



CoreOrganic

# Promoting sustainable consumption and healthy eating:

*A comparative study among public schools in Denmark, Germany, Finland & Italy*

Chen He & Bent Egberg Mikkelsen  
Food, People & Design  
Aalborg University Copenhagen, Denmark

**Linking Health, Equity & Sustainability in Schools**  
CICG, Geneva, July 10-11, 2010



# Abstract

- Since the Ottawa charter on the importance of health promotion in settings the school has been named as one of the most important arenas for interventions to promote physical activity and healthy eating. Especially the school food service has been the object of a change agenda that has been named the European school food revolution. This revolution is characterized not only attempts to promote healthy eating but also by attempts to make food supply and consumption more sustainable by integrating organic procurement policies. The current study aims at investigating how these two agendas work together. Do they compete or do they go hand in hand as previous studies suggest? And if this is the case does organic food schemes at school and related curricular activities then induce healthier eating behaviours among children? The research that is part of the iPOP study was conducted among school food coordinators in public primary/secondary schools (children age from 6 to 15 years old) in Denmark, Germany, Finland and Italy. The study was initiated in Denmark, and subsequently performed in the other three countries through a web-based questionnaire. The questionnaire was translated and adapted to fit the different languages and food cultures. The questionnaire researched the attitude, policies and serving practices regarding promoting organic foods and healthy eating habits through school food service and classroom activities. The data suggest that schools with organic supply tend to develop organisational environments that are more supportive for healthy eating than their non organic counterparts. However the results were only significant for Denmark and Italy, In Germany results were significant in some cases where as for Finland there were no differences or results were contradictory. The findings suggest the school food revolution is driven by different agendas but that awareness raising on nutrition and sustainability issues seems to be an important feature of many change processes. Findings also suggest that the two agendas although separated in the scientific literature is much more integrated in the everyday life perspective of school practitioners

# Organic consumption and health behaviour

## Previous studies

- Health reasons are the one most important reason for consumers to buy organic. Torjusen et al (2004)
- Health reasons are more important than concerns for environment and nature. Beckmann (2002)
- Introduction of organic foods seems to induce a changed dietary pattern. O'Doherty et al (2001)
- Consumption of vegetables and cereals was higher among heavy-users (Brombacher & Hamm 1990)
- Green caterers serve more healthy meals than their non green counterparts. (Mikkelsen et al, 2007)

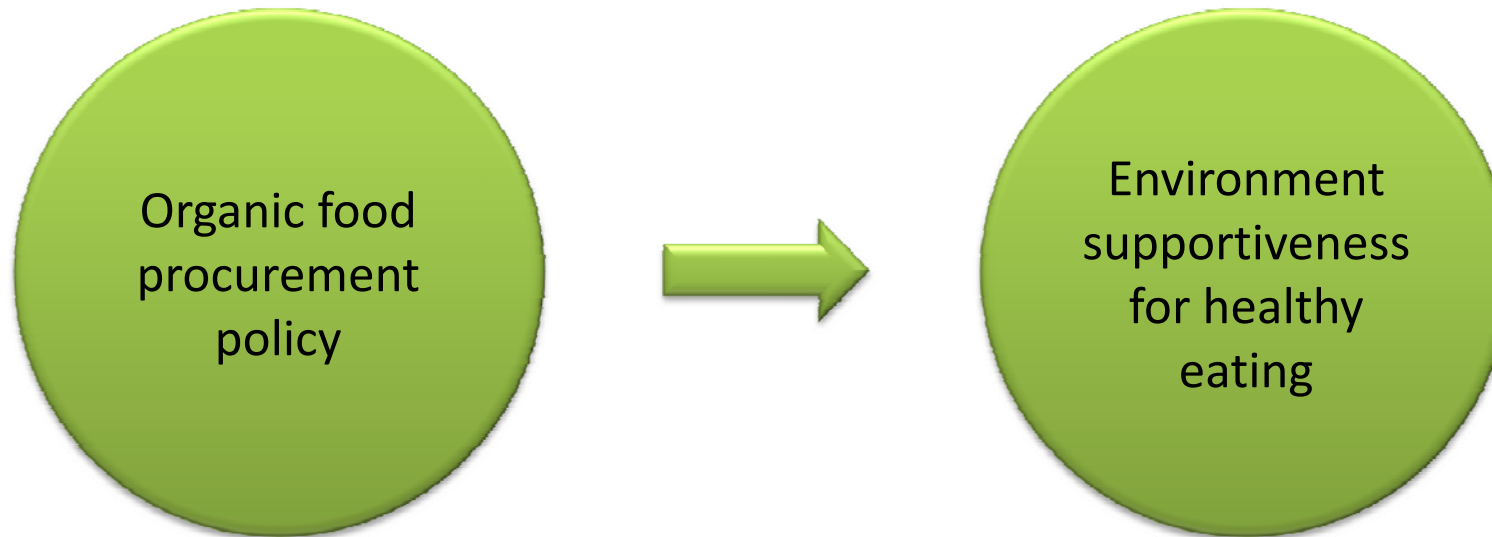
Torjusen H, Sangstad L, O'Doherty Jensen K & Kjærnes U. European consumers' conceptions of organic food: A review of available research. Professional Report no. 4, Oslo: National Institute for Consumer Research, 2004. URL [http://news.xinhuanet.com/english/2008-05/28/content\\_8265891.htm](http://news.xinhuanet.com/english/2008-05/28/content_8265891.htm) (visited 2008, July 2).

Beckmann, S. ØKO foods revisited - Danish consumers demand for organic food at the turn of the century. In: Farhangmehr, M. eds: Proceedings of the 31st EMAC Conference Braga: University of Minho, 2002.

Mikkelsen, BE, Bruselius-Jensen, M, Andersen, JS & Lassen, A Are green caterers more likely to serve healthy meals than non-green caterers? Results from a quantitative study in Danish worksite catering. *Public Health Nutrition*, 2007, Vol – 9, no- 07, p 846 – 850

Brombacher, J. & Hamm, U (1990): So kaufen Bio-Haushalte ein. In "Schule und Beratung", Jg. 1990, Nr. 9/10, S. V11-V15.

# Aim/Objective



# Hypothesis

Attitude (school)

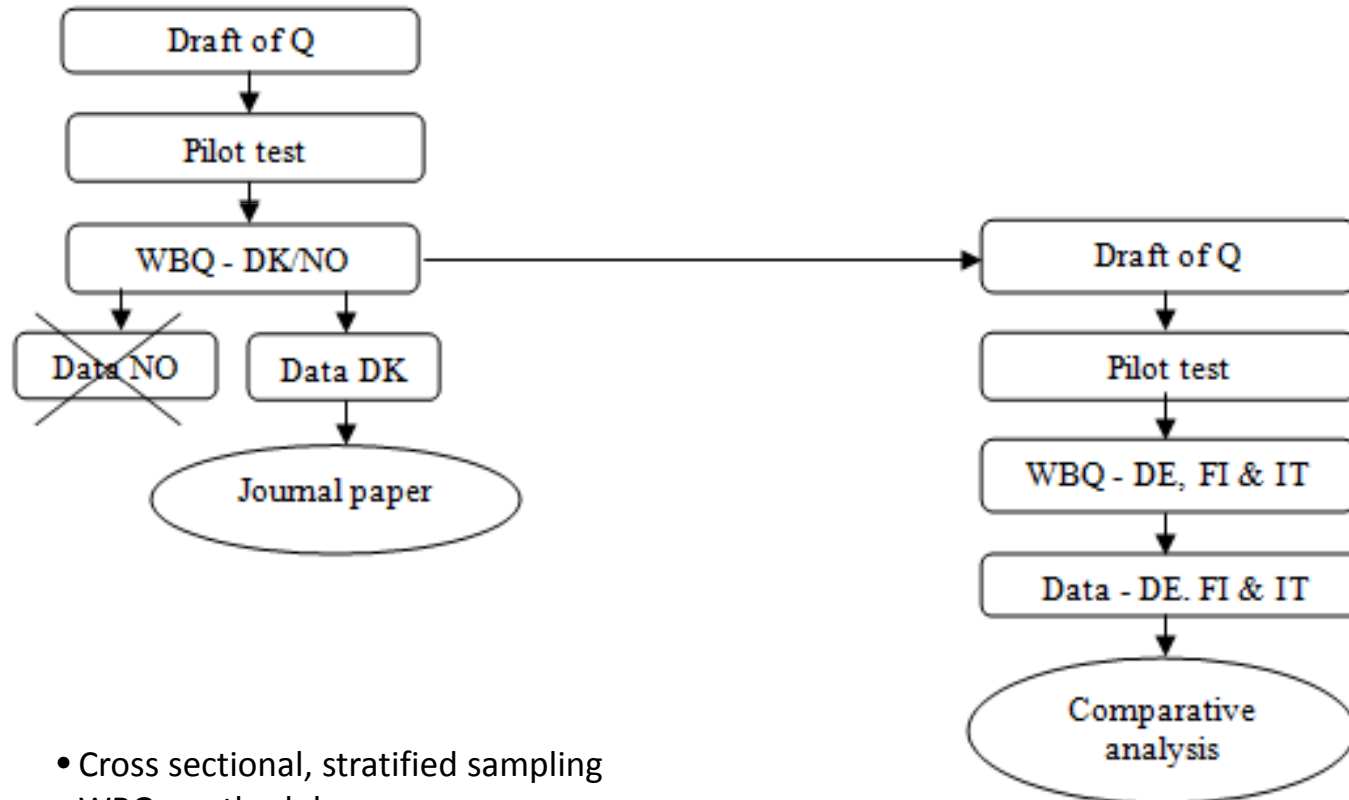
```
graph TD; A[Attitude (school)] --> B[Environment/policy/praxis (school)]; B --> C[Behaviour (students)];
```

The diagram consists of three horizontal bars stacked vertically. Each bar has a dark blue top half and a light blue bottom half. The text is centered in the dark blue portion. A downward-pointing arrow connects the bottom of the first bar to the top of the second bar, and another arrow connects the bottom of the second bar to the top of the third bar.

Environment/policy/praxis (school)

Behaviour (students)

# Study design



- Cross sectional, stratified sampling
- WBQ methodology
- Respondents: school food coordinators (SFC)
- Selfreporting of praxis, attitude & intention

# Sampling schools

Status of distribution and response of WBQ

	Denmark		Germany		Finland		Italy	
	Respondents	Percent	Respondents	Percent	Respondents	Percent	Respondents	Percent
Complete	79	44,1%	57	37,5%	205	20,5%	176	18,7%
Partially complete	13	7,3%	65	42,8%	45	4,5%	39	4,2%
No responding	87	48,6%	30	19,7%	748	74,9%	725	77,1%
Distributed	179	100,0%	152	100,0%	998	100,0%	940	100,0%

□

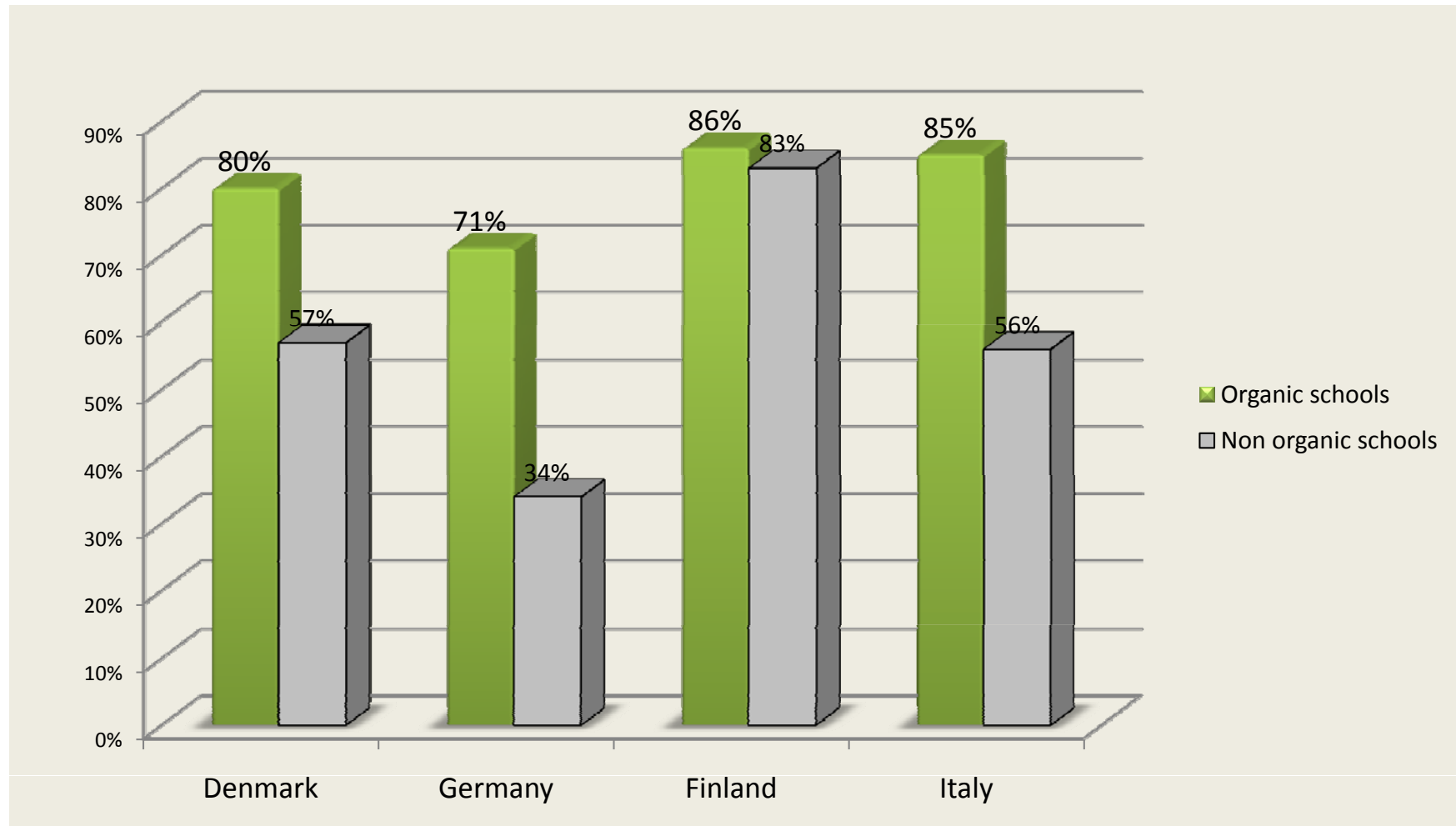
# The indicators

## Organizational environment

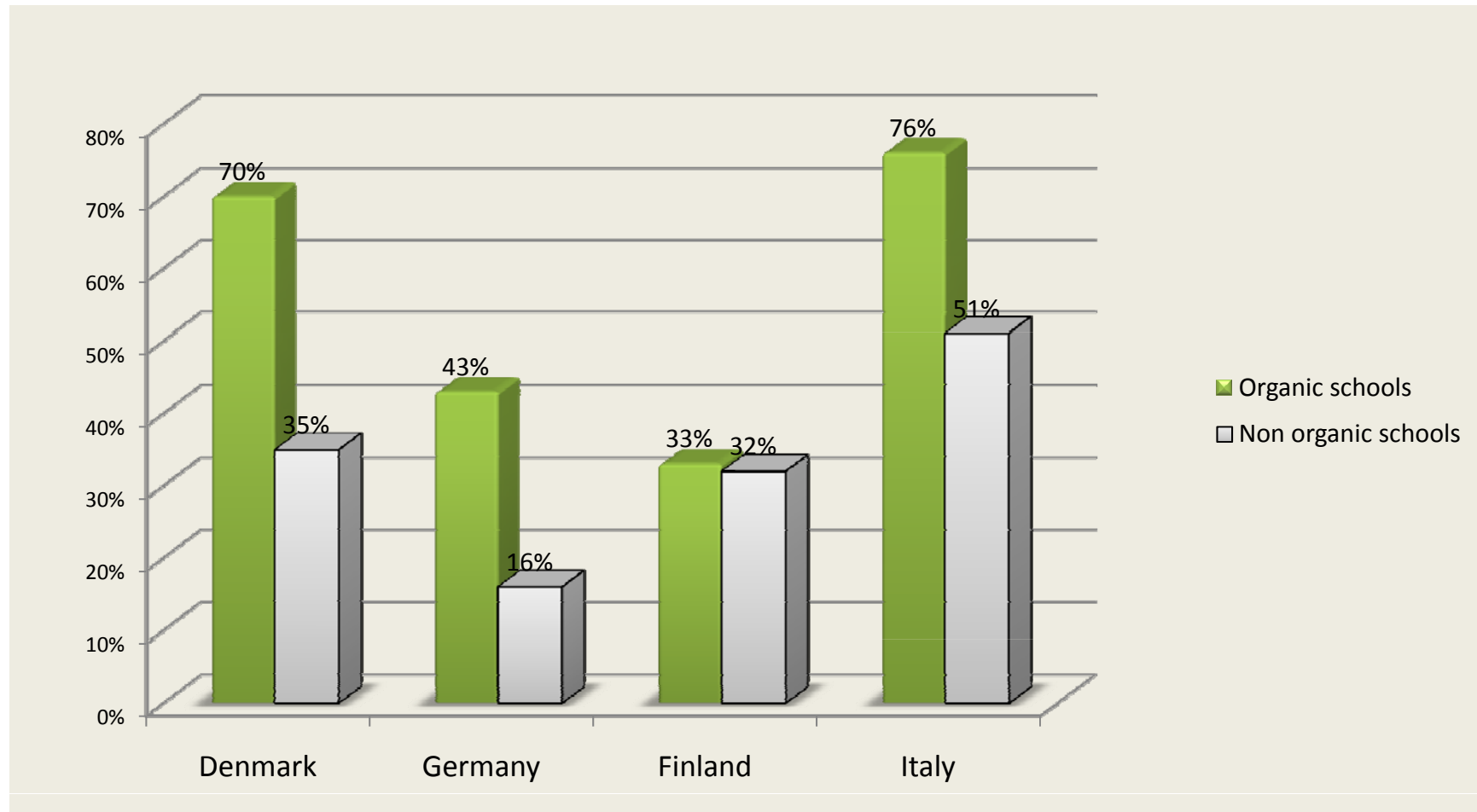
- *Having a Food and Nutrition Policy (FNP)*
- *Integrating nutrition in class activities*
- *Providing school canteen*
- *Enforcing nutritional recommendations*
- *Meeting nutritional guidelines*
  - Availability of FV
  - Availability of water
  - Non availability of fizzy drinks
  - Non availability of cocoa milk



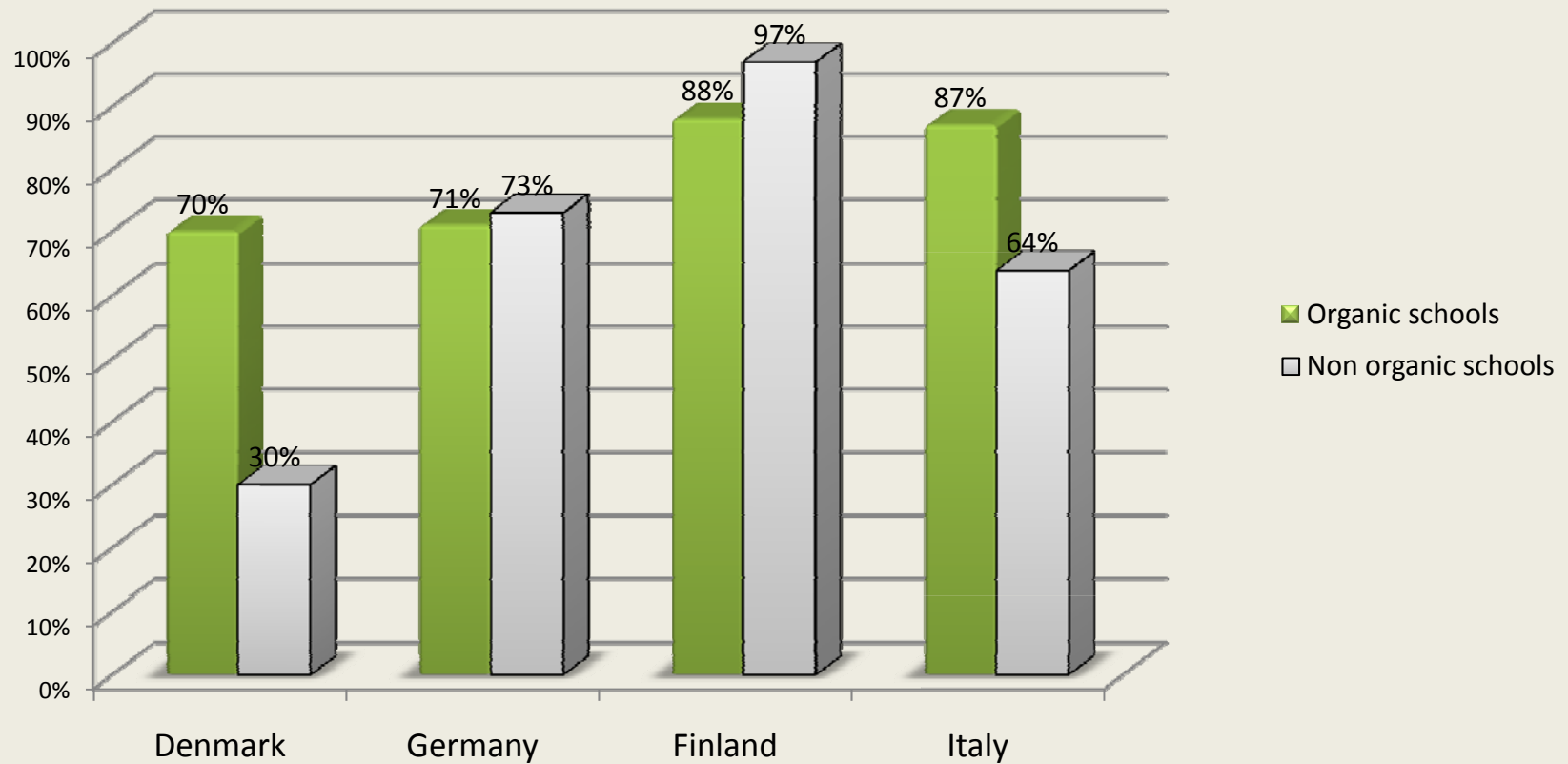
# Having a food and nutrition policy



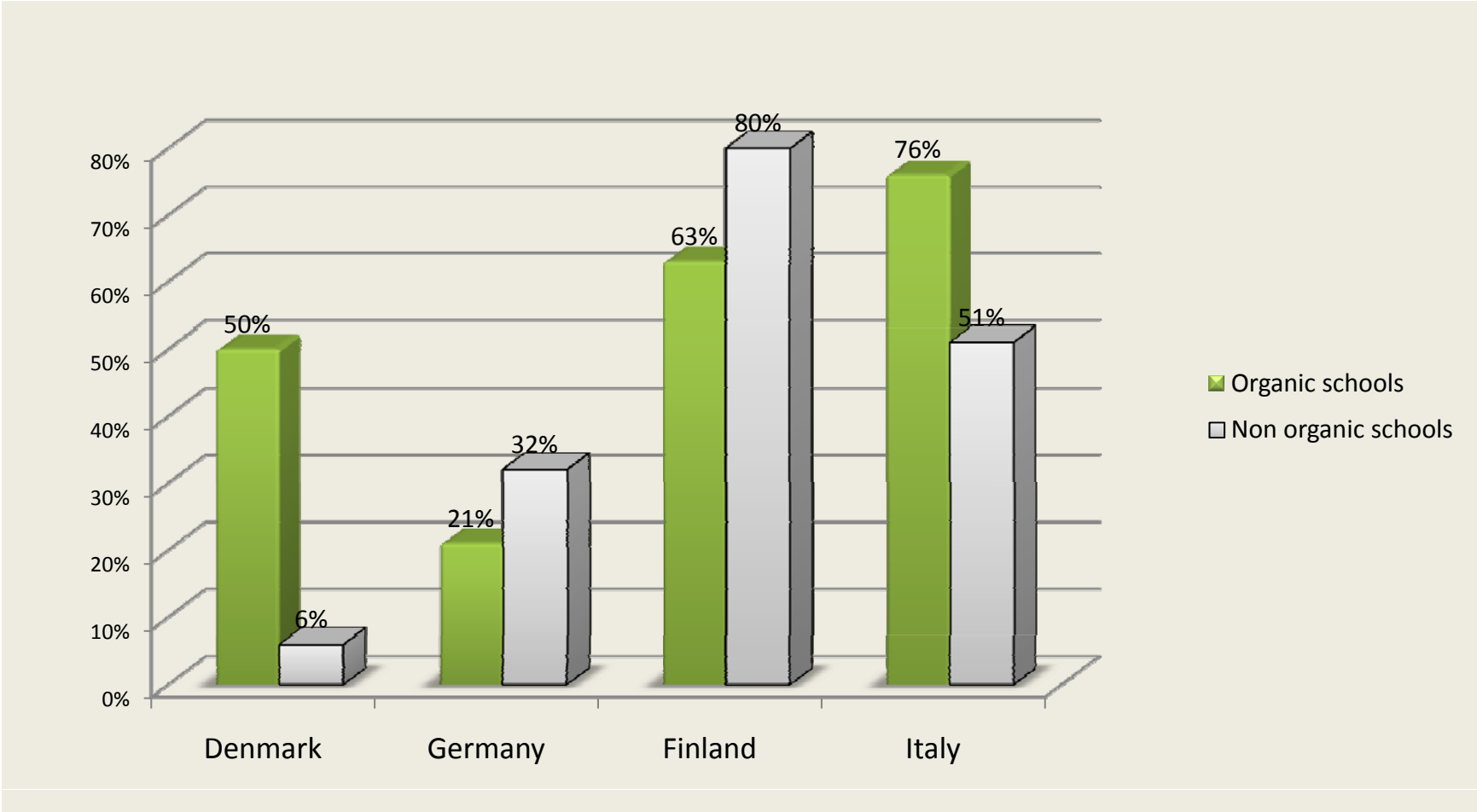
# Integrating nutrition in curricula



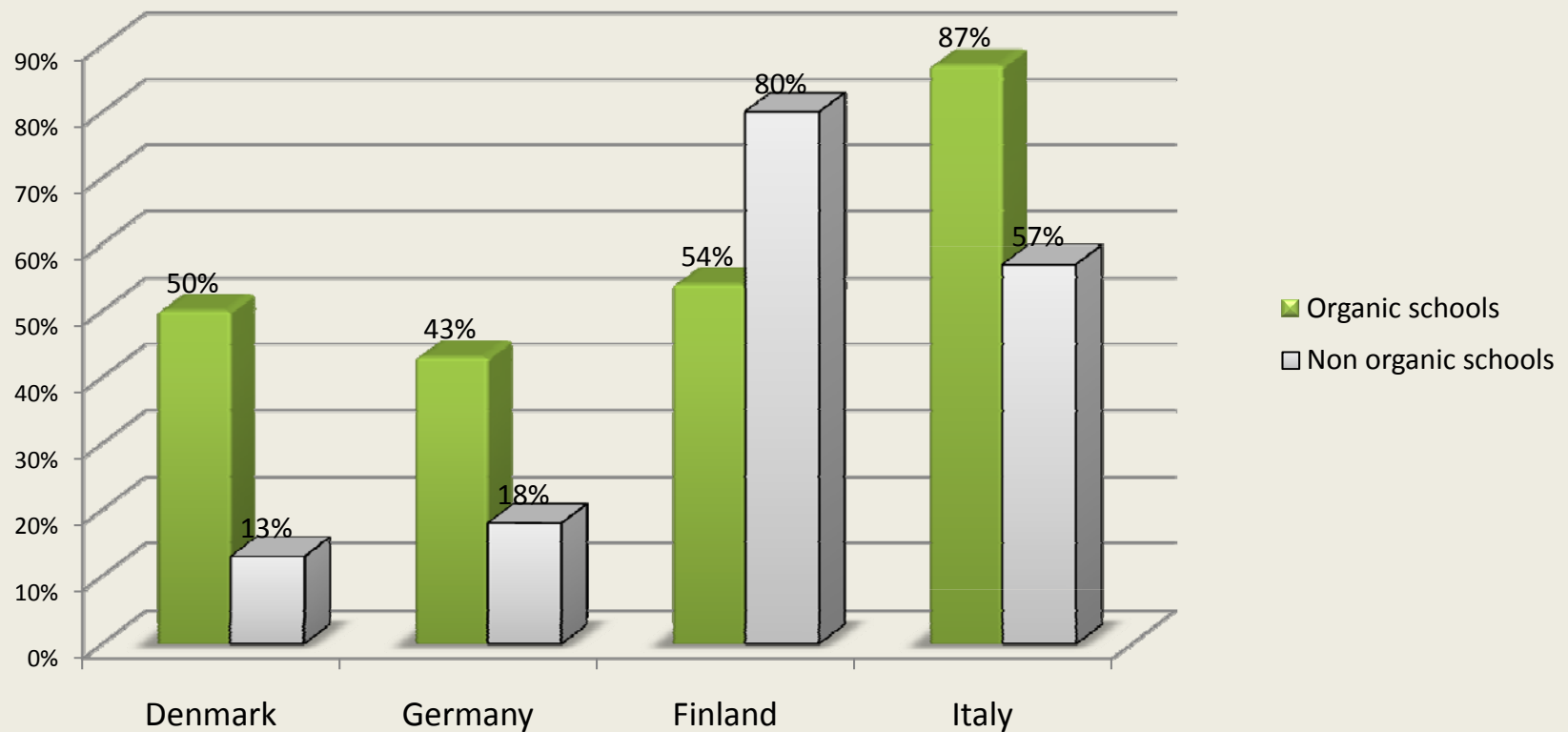
# Providing school canteen



# Enforcing nutritional recommendations







# Performing nutrition calculation



# Results

Do organic schools provide better environment for healthy eating?

-   In all cases
-  In some cases
-  No differences or contradictory

## ➤ *Limitations:*

- *size of sample is small*
- *drop out rate considerable and needs to be analysed*
- **Further research**
- *Is differences manifest at foodservice availability level*
- *Can differences be found at student intake level*

# Discussion

- There is ample evidence that consumers in most cases make a **link between organic food and individual health**
- Some evidence on the fact that **organic supply associates with a healthier environment**



- Include a position on organic food in your **food and nutrition policy**
- Integrate organic **supply with curricula activity** - apply the whole school approach
- Integrate **education for sustainability** with **education for healthy eating**
- Theoretically based teaching should go hand in hand with **hands on learning**



**Read more:**

<http://ipopy.coreportal.org/>

**Co-workers**

**Chen He**

Ann-Kristin Løes

Melanie Lukas

Carola Strassner

Roberto Spigarolo

Minna Mikkola