to human dependence on ecological realities and the exceeding of planetary boundaries (Steffen et al., 2015). Climate

A modern dualistic worldview and alienation have replaced the perception of man as an integral part of nature. Seeing nature as an object of instrumental benefit has led to attitudes of indifference and overconsumption (Wolff, 2011). The impact of private indi-

Source: Lehtonen & Salonen et al. 2018,
"A pedagogy of interconnectedness.."

I as a "normal" consumer and "good" person?

It is increasingly clear that sustainably feeding 9 billion people—the projected world population in 2050—**who will consume at the rate of 12 billion people, if they follow the current consumption pattern of industrialized countries**, will require a much more careful and integrated approach to the use of land, water, and energy than we currently apply.
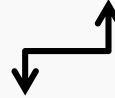
As a result of economic and population growth, wealthier populations in the developed and increasingly the developing world are juxtaposed with nearly 1 billion food-insecure people and 2 billion people suffering from micronutrient deficiencies.

Global Hunger Index 2012 IFPRI

Overweight and obesity are the fifth leading risk for global deaths. At least 2.8 million adults die each year as a result of being overweight or obese. In addition, 44% of the diabetes burden, 23% of the ischaemic heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity.

http://www.who.int/mediacentre/factsheets/fs311/en/

Roughly one-third of the edible parts of food produced for human consumption, gets lost or wasted globally, which is about 1.3 billion ton per year.

FAO UN 2011

Approaches to water security policy challenges

This article reviews and contrasts two approaches that water security researchers employ to advance understanding of the complexity of water-society policy challenges. A prevailing reductionist approach seeks to represent uncertainty through calculable risk, links national GDP tightly to hydro-climatological causes, and underplays diversity and politics in society. When adopted uncritically, this approach limits policy-makers to interventions that may reproduce inequalities, and that are too rigid to deal with future changes in society and climate. A second, more integrative, approach is found to address a range of uncertainties, explicitly recognise diversity in society and the environment, incorporate water resources that are less-easily controlled, and consider adaptive approaches to move beyond conventional supply-side prescriptions. The resultant policy recommendations are diverse, inclusive, and more likely to reach the marginalised in society, though they often encounter policy-uptake obstacles. The article concludes by defining a route towards more effective water security research and policy, which stresses analysis that matches the state of knowledge possessed, an expanded research agenda, and explicitly addresses inequities.

Source: Zeitouna et al. (2016). Reductionist and integrative research approaches to..

Integrative approach: global water shortage

stress indicator, was used to identify water shortage in 284 sub-basins. Although our results show a few areas with moderate water shortage (1000–1700 m^3/capita/yr) around the year 1800, water shortage began in earnest at around 1900, when 2% of the world population was under chronic water shortage (<1000 m^3/capita/yr). By 1960, this percentage had risen to 9%. From then on, the number of people under water shortage increased rapidly to the year 2005, by which time 35% of the world population lived in areas with chronic water shortage. In this
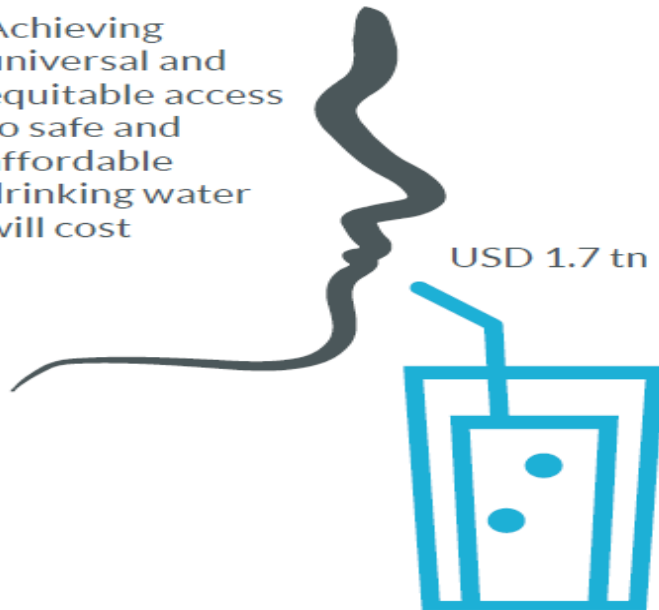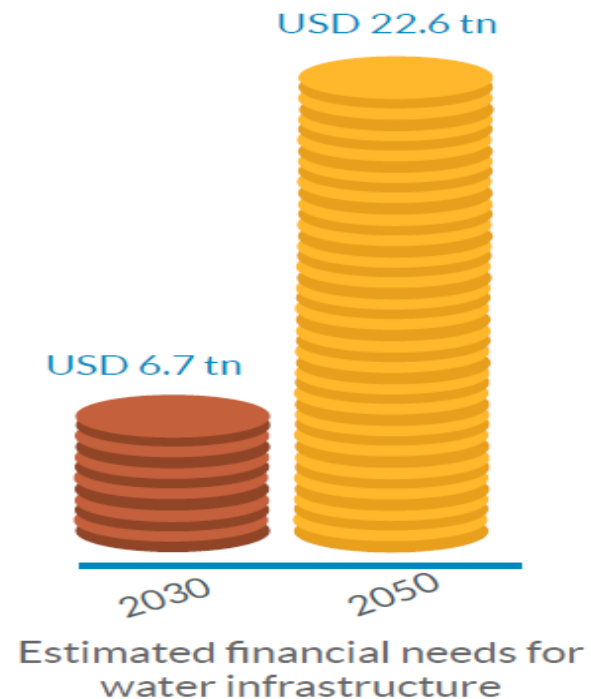
Global water shortage

sufficiency within the last century. We consider a food production unit (FPU) to have experienced green–blue water (GBW) scarcity if local renewable green (in soils) and blue water resources (in rivers, lakes, reservoirs, aquifers) were not sufficient for producing a reference food supply of 3000 kcal with 20% animal products for all inhabitants. The number of people living in FPUs affected by GBW scarcity has gone up from 360 million in 1905 (21% of world population at the time) to 2.2 billion (34%) in 2005. During this time, GBW scarcity has spread to large areas and become more frequent in

Source: Porkka et al. 2016 Causes and trends of water scarcity.

Achieving universal and equitable access to safe and affordable drinking water will cost

USD 1.7 tn

Hutton et al (2016)

USD 22.6 tn

USD 6.7 tn

2030   2050

Estimated financial needs for water infrastructure

Winpenny (2015)

Climate change = water-food-energy change

- How will climate change affect the planet and the societies?

= through the **water** cycle

- The biggest challenge caused by the climate change?

= reduced global **food** security

- The main solution for the climate change mitigation?

= emissions reduction in **energy** production

Petteri Taalas, secretary general of WMO 5.11.2018

See: e.g. Urry (2011), Climate change and society

A weak signal of a legal resilience 1/2

Antti Belinskij – Niko Soininen – Kaisa Huhta

THE LEGAL RESILIENCE OF WATER, FOOD AND ENERGY SECURITY IN FINLAND

Water, food and energy security are essential building blocks of modern societies. In practice, security in these three sectors requires that there is a sufficient amount of good quality water, food and energy at a reasonable price to sustain a functioning society, and that the society is protected against destructive forces, such as storms and floods. In order to deliver these goals, the systems safeguarding water-, food- and energy security have to be resilient. To safeguard resilience, the regulation of security needs to address three essential questions: 1) essential security vulnerabilities in each sector, 2) links between the three security sectors, and 3) different time scales of security, from emergency mitigation measures to the preparation of and adaptation to broader, long-term security challenges, such as climate change.

Source: Belinskij, Soininen, Huhta, Vesi-, ruoka ja energiaturvallisuuden oikeudellinen resilienssi. Ympäristöpolitiikan ja -oikeuden vuosikirja 2017. (in Finnish)

A weak signal of a legal resilience 2/2

Although the existing regulatory framework addresses important elements of resilience, some challenges remain. First, the legal framework for short-term security preparedness still places heavy emphasis on exceptional circumstances, such as armed conflict. This article argues that the legal framework should rather highlight the security risks associated with normal societal conditions and everyday activities of different actors. Second, the security legislation for water, food and energy is becoming increasingly sectoral. This approach fails to fully consider the cross-effects of law between these sectors and undermines the benefits that could be achieved through a nexus approach. Third, the legal framework for ensuring security in the water, food and energy sectors should be developed to place heavier emphasis on long-term security issues and the prevention of security threats.

Source: Belinskij, Soininen, Huhta, Vesi-, ruoka ja energiaturvallisuuden oikeudellinen resilienssi. Ympäristöpolitiikan ja -oikeuden vuosikirja 2017. (in Finnish)

Can there be peace between rule of law and other SDGs? 1/2

..I argue that **the rule of law may at times be the single biggest obstacle** for achieving the other SDGs.

..by dividing the rule of law into formal, procedural, and substantive camps. In a nutshell, **the formal** camp emphasizes controlling arbitrary public powers. This is done by setting formal criteria for what legal rules and their application must look like. **The prodedural** rule of law theories..emphasize the role of law applying institutions such as the courts…finally, the **substantive** rule of camp requires that goals, such as the SDGs, should guide both the legislature and the courts in all their actions.
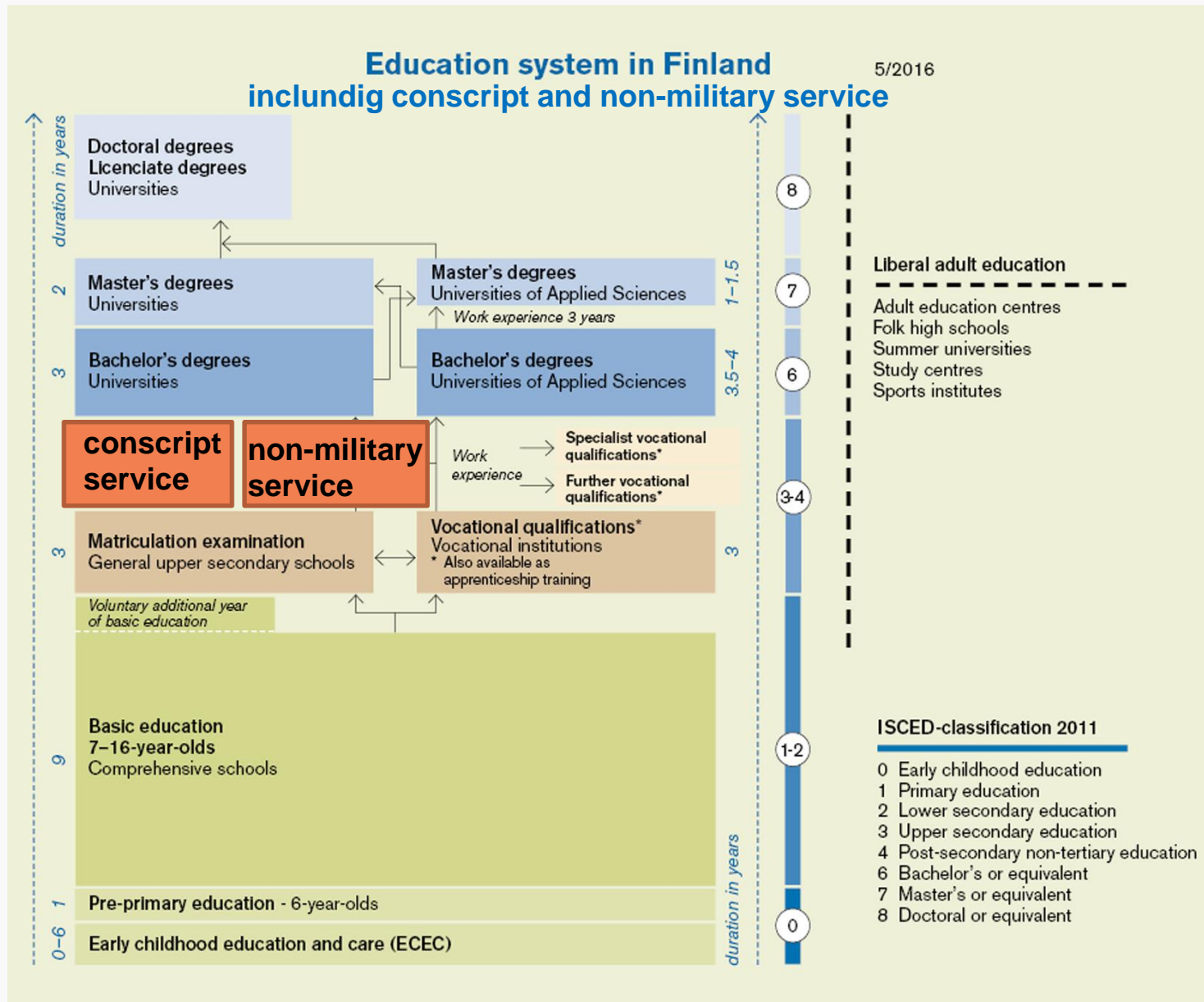
Can there be peace between rule of law and other SDGs? 2/2

..the substantive rule of law theories require the formal and procedural theories, as substantive goals cannot be realized without institutional structures, or any formal criteria for what the legal rules should look like. **There is accordingly a functional and empirical linkage between the rule of law theories.**

Source: Soininen (2018) "Torn by (un)certainty.." in Sustainable development goals: law, theory and implementation edited by Duncan French & Louis J. Kotzé

Education system in Finland

Education system in Finland
inclundig conscript and non-military service

THANK YOU!

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