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The North Karelia project



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Europevent

Geneva 15.4.2011

Greetings from Finland



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History in Finland

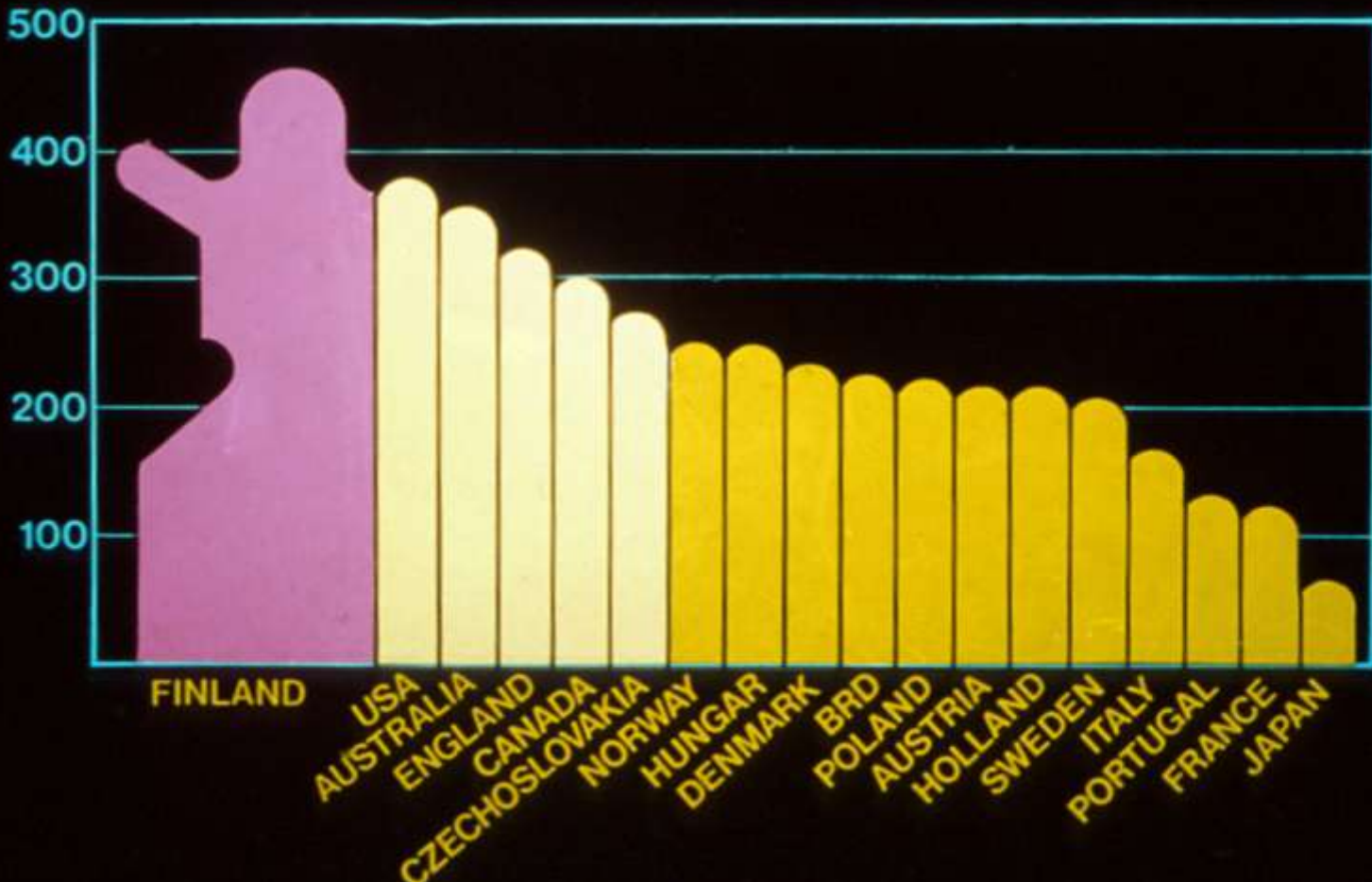
- Hardships of war and postwar years
- Increase in standard of living
 - Great increase in CVD
- Attention to extremely high CVD mortality
- Previous studies: East-West study (part of Seven Countries Study)



MORTALITY RATES OF ISCHAEMIC HEART DISEASE AMONG MEN IN SELECTED COUNTRIES



CHD mortality
per 100.000 men in 1973



NORTH KARELIA PROJECT FINLAND



North Karelia Project

Principles



- Due to the chronic nature of CVD, the potential for the control of the problem lies in primary prevention
- The risk factors were chosen on the basis of best available knowledge:
 - previous studies
 - collective international recommendations
 - epidemiological situation in North Karelia
- Chosen risk factors:
 - smoking
 - elevated serum cholesterol (diet)
 - elevated blood pressure (diet & treatment)
- Community based approach to change lifestyles



Theory + hard work

- Theory:
 - ✓ Medical
 - ✓ Behavioural, social
- Hard work: practical and flexible work with the community



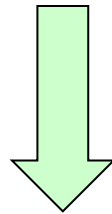
From Karelia to National Action



- **First province of North Karelia as a pilot (5 years), then national action (1972–77)**
- **Continuation is North Karelia as national demonstration (1977–97)**
- **Good scientific evaluation to learn of the experience**
- **Comprehensive national action**



Community-based project
(pilot, demonstration, model)



National programme and
policies



Evaluation / Monitoring



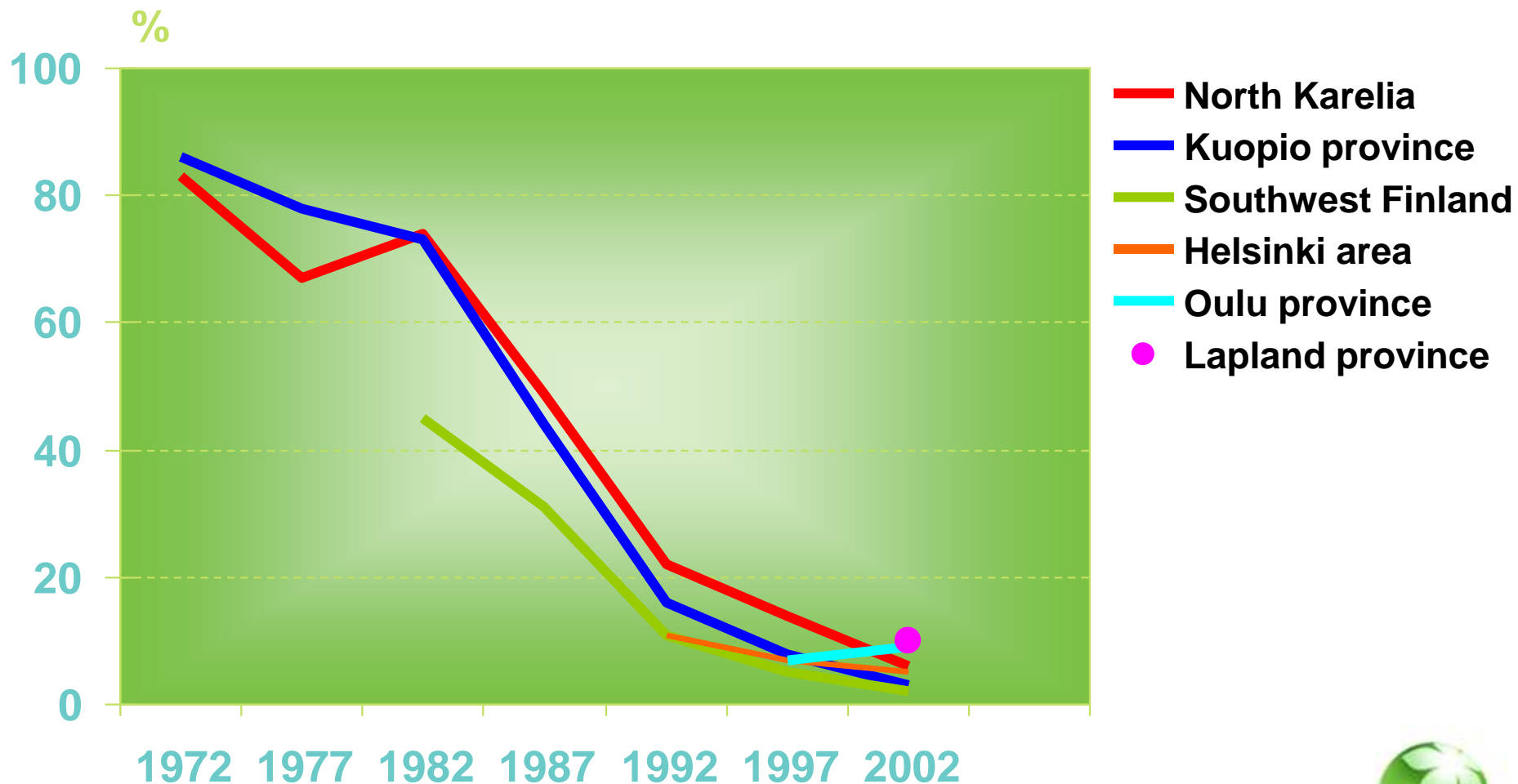
- **North Karelia – all Finland**
- **Monitoring systems**
 - **health behaviour**
 - **risk factors**
 - **nutrition**
 - **diseases, mortality**



RESULTS



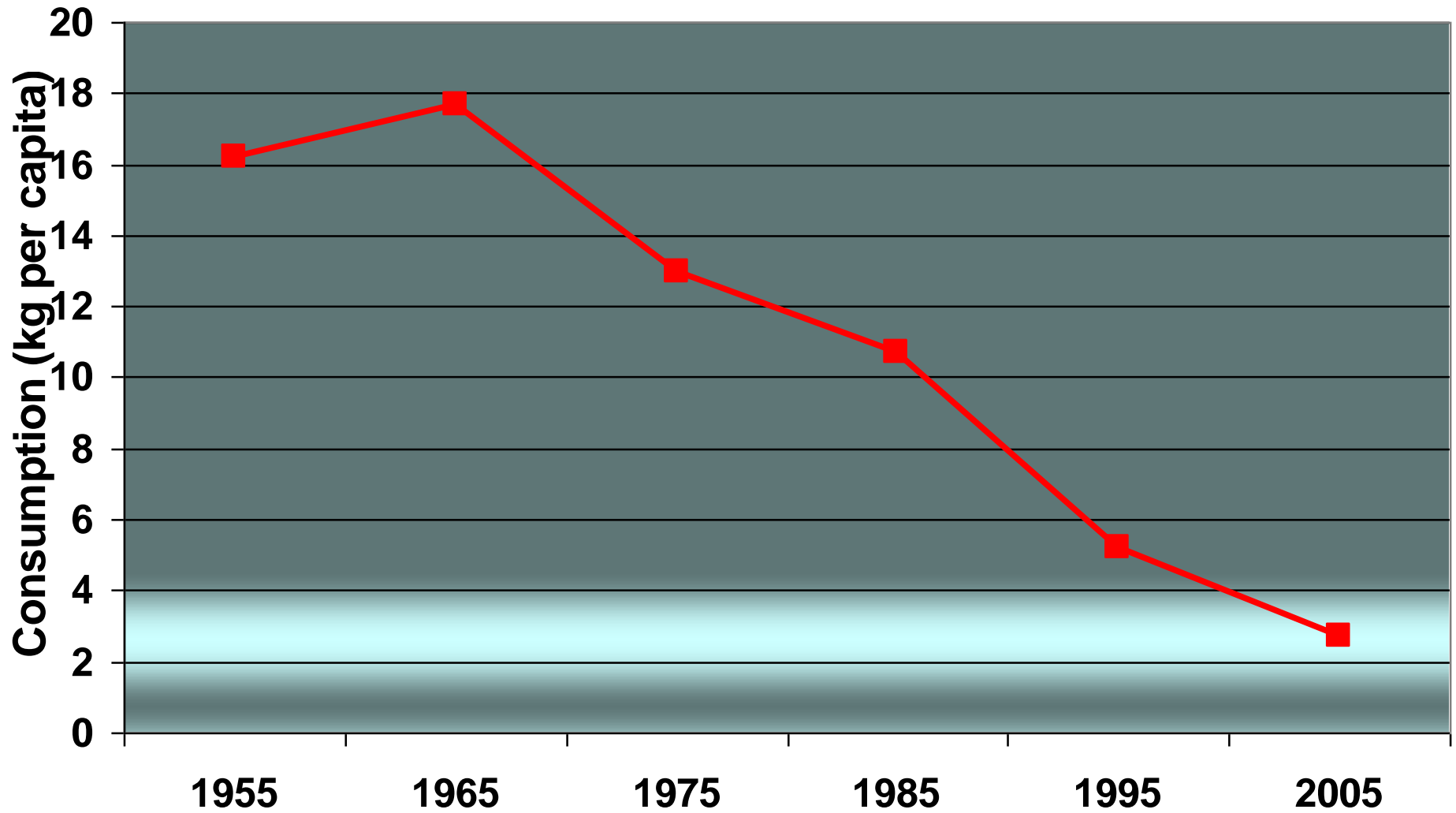
Use of Butter on Bread (men age 30–59)



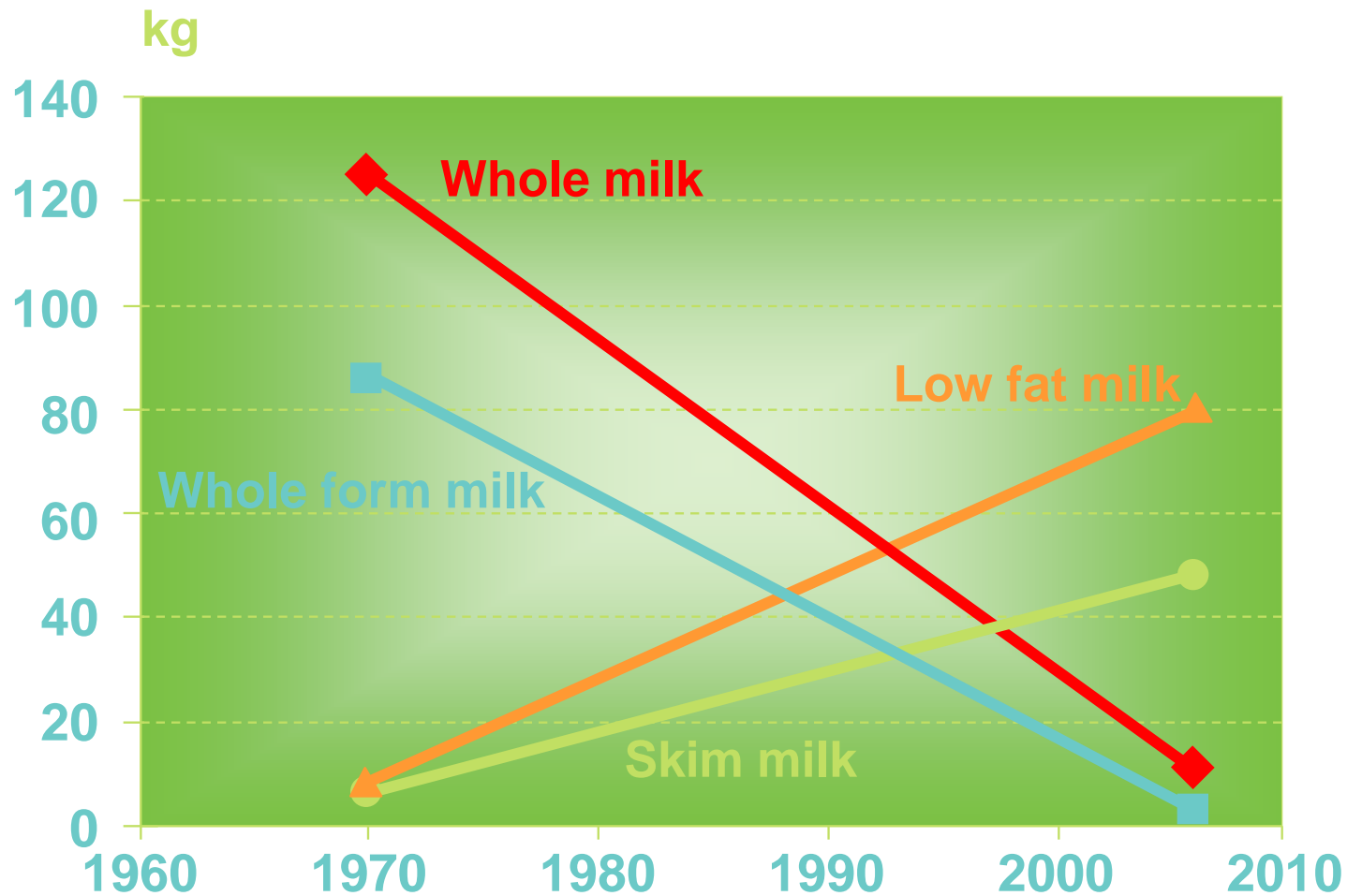
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Butter consumption per capita in Finland



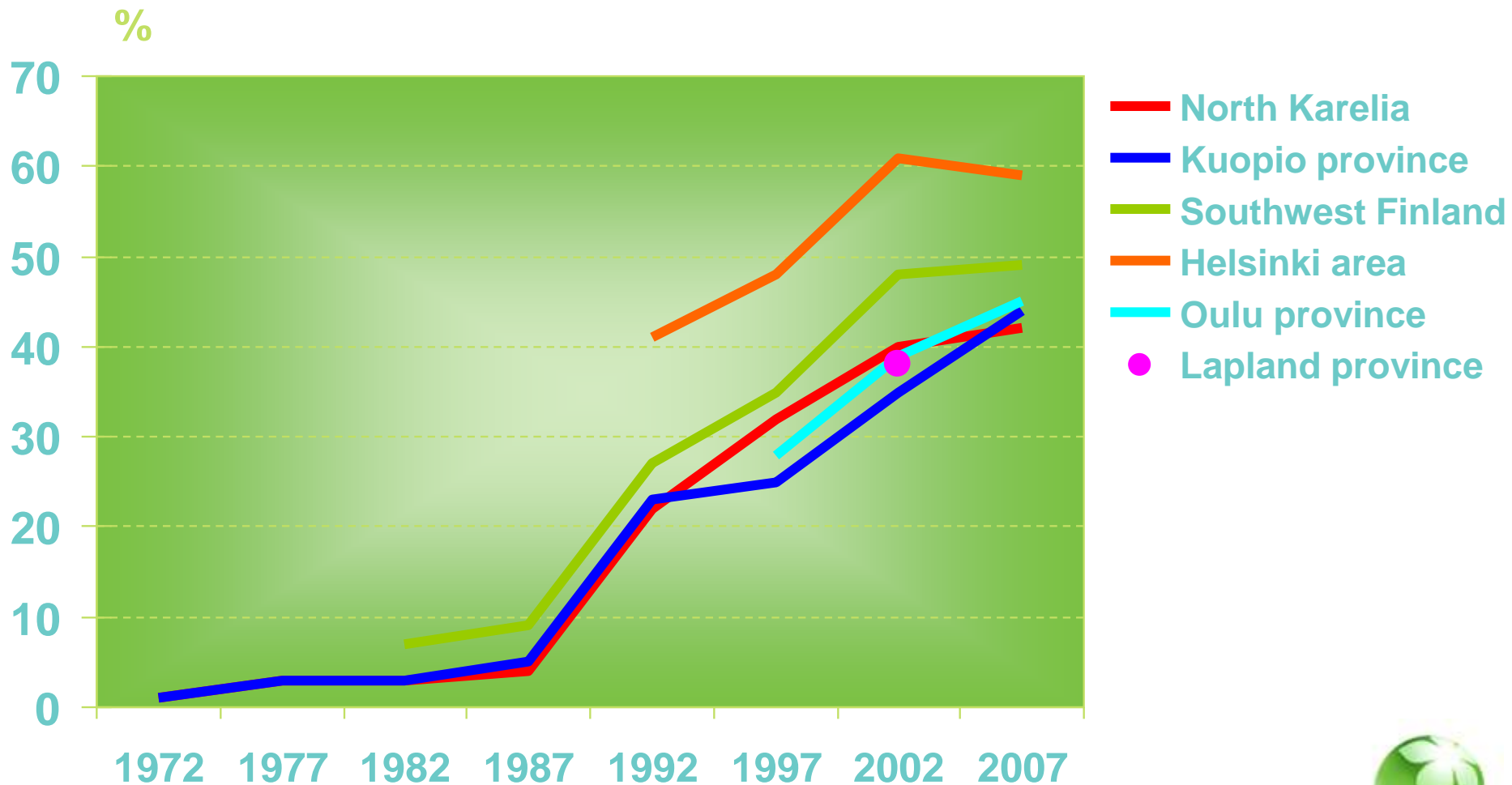
Milk Consumption in Finland in 1970 and 2006 (kg per capita)



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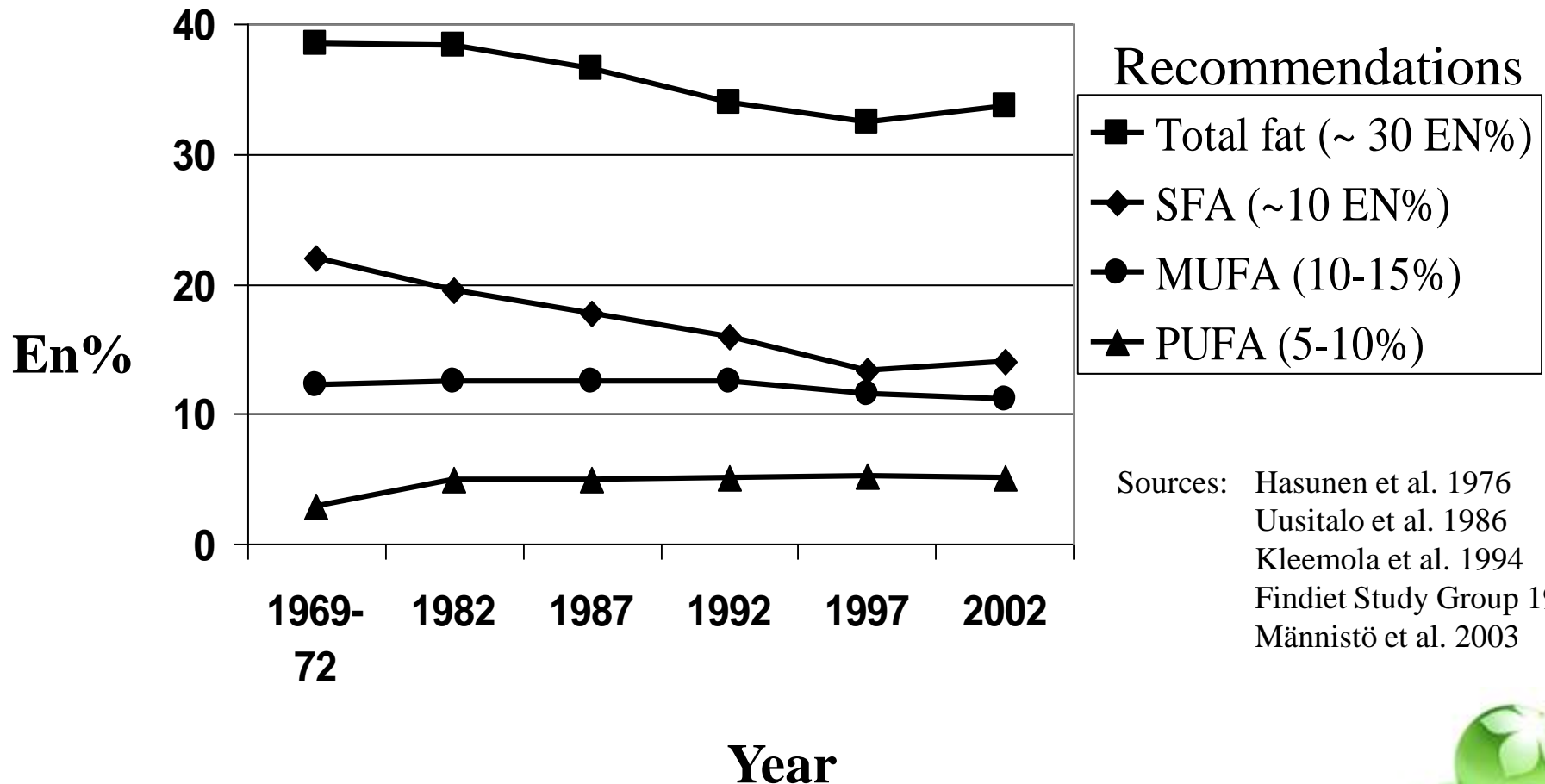
Use of Vegetable Oil for Cooking (men age 30–59)



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Fat Intake as Percentage of Energy in Finland

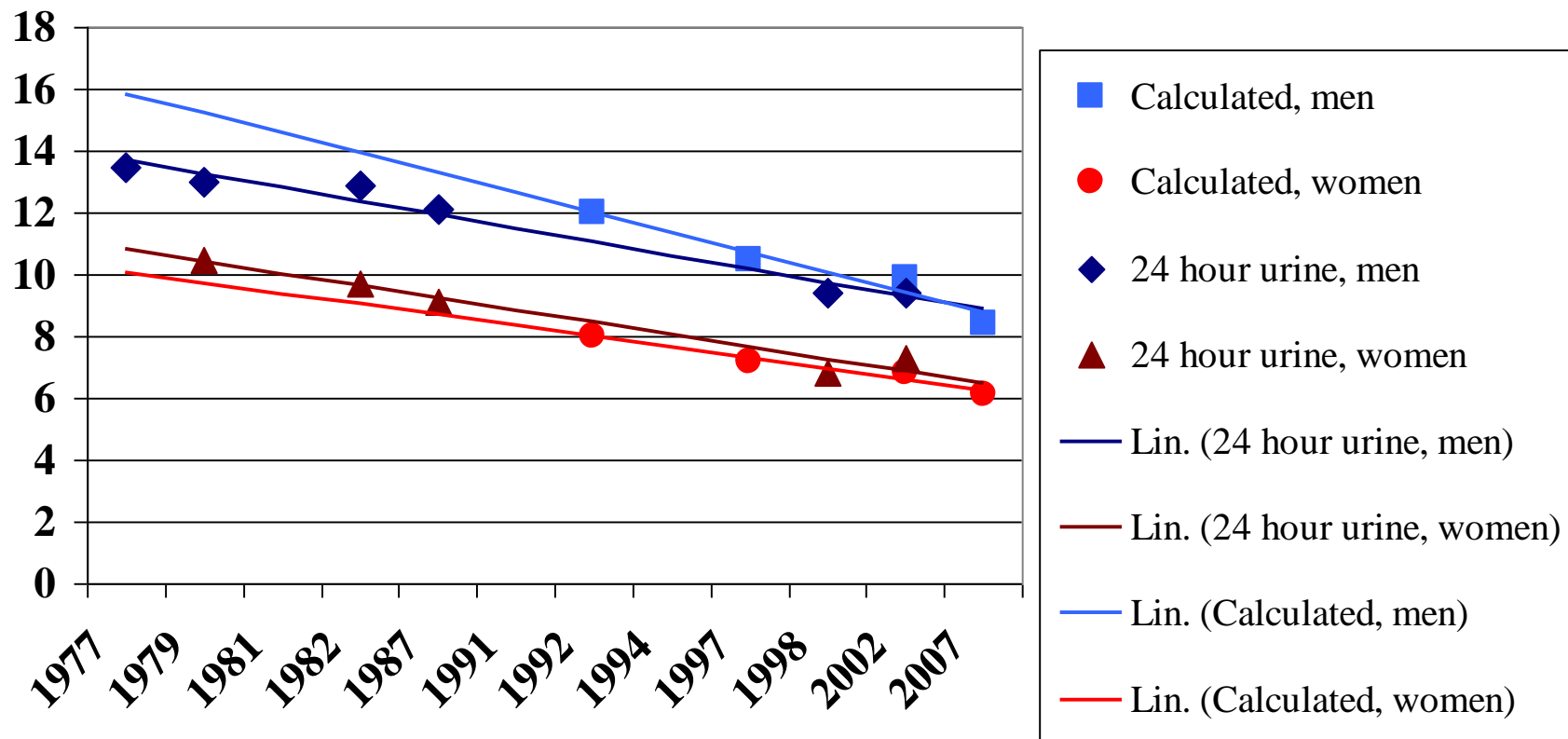


Sources: Hasunen et al. 1976
Uusitalo et al. 1986
Kleemola et al. 1994
Findiet Study Group 1998
Männistö et al. 2003

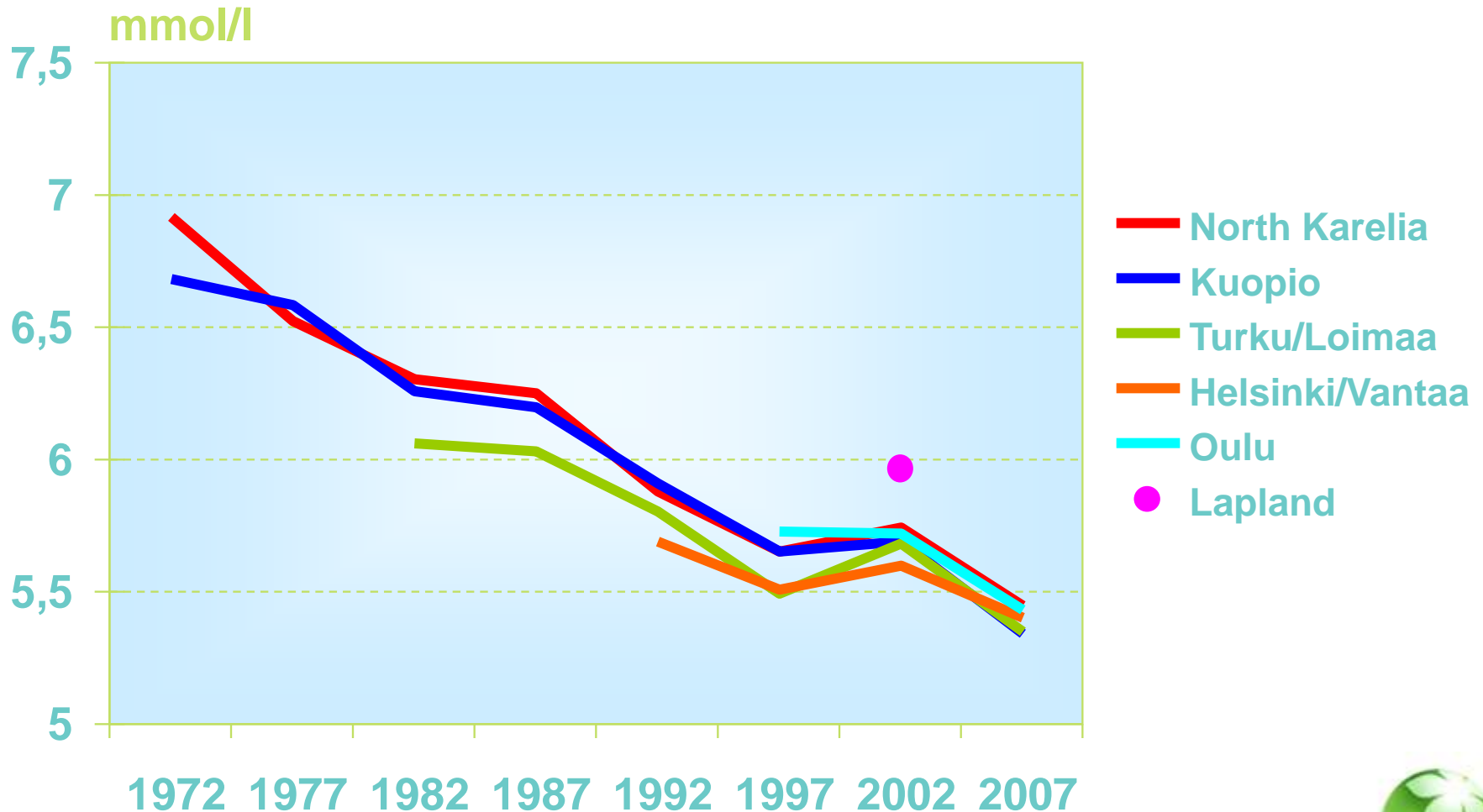


Salt intake in Finland 1977-2007

FinnDiet Study



Serum Cholesterol in Men Aged 30–59 Years



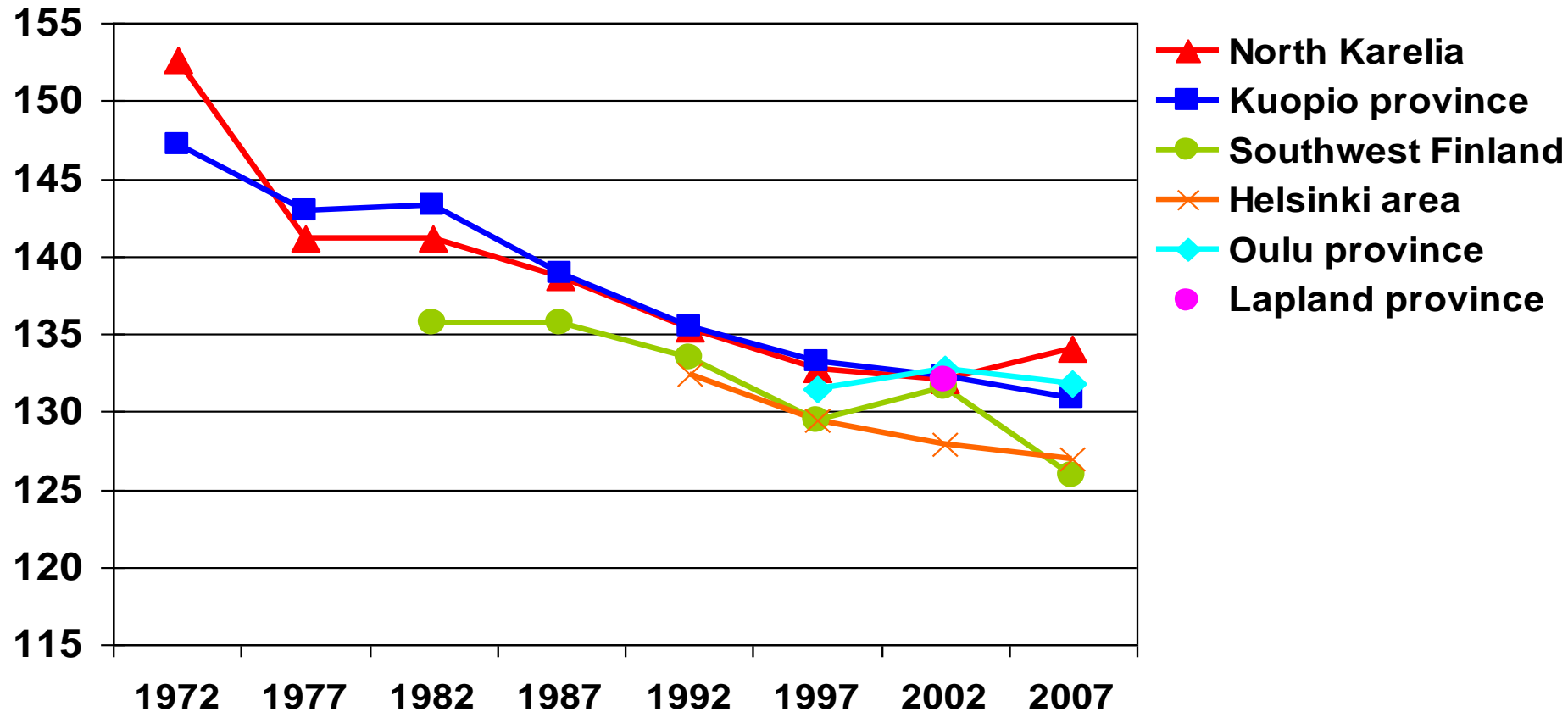
FINRISK Studies 1997 & 2002

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Systolic blood pressure in women (30–59 y)

mmHg

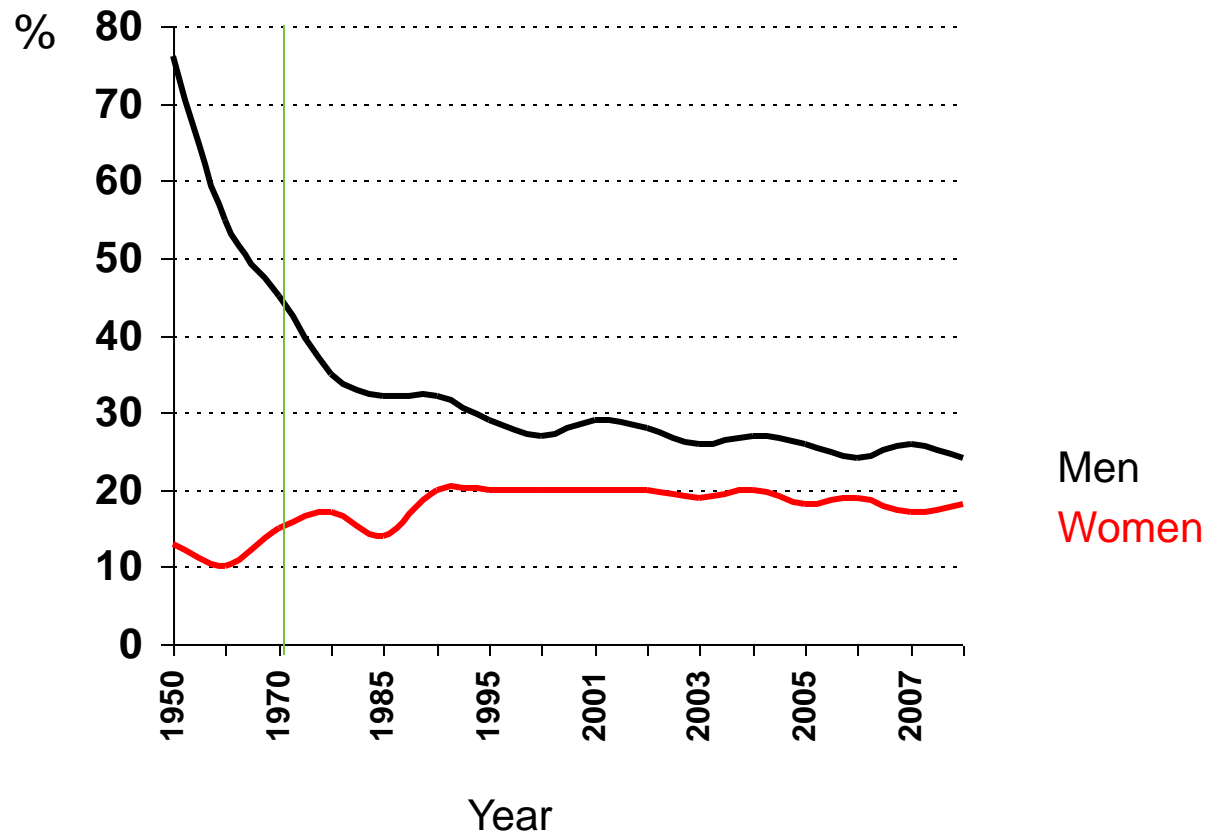


North Karelia project evaluation and FINMONICA and the National FINRISK Studies 1972 - 2007

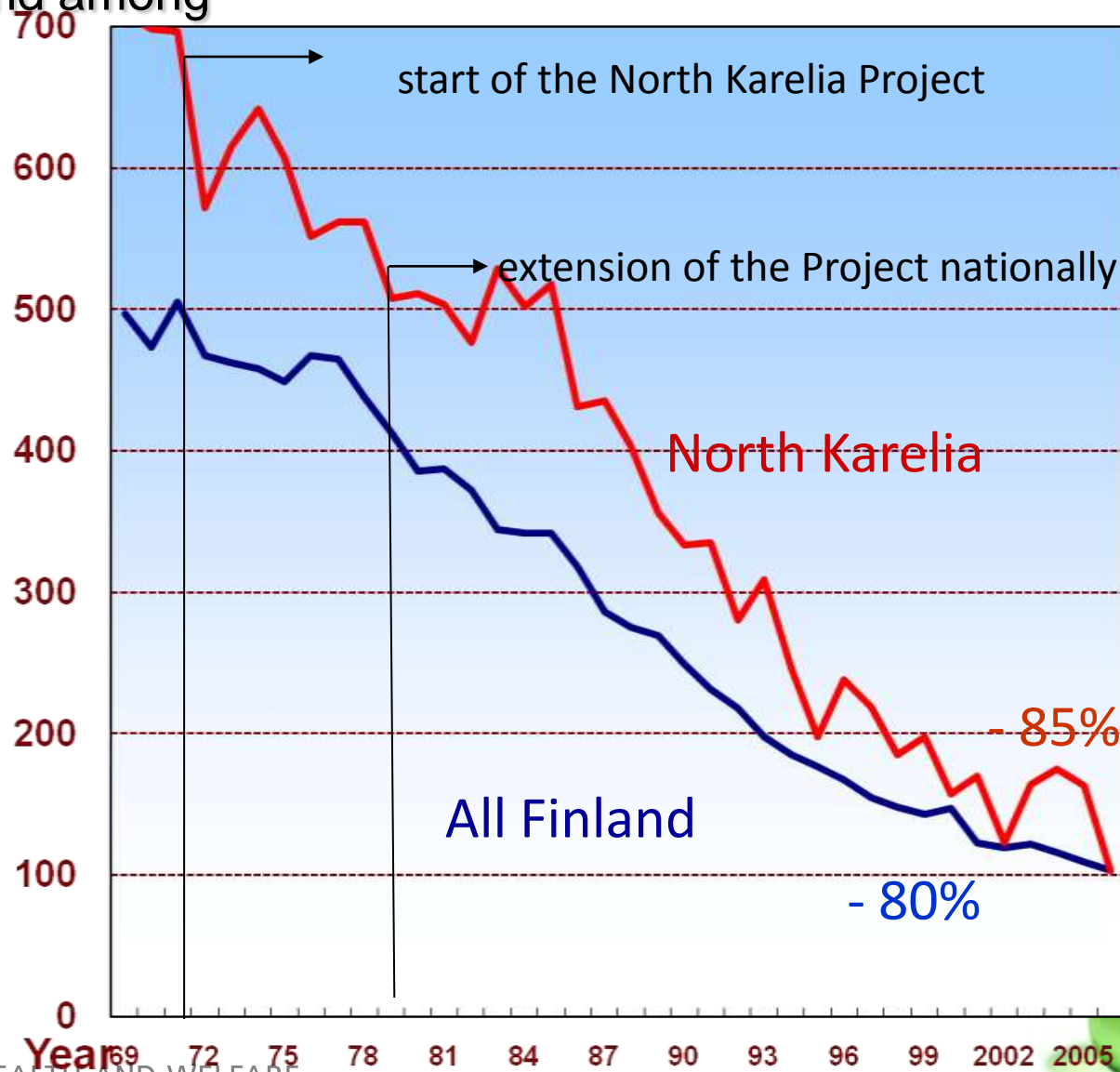
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Daily smoking in Finland 1950-2008



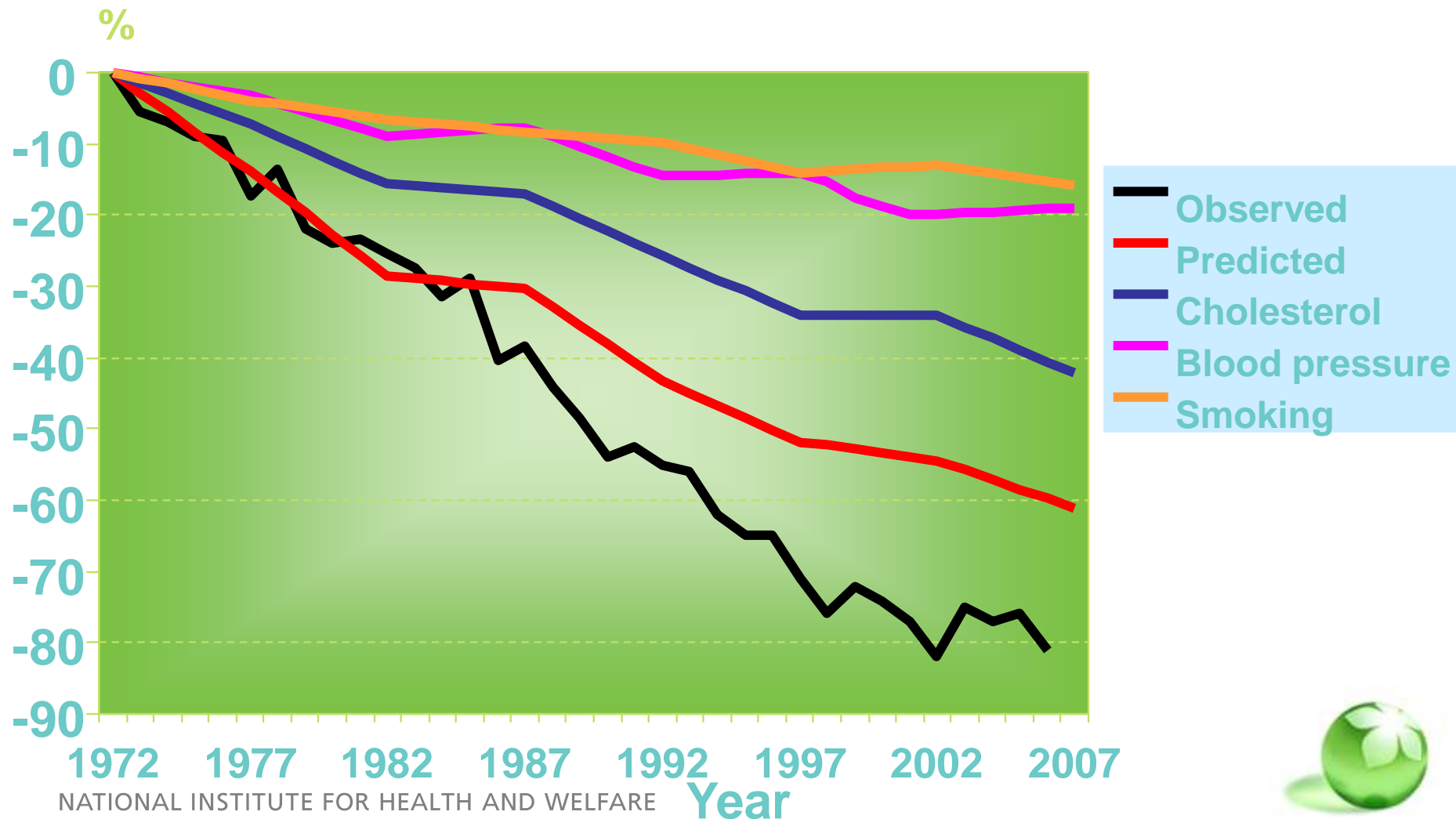
Age-adjusted mortality rates of coronary heart disease in North Karelia and the whole of Finland among males aged 35–64 years from 1969 to 2006.



Mortality per 100 000 population

Age-standardized to European population

Observed and Predicted Declines in Coronary Mortality in Eastern Finland, Men



Mortality Changes in Finland from 1969–71 to 2006 (Men 35–64 Years, Age Adjusted)

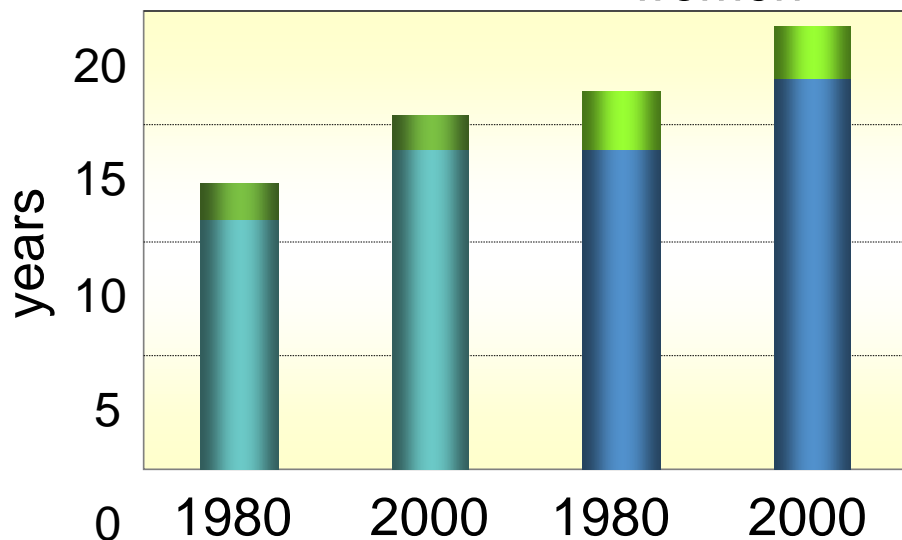
	Rate (per 100.000)		Change from 1969–71 to 2006
	1969–71	2006	
All causes	1328	583	- 56%
All cardiovascular	680	172	- 75%
Coronary heart disease	489	103	- 79%
All cancers	262	124	- 53%



Healthy and sick years of life expectancy of 65 year old Finns in 1980 and in 2000

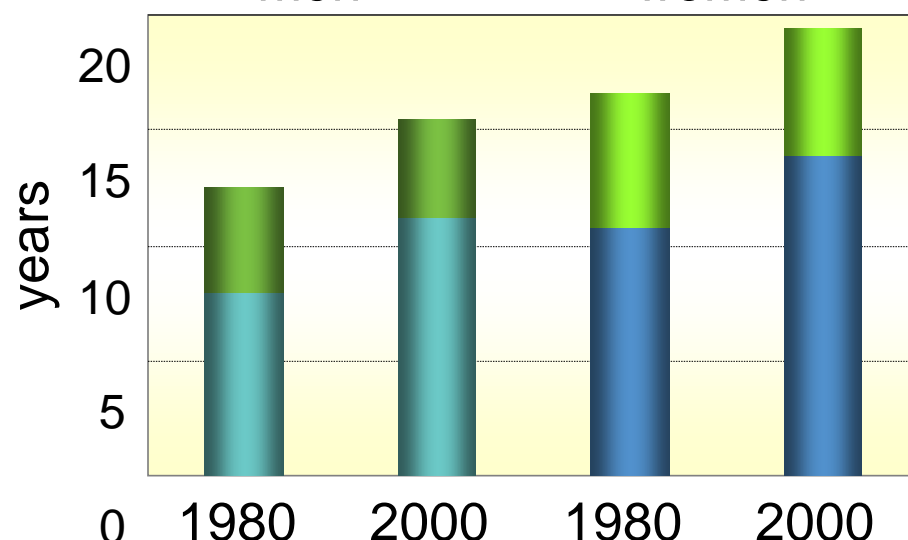
Managing basic functions

men women



Subjective health

men women



 Sick/disability

 Healthy/no disability

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From Karelia to National Action

Major Elements of Finnish National Action 1.

- **Research & international research collaboration**
- **Health services (especially primary health care)**
- **North Karelia Project, other demonstration programmes**
- **Health Promotion Programmes (coalitions, NGO's, collaboration with media etc.)**
- **Schools, educational institutions**



From Karelia to National Action

Major Elements of Finnish National Action 2.

- **Industry, business – collaboration**
- **Policy decisions, intersectoral collaboration, legislation**
- **Monitoring system: health behaviours, risk factors, nutrition, diseases, mortality**
- **International collaboration**



Examples of intersectoral action

- Tobacco legislation & policy
- Nutrition development
- Interaction with the private sector
- NGO's



Development of Finnish Rapeseed Oil



Fruits and Vegetables – Supermarkets



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Biscuit Example

- **Leading Finnish biscuit manufacturer (LU Finland Ltd) has removed some 80.000 kg of SAFA by changing the fats used**
- **All trans fats removed**
- **Major change to rapesead oil**



HK Example:

(One of the two main meat/sausage companies in Finland)

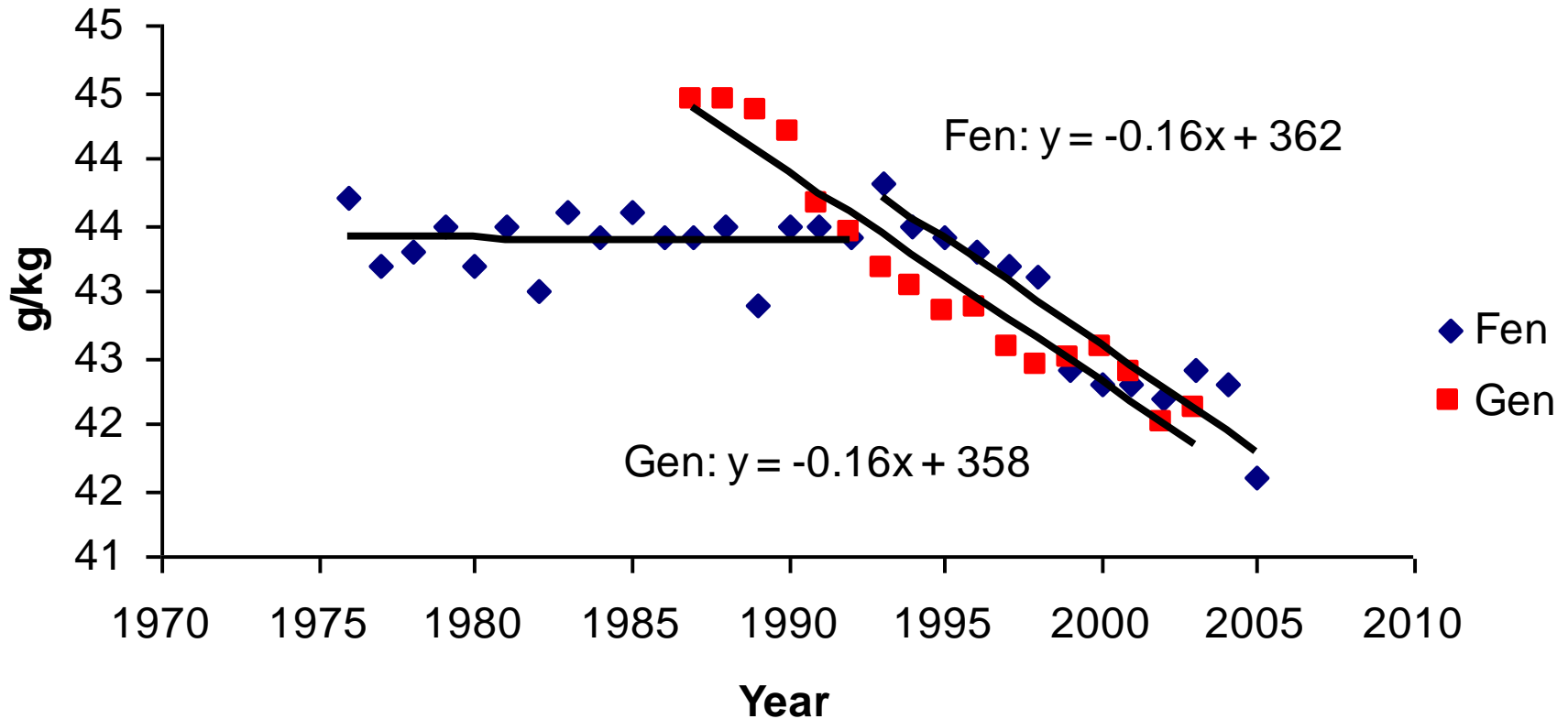
- Since 2007 annually:
 - 40.000 kg less salt
 - 10.000 kg less saturated fatin their products
- 87 of their products comply with the Heart Symbol criteria in their category





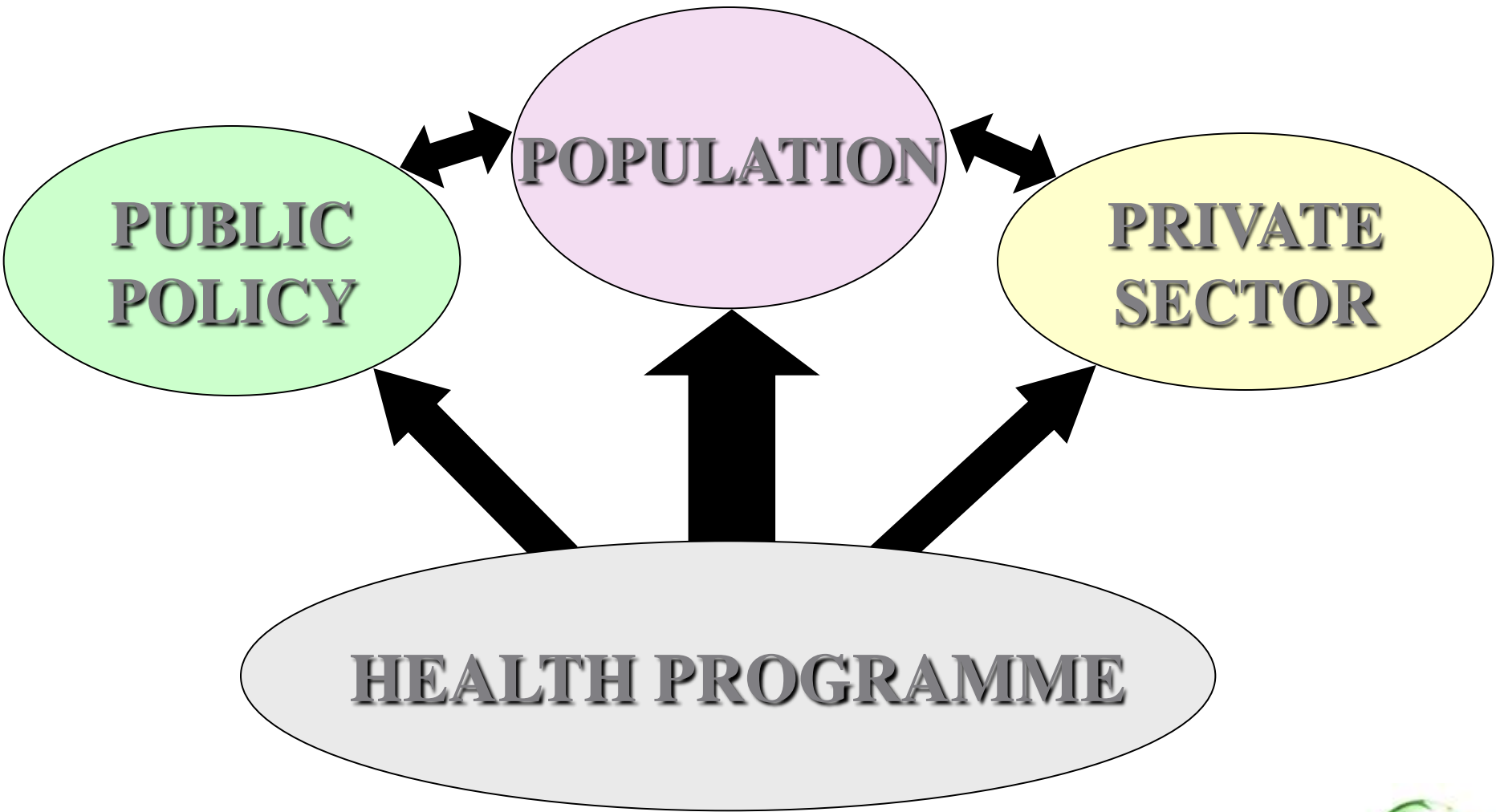
Anna elämän maistua

Change in fat content of Finnish cow milk



The Finnish Heart Symbol





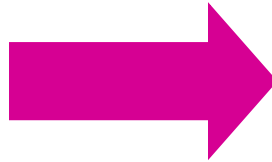
Social change

Broad change process
among the population in
interaction with respective
policy decisions



FROM PRIORITIES TO IMPLEMENTATION

**IDENTIFYING
PRIORITIES**



**IMPLEMENTING
THEM**



Finland Has Shown



- **Prevention of cardiovascular diseases is possible and pays off**
- **Population based prevention is the most cost effective and sustainable public health approach to CVD control**
- **Prevention calls for simple changes in some lifestyles (individual, family, community, national and global level action)**
- **Influencing diet and especially quality of fat is a key issue**
- **Many results of prevention occur surprisingly quickly (CVD, diabetes) and also at relatively late age**
- **Comprehensive action, broad collaboration with dedicated leadership and strong government policy support**



The North Karelia/Finland experience

- Supports and has interacted much with the WHO NCD strategy:
 - Integrated prevention
 - Diet & physical activity strategy
 - FCTL
- Looks forward to global upgrading of NCD prevention
 - UN NCD Summit in September 2011 in New York



For successful prevention

➤ **Strong leadership combined with**

➤ **Good partnership**

* * *

➤ **Do the right things**

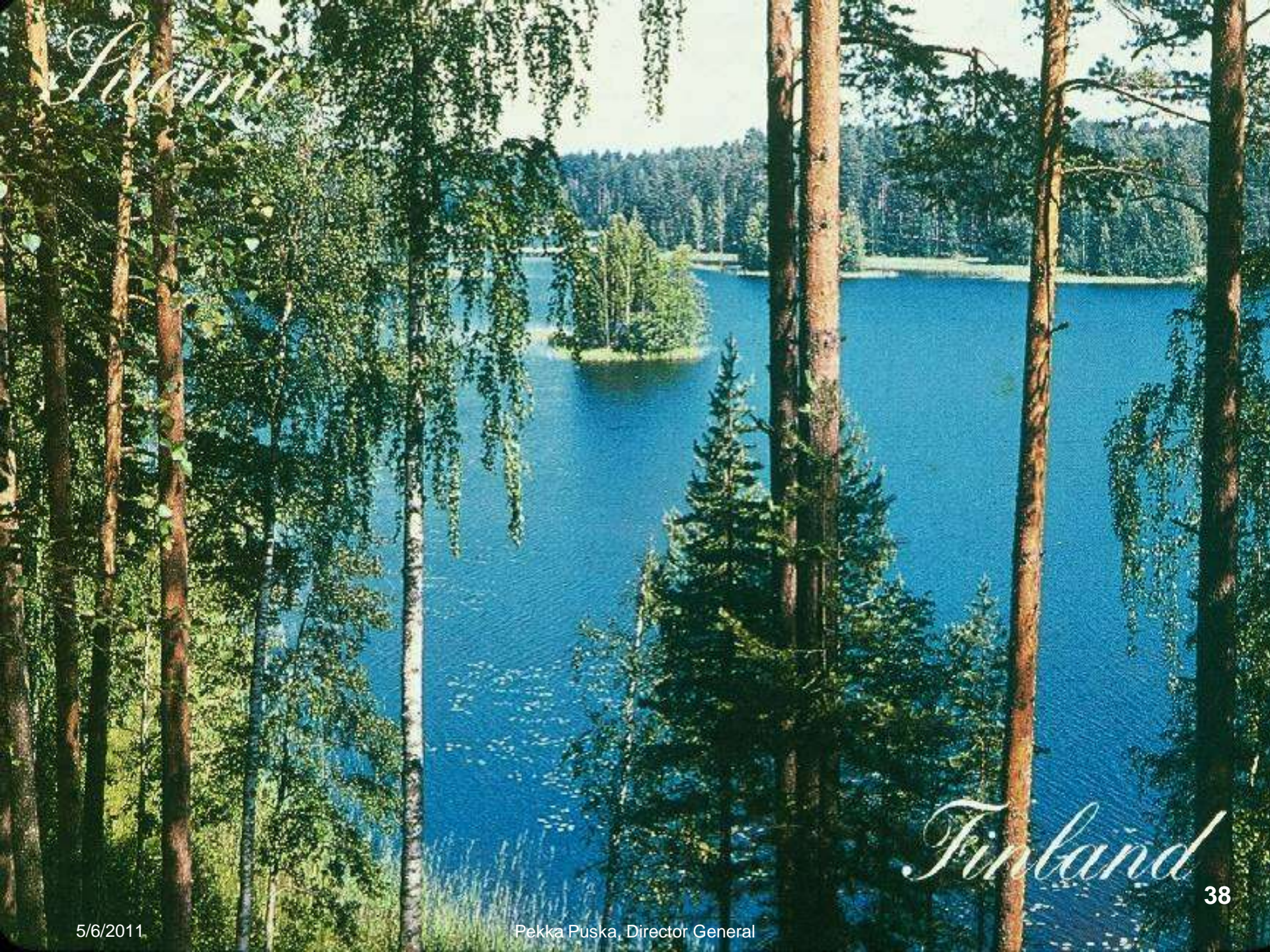
➤ **Do enough of those**



Thanks



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Suomi

Finland