



# ” National Action Plans and implementation of IPM principles in the Nordic-Baltic countries”

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PesticideLife project**

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# PesticideLife Project

- LIFE+ project, time 2010- 2013

## *Implementing IPM in Cereal Production in the Northern Zone*

- coordinated by MTT, partners Finnish Safety and Chemical Agency (TUKES) and advisory organisation Nylands Svenska Lantbrukssällskap
- Sanni Junnila, coordinator
- Project home page: [www.mtt.fi/pesticidelife](http://www.mtt.fi/pesticidelife)

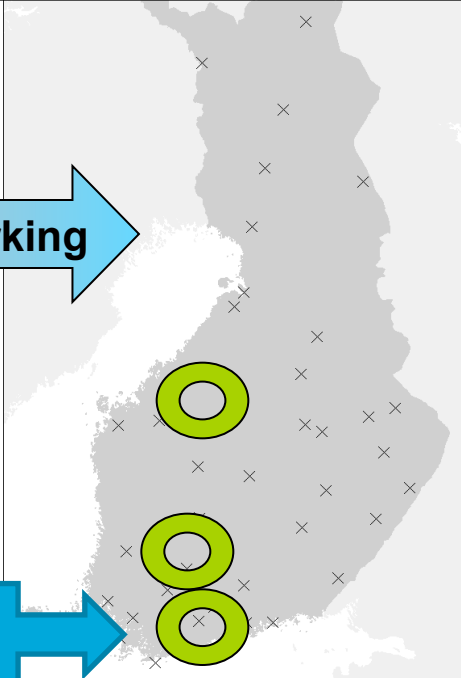
**Framework directive 2009/128/EC**  
on sustainable use of pesticides



**PesticideLife test farms**  
3 areas x 3 farms

**NAP**  
**National Action Plan**  
**in 2011**

**PesticideLife:**  
Reducing  
environmental  
risks in use of  
PPP in Northern  
Europe



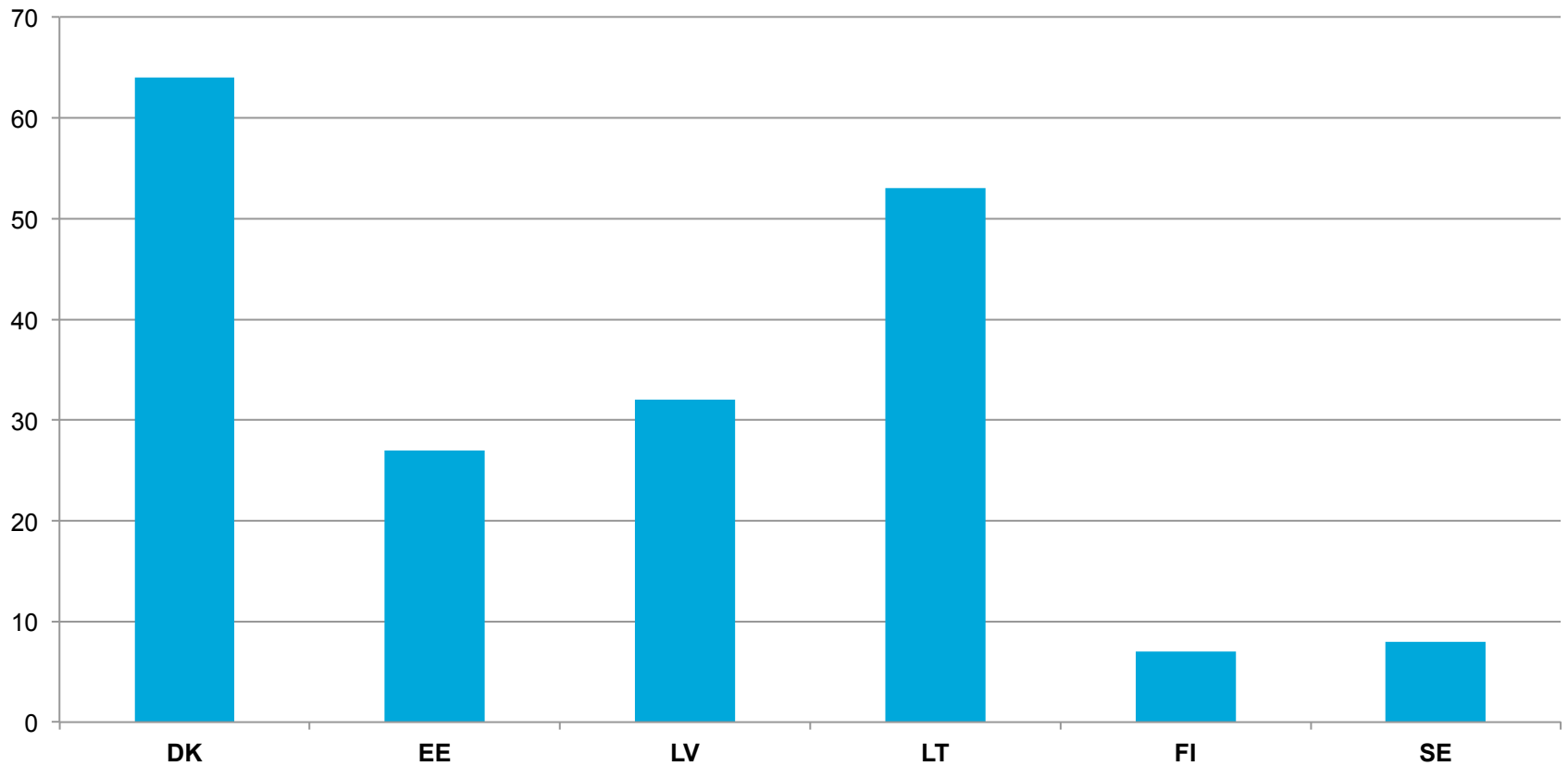
**Networking**

**Nets!**

**Reducing environmental and health risks**

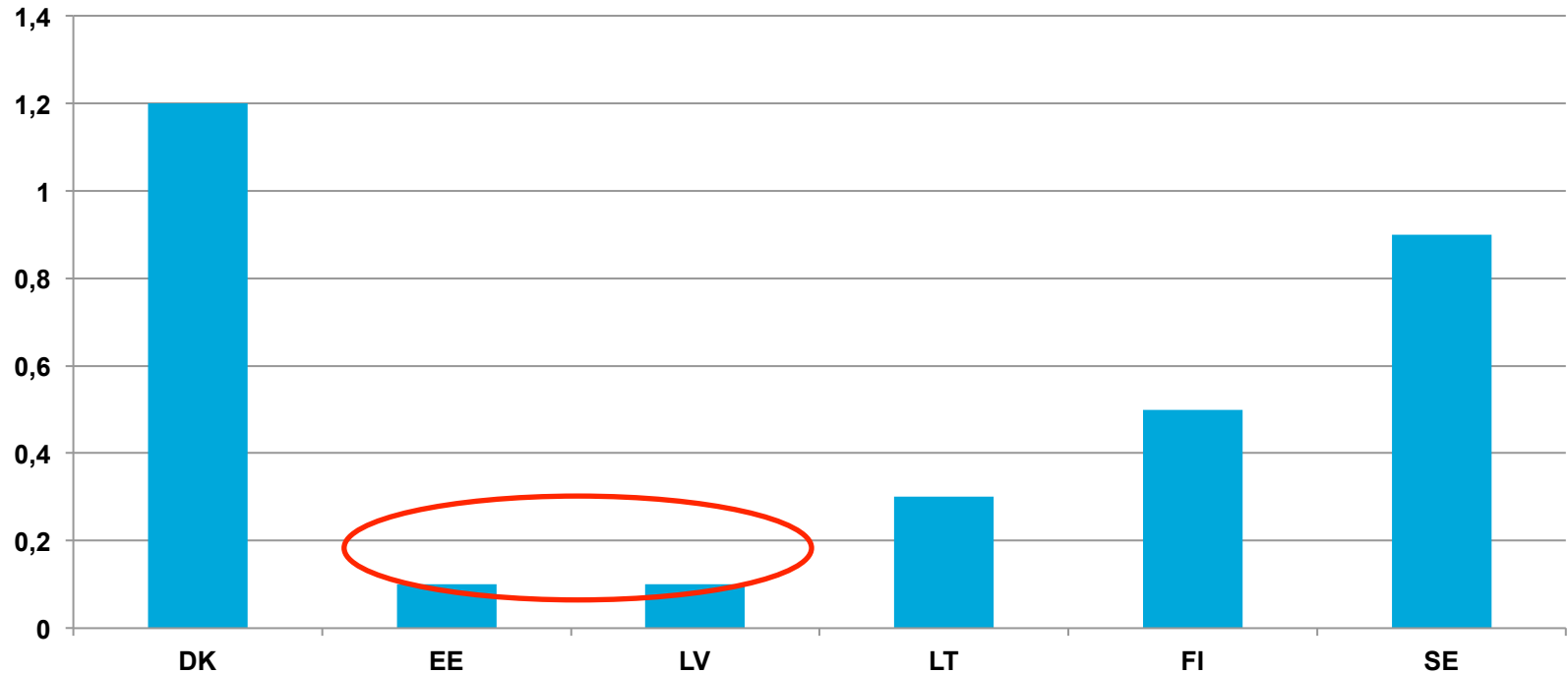
# Land cover

Agricultural land %



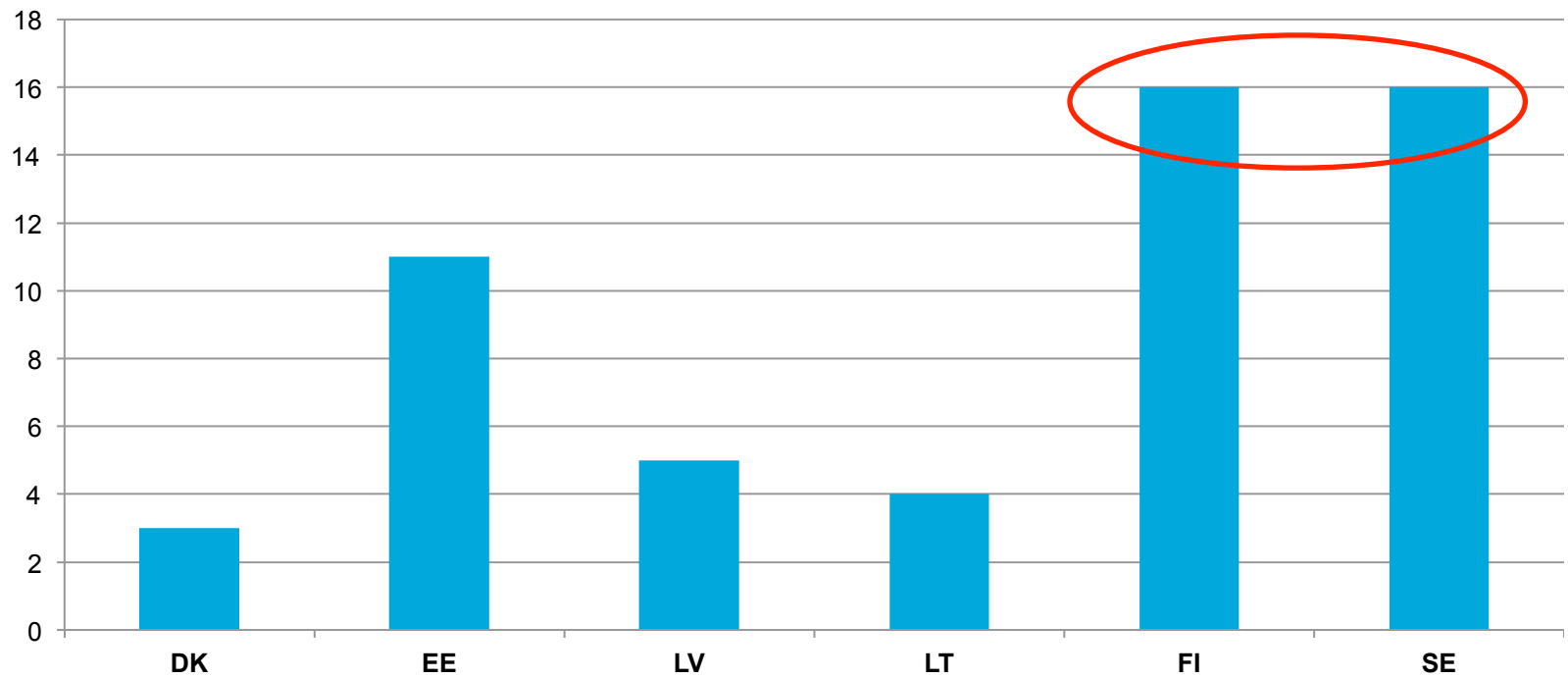
# PPP sales 2003

proportion PPP sales /EU



# Water systems

Water& wet land %



# Background , history to minimize ...

- Almost Every country has had documented plans to minimize the USE of pesticides
- In Denmark: NAPs on pesticides for decades, starting in 1986:
  - Pesticide Action Plan I (1987-1996), Bichel Committee (1998-1999)
  - Pesticide Action Plan II (2000-2003) , Pesticide Plan 2004-2009, Green Growth (2009-2015)
- In Sweden: Sweden: First National Action Plan 1986, A new reduction goal was decided 1990 – continued goal another 50 % reduction until 1996.
  - 2nd program 1997-2001.3rd program 2001-2006, was prolonged until 2009.
  - 4th program 2010-2013. "Hållbar användning av växtskyddsmedel".
- In Finland: Tasapainoinen kasvinsuojelu ("Balanced plant protection") 2000 –
- *"The politicians of Latvia are not actively working on programmes to minimise pesticide use, as the public debate has been minimal"* (Weed Research 48, 201–214)
- DK : The Agreement on Green Growth **The government** (Venstre and De Konservative [Venstre, the Danish Liberal Party and The Danish Conservative Party]) and Dansk Folkeparti [The Danish Peoples' Party] have **signed**



# NAP Coordination and stakeholders

- **DK: Governmental process led to the Green Growth policy**
- **SE: The Swedish Board of Agriculture coordinates, many stakeholders including The Federation of Swedish Farmers**
- **FI: Ministry of Agriculture and Forestry : a committee made the proposal for NAP (16 stakeholders),**
- **EE: Ministry of Agriculture : in progress, a draft will be circulated among IPM experts (Jõgeva Plant Breeding Institute, Estonian Research Institute of Agriculture and Estonian University of Life Sciences).**
  
- **LV: Ministry of Agriculture (Plant Protection Department, Integrated Plant Protection Division)**
- **LT: Ministry of Agriculture: Committee, consists of many stakeholders**



# NAP snapshot (in June 2011)

- **DK: public as a part of the Green Growth program**  
<http://www.fvm.dk/Default.aspx?ID=18488&PID=169747&NewsID=5558>
- **SE: A report with proposed measures was presented in 2010.**  
These measures are still being processed
- **FI, A recommendation for the NAP done, will be published by the Ministry of Agriculture and forestry ? soon ?**
- **EE: The work started**
- **LV: “writing in progress” training projects coordinated by the Cabinet of Ministers, Plant Protection Service specialists coordinate networking among stakeholders**
- **LT : A committee is processing a recommendation for the NAP, a working group established 2010**

# NAP goal setting... qualitative !

- **DK:** Reduction in the pesticide impact >Environment and health burdens from use of pesticides in horticultural and fruit growing sectors must be reduced maximally
- Pesticide residues in Danish-produced food must be reduced to a minimum.
- Approved pesticides must not leach into the groundwater at levels above the maximum limit value.
- The current indicator (treatment frequency) is to be replaced > The “pesticide impact index” shall be reduced **to 1.4** by the end of 2013.
- **SE:** Reduced risk, measured by risk indicators, almost no residues in water, low residue levels in domestic vegetable crops..
- **FI:** Reduction in the pesticide impact on Environment and health, decrease dependence on chemical pesticides, residue levels below acceptable values, increased IPM training and a common IPM understanding , environmental risks monitored
- **EE:**the plan not ready
- **LV:**the plan not ready
- **LT:** the plan not ready

# Actions

- **DK:** Introduction of a new **indicator** for the “pesticide impact index, re-structuring of the **pesticide tax**, Warning system for pesticides found in groundwater , Continuation of pesticide control which includes control of **illegal imports**
- **extension service** on IPM will be nearly fully financed.
- Information campaigns for **consumers** and garden owners
- **FI:** **training** programs for farmers, retailers and users, IPM information services, monitoring of residues (water systems), research focused on biological control ? (hallucination 😊)
- **SE:** Training, extension services and information. Research, development and trials, Legislation, Monitoring, **Follow-up**,
- **EE:** the plan not ready
- **LV:** the plan not ready
- **LT:** IPM development, training, handling, application, equipment, information to the public, **indicators**

# Resources ?

- **DK : + 4,8 m€ /6 years for IPM advice systems +1,6m€ warnings, thresholds etc.**
- **SE: 1,65 m€ /2011 to implement the directive including IPM + 1,3 m€ for research and development**
- **FI ? TUKES (Finnish Safety and Chemical Agency) two persons to coordinate the IPM implementation! Institutes should allocate resources, not assured ! projects ? National, regional money ? Farmers training -Chargeable or free ?**
- **EE: the plan not ready**
- **LV: the plan not ready ?**
- **LT: Need of funds listed: research, monitoring , training of farmer?**

# Indicators – a difficult issue

- **EU**
- **HAIR project ?? Harmonized risk indicator ?**
- **SYNOPS/Endure, GIS based analysis and warnings?**
- **DK indicators 2011 ? national?**
- Sweden will continue with the national indicators until there are indicators for Europe available.
- **Collaboration needed !**
- **Comparable on EU level**

# Consumption of pesticides - DATA

- DK: **will store** the consumption **data** reported by farmers per crop per farm
- SE: the farmer has to **keep records** over the use of pesticides, data collection not decided
- FI: the farmer has to **keep records** over the use of pesticides, data collection not decided
- EE: the plan not ready
- LV: the plan not ready ?
- LT : the plan not ready

” *IPM implementation as a mutual **learning** process*”

- People develop new knowledge by **learning** → **behavioral change** (transformative change)
- **Knowledge is personal and cannot be transferred** (Röling, 1988).
- Schemes which facilitate **learning, confidence building and motivation** support **knowledge creation** instead of knowledge transfer:
  - When **new skills** and major **strategic changes** are required
  - When **collective** agreement or action is needed

# Reorientation of **roles** for mutual learning:

- **Scientist** = not only an **expert**, but also a **learner**; needs new skills in facilitation of learning, conflict resolution and communication
- **Grower** = not only a **learner**, but also an **expert**; must be able to articulate her needs and be aware of available services
- Farrington, J., Martin A.M. 1988. Farmer Participatory Research: A Review of Concepts and Recent Fieldwork. Agric.Admin. & Extension 29, 241-264.



## Consumer dialogue: Critical questions in the future

- How the toxicity will be measured quantitatively enough
- So that accumulation total toxicity is possible and reliable
- How is the risk defined in production environment, in nature
- Can the definition of the risk be verified on a solid base
- How the results should be validated – practical or theoretical (modeled risk)
- Can the methods be standardized
- How do we communicate the risk with consumers
- How do we communicate the risk with local/regional inhabitants
- Solution can NOT be measuring the end-point impact, but *characterizing the mode of impacts of pesticides and modelling impact potential*

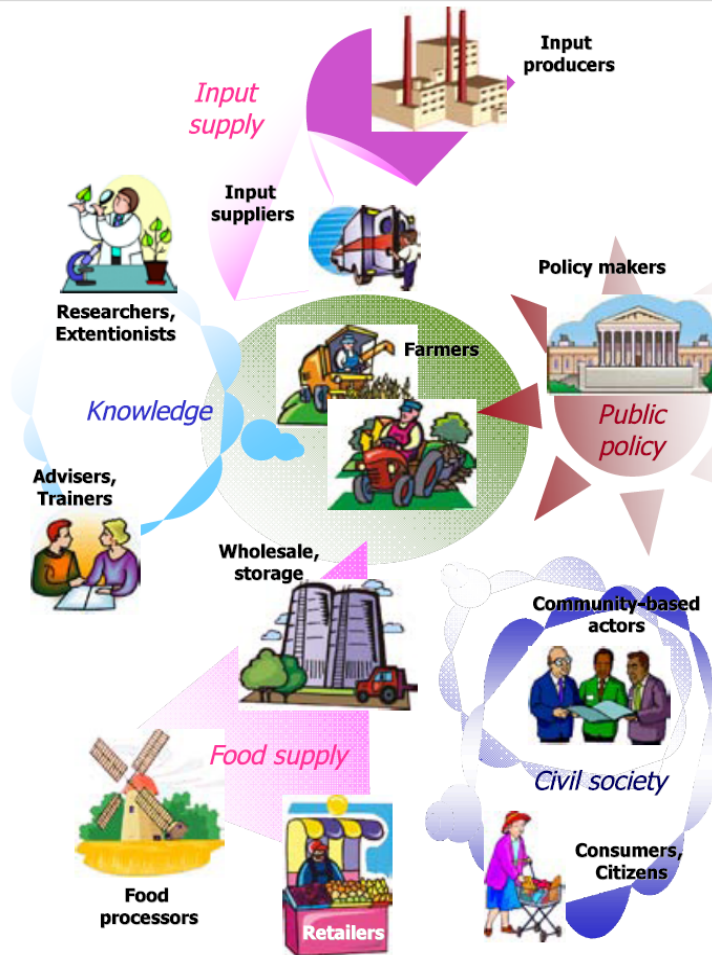
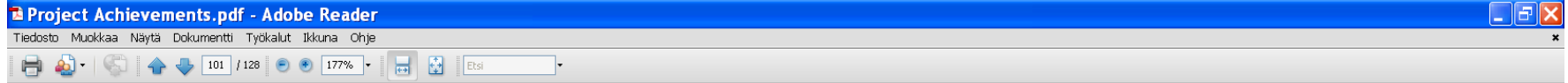
# ”IPM North” NJF working group ?



Nordic Association of agricultural Scientists

- **Proposal to the Board of NJF** (<http://www.njf.nu/site/redirect.asp?p=1000>)
- Aims:
  - a) comparison of the NAPs,
  - b) joint development and testing of IPM tools,
  - c) exchange of training materials,
  - d) development of risk indicators for the North Zone region,
  - e) assurance of compatibility of data bases on consumption of pesticide use,
  - f) **to operate as a link between national and European (ENDURE) networks,**
  - g) to change experiences on participatory training systems and public dissemination of IPM information to consumers

“We all have to work together”, Claire Lamine,



this is perceived to reduce or eliminate pesticide use, which is confirmed by the focus group organized in 4 countries within ENDURE.

### The possible role of civil society

Finally, civil society has today a key role to play through the construction of the environmental impact of agriculture as a public issue. In recent years, the public debate evolved from concerns about the environmental impacts of pesticides to concerns about the cumulative impacts of pesticides on human health, which has influenced changes in pesticide risk regulation. On the other hand, transitions towards IPM have not been put forward mainly because the civil society's main spokesmen (NGOs, medical doctors or scientists) mostly think in terms of zero-pesticide rather than low-input practices.

### Obstacles and opportunities for robust transitions

Our sociological studies show that reducing the dependence on pesticides is not only a matter of changes at the farm level. Whereas many actors stress the reluctance of farmer to consider non-chemical alternatives, we show that market conditions, governance of extension and research and public debates are framing stakeholder perceptions and actions and impeding change. Where farmers themselves talk, often in a rather fatalistic way, of market and legislation as the most if not only factors determining (or preventing) change. we



**Thank you !**

