

material efficiency schools energy saving  
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## Evaluation of European Energy Behavioural Change Programmes

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Working Group on Energy Related Behaviour Change***

heat pump environment municipal sector construction

# Introduction

- The BEHAVE Project: Evaluation of Energy Behavioural Change Programmes (Nov 2006 – Apr 2009)
- EU Intelligent Energy – Europe (IEE) Programme
- Project phases:
  1. Analysis of behavioural theories
  2. Meta-analysis of case studies
  3. Preparation of guidelines for energy-related behavioural change programmes
- Meta-analysis of 41 European case studies from 11 countries
- <http://www.energy-behave.net/>



# Evaluation viewpoints

- Meta-evaluation of a highly heterogeneous stock of case studies
  - Long-list of 100 cases → short-list of 41 cases covering a multitude of topics and target groups and using a variety of instruments
  - Seeking for the anatomy of a “successful programme”
- Analysis of the monitoring and evaluation carried out within the case studies

# Stock of cases

- General climate and energy efficiency campaigns
  - Energy efficiency of new and renovated buildings
  - Household energy use: heating, appliances, lighting etc.
  - School projects
  - Local energy agencies (energy advice)
  - Energy label programmes
  - Renewable energy
  - Others (eco-driving, alcohol traffic awareness)
- Austria 4 cases
  - Bulgaria 2
  - Finland 6
  - France 4
  - Germany 1
  - Greece 1
  - Netherlands 5
  - Norway
  - Spain 7
  - Sweden 5
  - UK 4

# Meta-evaluation methods

- Quantitative analysis:
  - Target groups, topics, instruments used, budget, duration, desired behavioural change
- Qualitative analysis:

## Five steps of the project cycle:

1. Contextual analysis
2. Planning
3. Implementation
4. Monitoring
5. Evaluation

## Three major viewpoints:

- Behavioural theories
- Social marketing
- Project manager insights

# Types of behaviour and behavioural factors targeted

- Types of behaviour addressed
  - Investment behaviour
  - Habitual behaviour
  - Energy behaviour in general

	<b>Aimed at change of behavioural factors</b>		
	<b>Motivational factors</b>	<b>Facilitating factors</b>	<b>Reinforcing factors</b>
Number of case studies	37	17	16
Percentage	90%	41%	39%

# Steps 1-3

- Step 1: Contextual analysis
  - E.g. energy efficiency barriers, regulatory framework, energy use by consumers/target groups, institutional setting, market structures, climate, natural resources, demography and social context, cultural factors
  - Not often reported explicitly but considerable effort was visible from the case studies
- Step 2: Planning
  - The most important step
  - Most campaigns operated with formal strategic/marketing plans (+)
- Step 3: Implementation
  - The simplest phase: acting upon the plan

## Step 4: Monitoring

- Provides:
  - feedback to programme management to allow effective control and
  - performance data for the ex-post evaluation of the programmes
- Performance indicators with target levels
- Monitoring examples in the case studies
  - Materials distributed
  - Activity participants
  - Media monitoring results
  - Web site visitors
  - Market transformation
  - Subsidy applications, subsidies granted, measures taken
  - Contacts with energy advisors
  - Feedback from the target groups

## Step 5: Evaluation

- Process evaluations made in 40% of the cases
- Either qualitative or quantitative impact evaluation in 70%
  - ➔ average evaluation frequency is probably much lower
- Third-party evaluations were rare; most were self-evaluations
- Not many cost-benefit evaluations
- Not much analysis on non-participation
- Both bottom-up and top-down approaches

# Evaluation techniques used

- Surveys: telephone, mail internet, personal interviews, opinion polls, consumer panels (only after the campaign)
- Comparing the “before” and “after” survey results among participants
- Comparing the “after” survey results with a non-participating control group
- Tests (students, course participants)
- Observing changes in the markets
- Top-down survey investigating multiple campaigns with attribution

## Success factors reported by programme managers

- Careful preparation and preparatory phase
- Clear objectives
- Co-operation
- Resources
- Usability
- Simplicity: keep it simple
- Involvement, training and education of partners
- Attractiveness and positive atmosphere
- Stimulation and encouragement
- Rewards
- Backup
- Feedback
- Uniform and informative marketing campaign
- Motivation
- Proponents of change: friends, family, and the local community
  - a campaign challenging the friends (family)
- Locality and familiarity
- Infotainment and fun
  - learning by having fun
- The visible support from society's part
- Good visibility among the target group
- Repetition

# Setbacks reported by programme managers

- Deficiencies in planning:
  - too little time allocated for planning
  - unclear programme objectives
  - lack of knowledge on behavioural theories and their application
  - lack of consumer segmentation and needs analysis
  - no testing, risk analysis or advance planning of monitoring and evaluation
- No consulting of interest groups; lack of correct partners; excessive number of partners with conflicting interests and causing coordination problems
- Negative feedback to participants reduces motivation
- Quality requirements of consumers could not always be met
- Inadequate reporting and dissemination of results
- Imbalance between tasks and resources
- Logistical problems
- Bad luck: bad weather during outdoor activities, coinciding "competing" activities

# Lessons learned

- Take time to prepare action (programme design, resourcing and implementation)
- Highlight the importance of specific behavioural goals and target market(s)
- Seek synergies through collaboration between departments
- Seek synergies with private and civil sector activities
- Identify what has been done previously that has been effective, in comparable fields (not energy alone)
- Involve appropriate expertise across a range of disciplines

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