BEHAVE

Evaluation of Energy Behavioural Change Programmes

Intelligent Energy – Europe (IEE)
EIE/06/086/S12.443558

Work Package 3
Evaluation of Projects and Best Practices

Final Draft Report
13 December 2007

WP 3 Leader: Motiva Oy, Finland

Project coordinator: Antoinet Smits, SenterNovem, the Netherlands

SUMMARY

At the start of the BEHAVE project at the end of 2006, the influence of human behaviour on climate change was still debated. Today there is general consensus on the urgent need for radical transitions. Policies and programmes aiming to have on effect on consumers' habitual and planned (investment) behaviour, will have to take the increased awareness and motivation for change into account.

In Work Package 2 of the Project, various behavioural theories were reviewed with a view to their applicability in the development and evaluation of energy-related behavioural change programmes. Theory demonstrates that behaviour is a complex phenomenon. It is a product of factors both *internal* (attitudes, values, habits and personal norms) and *external* to the individual (fiscal and regulatory incentives, institutional constraints and social practices). Instruments needed to address behavioural and planned (investment) behaviour are different. Combination of various instruments (communicative, economic, fiscal and structural) may have the most effective impact on addressing the internal and external factors.

The PRECEDE-PROCEED Planning Model (Green and Kreuter), was proposed to be used to put the theories into practice in the development of new programmes and in the case analysis carried out in the Project. The model consists of three phases. First, a behavioural and contextual analysis is made and programme goals are established in line with policy objectives. Second, the corresponding determinants influencing the target group behaviour are analysed. These are predisposing factors (motivating behaviour), enabling factors (facilitating behaviour) and reinforcing factors (providing feedback). Third, the instruments are chosen, that influence the relevant determinants most.

In Work Package 3, behavioural change programmes and projects implemented in Europe were analysed. First, information was collected on almost one hundred cases from 11 countries using a structured template. Next, some cases from this inventory were selected for analysis, based on multiple criteria such as geographic distribution, coverage of various topics, target groups and instruments as well as availability and quality of evaluation data. As a result, more detailed information was collected on 40 cases which were subject to meta-analysis.

The cases featured various topics and target groups. Climate change campaigns and energy efficiency campaigns addressed the general public or all households, covered numerous topics and used multiple instruments. Energy efficient building programmes targeted either the construction of new buildings or renovation of old ones in a large scale. Household energy use was also addressed by programmes with narrower scope (e.g. changes in the heating system and/or energy use by household appliances or lighting). School programmes, local energy agencies (advice centres), labelling and renewable energy programmes had more focused target groups or more limited number of instruments. In addition, non-energy programmes were included featuring three eco-driving programmes and one health/safety programme.

The cases contained both well-known successful approaches and innovative new ones using new concepts and communication channels. All reviewed cases were either rather or very successful because of the selection criteria used.

The cases were analysed in five phases: context (pre-planning), planning, implementation, monitoring and evaluation. Planning (including contextual analysis) and evaluation were recognised as two of the most critical phases.

Case design usually included certain amount of contextual analysis. Among the most frequently mentioned contextual elements were national and international policies, the institutional setting, market structures, demographic and socio-economic variables and patterns of energy use. However, the exact process and method of setting programme goals remains quite unclear from the case reports. The programme goals were usually clearly defined as such, albeit in a qualitative rather than quantitative way. In quite many cases, there was lack of market segmentation; the goals were not targeted and the programmes tried to offer "everything to everybody". Because most of the programme goals were not measurable, it was difficult to evaluate if they were challenging, yet achievable. Despite the lack of measurable targets, quantitative evaluations of results were made in some cases. The lack of measurability can be a hindrance for acquiring programme financing when other types of programmes "compete" over the same funds.

Many of the programmes operated with quite formal plans. However, most were not based on scientific theories or evidence. Instead, design seemed to rely more on the experience accumulated to the programme managers and implementing organisations.

A rather limited variety of policy instruments was used. Because of the project objectives, all cases were to contain at least one type of communicative instruments. Regulatory and economic instruments were also used but in a limited number of cases. In terms of communication channels, traditional ones still dominate.

Although the average programme was sizeable at €3.8 million, many small programmes struggled with budget constraints. Also lack of project personnel and time constraints were reported. The average duration of a programme was just under three years. Although some programmes had been running for ten years or longer, there were also numerous short-term programmes.

The results regarding the planning of monitoring and ex-post evaluation were mixed. In many cases ex-post evaluation was planned from the outset of the programme and necessary information was collected during the monitoring process but there were also programmes which had not been subject to comprehensive ex-post evaluation or it was not planned in the planning phase.

In some cases monitoring was used for effective performance management which managed to reveal problems in implementation. The case studies utilised monitoring and gathered feedback by various means. It was very common to monitor the distribution of various materials, number of participants, web-site visitors, subsidy applications, contacts with advisors, market changes and user opinions/satisfaction.

Some level of evaluation was carried out for most of the programmes because it was a selection criterion the case studies. It was most common that evaluation was carried out ex-post but in longer programmes also mid-term evaluations or in permanent programmes periodical evaluations were conducted. No attempts to evaluate the

programme impact ex-ante were reported. A multitude of ex-post evaluation methods for programme impacts were reported. These ranged from participant surveys, testing and comparison with control groups to top-down method evaluating the impact of several programmes focusing on the same target group.

Process evaluation (25 cases) was slightly less common than impact evaluation (29 cases). Frequently reported problems included difficulties in the co-operation and motivation of the different implementing parties, problems in the communication channels and messages, and lack of or excessively negative feedback. It was also recognised in some cases that planning should have been better (lacking e.g. background studies and needs assessment) and more time should have been allocated.

Evaluation of the cost-effectiveness of the programmes was a rarity. This is somewhat surprising given the importance of cost-effectiveness in justifying financing decisions. The likely explanation is the difficulty of quantitative impact evaluation.

The hypothesis of the Project was that energy-related behavioural change programmes do not have the high impact they could potentially have, because in general 1) they have little basis in relevant theory, 2) concentrate mostly on motivational factors only, 3) follow a scattergun approach, 4) have rarely a prior diagnosis or evaluation and assessment of behaviour and 5) do not often lead to ongoing activities. The findings were more positive but revealed room for improvement in all areas. Particularly, there is need to increase the programme planners' knowledge on theoretical background, to improve the focus of the programmes (e.g., by market segmentation and target marketing) and to aim at long-term approaches.

TABLE OF CONTENTS

Part III Lessons learned

REFERENCES

ANNEXES   1. Case template
                 2. Project context
                 3. The consumer
                 4. Inventory of success factors and weak points in the case
                    studies

1 INTRODUCTION

1.1 *The BEHAVE Project*

BEHAVE - Evaluation of Energy Behavioural Change Programmes - is supported by the European Commission under the EU Intelligent Energy – Europe (IEE) Programme. BEHAVE aims to improve the impact of energy-related behavioural change programmes and projects in the household sector by learning from existing ones.

At the start of the project at the end of 2006, the influence of human behaviour on climate change was still debated. Today there is general consensus on the urgent need for radical transitions (see also Annex 2). The increased awareness and motivation for change will be taken into account in the Guidelines that are going to be developed in the next step op the BEHAVE project.

Definition of energy-related behavioural change programmes used in the project:

> Programmes that aim to have an effect on three factors of consumers' habitual and investment behaviour: motivational, facilitating and reinforcing factors (Bruel 2007).

We focus on behaviour change programmes that use mainly communicative instruments, not so much on those based on regulation, economic measures or structural provisions. We are interested to assess the impact of this type of programmes. The project is targeted at policy makers, programme designers/managers, and consumer organisations.

Our hypothesis was: ➔ Programmes and projects aiming to change energy-related behaviour do not have the high impact they could potentially have, because in general they:

- have little basis in relevant theory
- concentrate mostly on motivational factors only
- follow a scattergun approach
- have rarely a prior diagnosis or evaluation and assessment of behaviour
- do not often lead to ongoing activities

The main steps in the project are reflected in work packages:

WP 2 - Development of a framework for the comparison and evaluation;
WP 3 - Selection and evaluation of recent programmes and projects;
WP 4 - Development of recommendations and guidelines;
WP 5 - Independent evaluation of these guidelines;
WP 6 - Dissemination and training of policy makers and programme managers.

The project started in December 2006 with an analysis of the knowledge base in order to find evidence-based theoretical insights useful for this type of programmes and projects. The findings of this exercise are described in a report on the main methodologies and theories (Egmond & Bruel 2007).

In parallel, information was gathered on a variety of current programmes and project throughout Europe. The result was an inventory of 86 examples described in a template produced in the project. We then developed criteria for selection – the crucial one being availability of evaluation data - and applied them to the inventory. As a result, additional information was gathered from selected 40 cases, based on a second template that reflected the different phases of evaluation: context, planning, implementation and evaluation.

Table 1. BEHAVE Project partners

Participant name	Abbreviation	Country
SenterNovem	SenterNovem	the Netherlands
Agence de l'Environnement et de la Maîtrise de l'Energie	Ademe	France
Motiva Oy	Motiva	Finland
Energy Agency Sweden	STEM	Sweden
Centre for Renewable Energy Sources	CRES	Greece
Instituto para la Diversificación y Ahorro de la Energía	IDAE	Spain
Energy Efficiency Agency	EEA	Bulgaria
Enova SF	ENOVA	Norway
Energy Saving Trust	EST	United Kingdom
Energy Agency Austria	EAA	Austria

The project's internet address is http://www.energy-behave.net/.

More information on the project can be obtained from the project partners and the project co-ordinator:

> Ms Antoinet Smits
> SenterNovem (The Netherlands)
> Email: A.Smits@senternovem.nl
> Tel. +31-46-4202358

1.2 *Work Package 3 and contents of this report*

This report contains the results of activities in WP 3. The objectives were to:

1. Select and collect evaluation data on behavioural change projects and programmes in EU Member States and selected projects in other countries.

2. Analyse selected projects and programmes, and develop conclusions, recommendations and lessons learned for the planning and implementation of future projects, as well as for sustaining the results of past projects.

3. Analyse the approaches used for new delivery mechanisms, and describe models or methodologies that can be used in future projects.

These results of the analysis will provide input to Work Package 4 where guidelines for programme design and implementation will be developed.

This report is composed of three parts:

Part I   Quantitative analysis
Part II   Qualitative analysis
Part III   Lessons learned

1.3 *Acknowledgements*

The detailed template was prepared by the project partners in consultation with an external expert, Dr Heather Greer.

A significant part of the qualitative case analysis was subcontracted to a specialist in economic sociology: Ph.D M.A Leena Haanpää from Turku School of Economics, Finland. The objective of subcontracting was to ensure adequate emphasis on social marketing with focus on the consumer. Another objective was to get an external view from an analyst who has not been personally involved in energy efficiency programme planning and implementation and, therefore, is not biased.

The subcontractor produced a separate report called "The unpredictable consumer: A report of BEHAVE Project". The applicable parts of the report - in practice vast majority of it - have been integrated into this report.

The subcontractor has significantly contributed to the following chapters:
- Chapter 2.2 Social marketing
- Chapter 5: Planning
- Chapter 6: Implementation
- Chapter 7: Monitoring and marketing control
- Chapter 9.3: Success factors and weak points
- Annex 3: The consumer

1.4 *Case overview*

In the first phase of the BEHAVE Project, we collected information on 98 cases from 11 countries. Next, the project team selected 41 cases from this inventory, based on multiple criteria such as geographic distribution, coverage of various topics, target groups and instruments as well as availability and quality of evaluation data.

Detailed information was collected on these cases. 40 of the cases have been implemented in the countries of the project partners and one in Germany. Effort was made to collect cases from new and forthcoming Member States but, with the exception of Bulgaria, suitable cases (focus on behavioural change, evaluation results available etc.) were not identified. The cases which have been included in the meta-analysis are listed in Table 2.

Many innovative new approaches were presented in the programmes using new concepts and communication channels. Also, cases following well-known approaches in Europe were presented. All cases could be considered as rather or very successful because of the selection criteria used. Using less successful ones might have offered different learning opportunities.

All partners provided cases for the meta-analysis: Spain 7, Finland 6, the Netherlands 5, Sweden 5, Austria 4, France 4, UK 4, Bulgaria 2, Norway 2 and Greece 1. In addition, one case was submitted by Germany.

Most programmes were nationwide. Spain presented three regional programmes (E 1, E 7 and E 9) and UK and Austria reported one local programme each (UK 5 and A 3). Certain level of localism can be found in cases presenting local energy advice centres (Fr 8, UK 3 and UK 9), however, the centres have a wide coverage of the country.

One programme, the Nordic Swan Label (S 4) - featuring an eco-label for various products - covers all the Nordic Countries. Some programmes either copied or otherwise implemented in several Member States are the Norwegian Rainmakers TV-campaign for children (N 1) and the Swedish Don't Drink and Drive Campaign (S 1).

In Table 2, the case have been categorised in nine groups. The groups have been formed based on the type of the programme:

- Two of the categories, climate change campaigns and energy efficiency campaigns feature mainly programmes targeting the general public or all households, using multiple instruments and in same cases consisting of multiple sub-projects.

- Energy efficient building programmes consist of campaigns or other programme types addressing either the construction of new buildings or renovation of old ones in a large scale.

- Household energy use groups very different programs, however all focusing on changes in the heating system and/or energy use by household appliances or lighting etc.

- School programmes, local energy agencies (advice centres), labelling and renewable energy programmes are programmes with more focused target groups or more limited number of instruments.

- Non-energy programmes include three eco-driving programmes and one health/safety programme. Transport sector is included also in many of the climate change and energy efficiency campaigns. Due to the boundaries set in the BEHAVE Project, eco-driving - which normally is included in energy

The groups have not been used in the analysis itself, i.e., no comparisons between or inside the groups were made. Instead, the grouping was used in a very practical way to get a better overview and understanding of the stock of cases in terms of topics and target groups.

In the cases it was quite common to address the wide public as 68% of the cases mentioned the consumer and citizens as a target group and 59% of the cases households. More focused target groups were school children (mentioned in 29% of the cases), youngsters (20%), intermediary parties such as NGOs, social workers, teachers (15%), the elderly (10%), low-income groups (7%) and employees (7%). Sometimes other target groups, such as the media, were mentioned.

National governments play major role in the financing of the programmes. They either fully financed or participated in the financing of three quarters of the programmes. Other frequently mentioned financers were the energy agencies (24% of the cases) and utilities (17%). Other financers included professional associations (10%), local governments (7%), regional governments (2%) and NGOs (2%) as well as "others" (22%). The category 'others' was composed of, e.g., non-energy companies and the European Commission.

In 56% of the cases, a national, regional or local energy agency either implemented the programme or participated in the implementation. Other frequently mentioned implementing organisations were national government (27%), utilities (22%) and regional and local government as well as professional associations (each mentioned in 15% of the cases). Other implementing organisations were NGOs (12%) and "others" (29%), the latter one again composing mainly of non-energy companies, publicly financed agencies/institutes and universities.

The average budget of the cases concentrating mainly on behavioural change was €3.8 million. The Bulgarian case on building renovation (Bg 5) has a budget of €2.1 billion most of which is used for other activities than information dissemination and raising of awareness. Therefore, is not included in the calculation of the average. Advice centre programmes, programmes involving subsidies and long-lasting climate change and energy efficiency campaigns tend to have relatively large budgets clearly exceeding the average. Four programmes had budgets lower than €100 000. Two of them were one-off campaigns, two repeated campaigns for which only the budgets of one phase were reported.

The average duration of the programmes was 2 years and 11 months. The programmes with shortest duration at a time are energy efficiency weeks targeting at school children and other target groups; however, the programmes are also among the "oldest" ones having been implemented annually since 1996 and 1997, respectively. The duration of five other programmes was less than six months. The longest running programme is the UK Energy Efficiency Advice Centres (UK 3) which started in 1993. Some of the climate change and energy efficiency campaign are also among the longer-running programmes.

In terms of communication channels, traditional channels still dominate: booklets and brochures were distributed in 78% of the cases and in 68% of the cases information was disseminated through journalistic materials. Personal advice and training were both provided in about half of the cases. New channels, such as infotainment were used in one third of the cases and digital channels in three cases. Regulatory instruments were used in seven case studies and economic instruments in ten case studies.

Table 2. Cases included in the meta-analysis

Case no	Case name	Country	Implementing organisation(s)
Climate change campaigns			
Fi 3	The Finnish Climate Change Communications Programme	Finland	- Coordinator: Motiva Oy - Programme Manager: Private Consult
Fr 1	Climact (CO$_2$ impact calculator)	France	- National, regional, local energy agency
Fr 5	The Challenge for the Earth (Défi pour la Terre)	France	- National, regional, local energy agency - Nicolas Hulot Foundation
S 6	The Swedish Climate Campaign	Sweden	- National government - National, regional, local energy agency
UK 1	National Advertising Campaign	United Kingdom	- National energy agency
Energy efficiency campaigns			
D 1	Campaign Energy Efficiency in Private Households (EnergieEffizienz)	Germany	- National government - National, regional, local energy agency - Utilities - Consumer associations - Professional associations (e.g. lighting, housing, etc.) - Retailers
E 5	Energy for Everyone, Energy Forever	Spain	- National government
Fi 1	Energy Awareness Week	Finland	- National, regional, local energy agency - Participants
Fi 6	Yardtalk Campaign by the VVO Housing Company	Finland	- VVO (housing company)

Case no	Case name	Country	Implementing organisation(s)
Energy efficient buildings			
A 2	Climate Herald	Austria	- National, regional, local energy agency
Bg 5	National Program for Renovation of Residential Buildings in Republic of Bulgaria	Bulgaria	- National government - Local government - Utilities - Consumer associations - Consumers / citizens - Households - ESCOs
Bg 10	Energy Efficiency Law	Bulgaria	- National government - Regional government - Local government - Utilities - Consumer associations - ESCOs - Real estate & facilities property owners
E 10	Sunrise Building/Mediterranean Verandahways	Spain	- Local government
Fi 4	Energy Efficient House	Finland	- National, regional, local energy agency - Professional associations (e.g. lighting, housing, etc.) - Companies
S 5	Heating in Villa	Sweden	- National, regional, local energy agency - Professional associations (e.g. lighting, housing, etc.) - NGO
Household energy use			
A 3	Fair Energy	Austria	- Utilities

Case no	Case name	Country	Implementing organisation(s)
E 1	Energy Efficiency Domestic Index	Spain	- Utilities
E 7	Economic Support for the Renewal of White Goods in the Community of Madrid	Spain	- Regional government
N 3	Electricity Savings in Households	Norway	- National energy agency
Nl 2	Measurement is Knowing	the Netherlands	- Subsidized environmental promotion organization
Nl 3	Electronic Feedback	the Netherlands	- Utilities - University
Nl 11	Energybox for Dutch Households (pilot)	the Netherlands	- National government - National, regional, local energy agency (SenterNovem) - Local government - Utilities

School projects			
E 3	Save Energy in Good Company	Spain	- National government
Fi 2	National Energy Theme Week for the Second Grade Pupils	Finland	- National government - Utilities (energy companies)
Gr 1	Open Doors	Greece	- National, regional, local energy agency
N 1	Rainmakers	Norway	- National energy agency - Norwegian Broadcasting Corporation - Norwegian Centre for Science Education - Norwegian Directorate for Education and Training
Nl 12	Energy Survival	the Netherlands	- National government - National, regional, local energy agency - Regional government - Local government - Utilities (to be expected)

Case no	Case name	Country	Implementing organisation(s)
			- Professional associations (e.g. lighting, housing, etc.)

Local energy agencies

Case no	Case name	Country	Implementing organisation(s)
Fr 8	Local Energy Information Centres (Espaces Info Energie)	France	- National, regional, local energy agency - Regional government - Local government - Consumer associations - NGO
UK 3	Energy Efficiency Advice Centres (EEAC)	United Kingdom	- National energy agency
UK 9	Sustainable Energy Network (SEN)	United Kingdom	- National energy agency

Labelling

Case no	Case name	Country	Implementing organisation(s)
E 8	Training Plan on Energy Labelling for White Goods Salespersons	Spain	- National government - Regional government - Consumer associations
Fr 6	Labels on Electrical Households Appliances (Etiquettes énergie)	France	- Manufacturers and retailers
S 4	The Swan Label	Sweden	- Nordic Council of Ministers

Renewables

Case no	Case name	Country	Implementing organisation(s)
A 4	Climate Active "Heat Pumps"	Austria	- National, regional, local energy agency - Professional associations (e.g. lighting, housing, etc.)
A 6	Climate Active "Solar Heating"	Austria	- NGO
E 9	Collection of Fried Oil from Households - Local and Innovative Biodiesel	Spain	- National, regional, local energy agency
S 7	Wooden Pelleted Heating - Future Heating	Sweden	- National, regional, local energy agency

Case no	Case name	Country	Implementing organisation(s)
Non-energy projects			
Fi 5	An Information Campaign on Safe and Economic Driving	Finland	- Consumer associations - Professional associations (e.g. lighting, housing, etc.) - NGO - Companies and enterprises
Nl 9	EcoDriving	the Netherlands	- National, regional, local energy agency
UK 5	EcoDriving, Scotland	United Kingdom	- National energy agency
S 1	Don't Drink and Drive	Sweden	- National, regional, local energy agency - Regional government - Local government - Consumer associations - NGO

2 ANALYTICAL FRAMEWORK

The analytical framework used in the qualitative analysis consists of three approaches which will be discussed in more detail in the following sub-chapters:

- Project planning and implementation cycle
- Social marketing concept
- The PRECEDE-PROCEED planning model

The project planning and implementation cycle is typical to basically any type of projects, not only those aiming at changing energy-related behaviour. In this report it is used to enable systematic reporting of the analysis made on the case studies.

The social marketing concept applies lessons learned from marketing and social policy (social sciences, social reform and social campaigning) into energy-related behavioural change programmes and projects. It provides new insight on the effectiveness of different programmes by putting the consumer and the citizen into the focus.

In Work Package 2 it was recommended to use the PRECEDE-PROCEED planning model (Green and Kreuter, 1999) for developing policy interventions (Egmond & Bruel 2007). In this report, the elements of the model have been taken into account in the case analysis, particularly when programme planning is discussed given that the model is, indeed, a planning model. However, the report is not structured following the model but the structure of project planning and implementation cycle is used because it is well-known, straightforward and simple. Furthermore, while the planning model is well-suited for planning new programmes, it has not been straightforward to apply it to case analysis of programmes which usually have not been designed using the model. Therefore, important elements of the model are either missing from the case descriptions or they are referred to in a very implicit way.

2.1 *Project planning and implementation cycle*

The qualitative analysis of the cases has been carried out in five steps of the project planning and implementation cycle:

1. Context
2. Planning
3. Implementation
4. Monitoring
5. Evaluation

Hereunder, each step is briefly summarized. All cases have been analyzed through the report using these steps which is also reflected in the report structure.

Context
Each project and programme is implemented in a certain context. There are numerous factors which can have an impact on what kind of behavioural change programmes are implemented ranging from European legislation to national circumstances.

Planning
Planning is probably the most important step of the project cycle. This is where the important decisions regarding implementation, monitoring and evaluation are made - all in a specific context.

Implementation
Programme implementation essentially features following the plan but leaving room for adjustments based on monitoring results on the progress as well as changes in the context. It calls for realistic balancing of goals and resources and requires a mix of different marketing and programme management skills.

Monitoring
Monitoring should be planned from the outset of the project or programme. It serves two objectives. 1) It feeds in information to the project management to allow marketing control during programme implementation and 2) provides data for ex-post evaluation.

Evaluation (ex-post)
Evaluation can consist of process and impact (effect and outcome) evaluation implemented in quantitative and/or qualitative ways. At the beginning of the BEHAVE Project it was expected that information is mainly gathered through programme managers' perceptions of the efficacy of the interventions (Bruel, 2007). Encouragingly, the analysis showed that many programmes have been subject to thorough evaluation and most programmes have included some evaluation, not only monitoring. The reason for this outcome is, of course, that one criterion for choosing the cases for which more detailed templates will be filled in was the existence of evaluation data.

2.2 *Social marketing concept*

According to Kotler and al. (2005) "The societal [social] marketing concept holds that the organisation's task is to determine the needs, wants, and interests of target markets and to deliver the desired satisfactions more effectively and efficiently than competitors, in a way that preserves or enhances the consumer's and the society's well-being." Ethical and social considerations are built in marketing concept in a way that penetrates consumer's attention and motivates them to make the change.

The social marketing that is practised in the cases could be characterised as *cause-related marketing*. This means that the general purpose of these programmes is to deliver mutual benefit and well-being for both consumers and the partners of the programme (in publicly financed programmes the society). In cause-related marketing it must be taken into account that some consumers look for signs of good corporate citizenship. This applies to such programmes in which both social marketing and

product sales are combined. In other words, consumers when making purchase decisions regarding for example, energy saving domestic appliances, may have expectations for companies' public interest to environmental issues and not only for profits.

In social and cause-related marketing it is also a question about companies' reputation as a good corporate citizenship. This sets criteria for planning of the whole project. Several examples of companies implementing or participating energy-related behavioural change programmes were presented among the case studies. However, over half of the programmes were implemented by national or regional organisations concentrating mainly on promoting energy efficiency and/or renewables. It may be possible that these organisations are considered more neutral by the consumers.

2.3 *The PRECEDE-PROCEED planning model*

The planning of a policy intervention consists of several different considerations ranging from objectives to interventions. The PRECEDE-PROCEED model (see Figure 1) approaches the planning process by breaking it into manageable smaller pieces. It also allows taking account both internal and external factors. The model recognises that behaviour is a complex of factors that need unravelling and need to be influenced by a combination of interventions.

The model consists of three phases. Green and Kreuter summarize their planning model with the slogan: "begin at the end". Therefore the sequence of planning is the following:

1. In Phase 1 "Diagnosis", a behavioural and contextual analysis is made and programme goals are established in line with policy objectives. The roles of habitual and reasoned behaviour of the target groups are assessed. Also the changeability of behaviour is analysed as it is advisable to start with behaviour which has the greatest impact and is easiest to change.

2. In Phase 2 the corresponding determinants influencing the target group behaviour are analysed. These include predisposing factors (motivating behaviour), enabling factors (facilitating behaviour) and reinforcing factors (providing feedback). Behaviour can be explained as a function of the collective influence of these determinants. In this step, both internal and external factors influencing behaviour should be taken into account.

3. Finally, the instruments are chosen in Phase 3. Regulatory instruments (laws, regulations, permits, enforcement, covenants and agreements) mainly influence behaviour through compulsion. Economic instruments (subsidies, levies, taxes, tax differentiation and financial constructions) influence behaviour through financial transactions. Communicative instruments (information and promotion, training, personal advice, demonstrations and benchmarks) persuade. Structural provisions (infrastructural provisions and technical interventions) work by compulsion and in a facilitating way. Often, a

combination of instruments is used to influence people's decisions. (Bruel 2007).

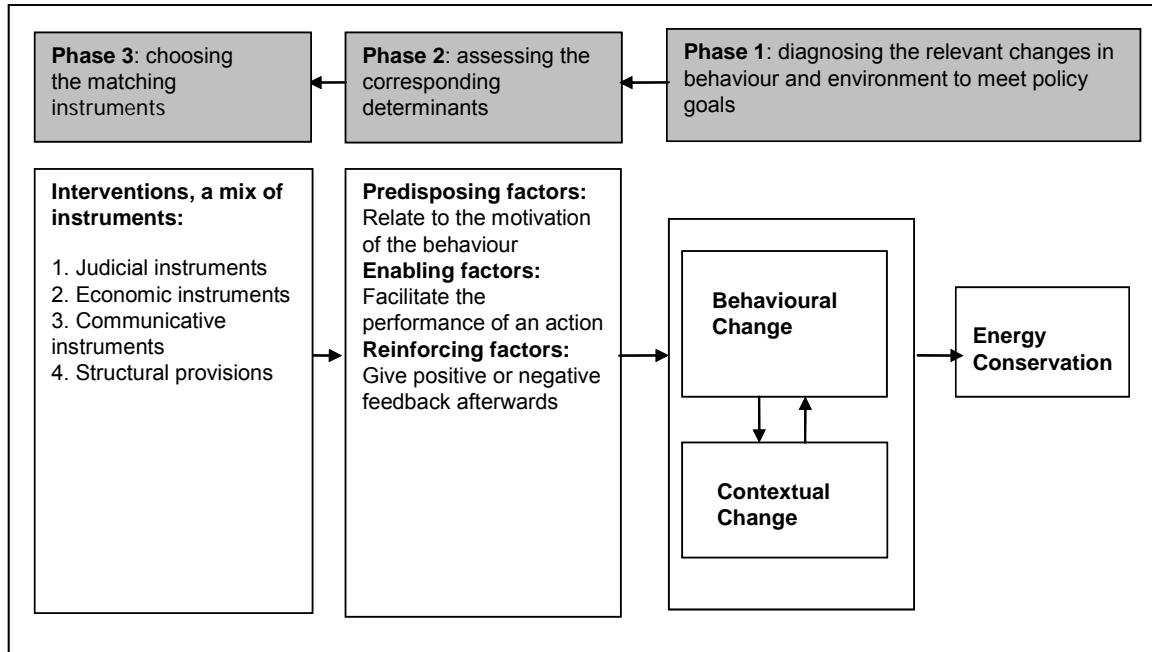**Motto of the model: beginning at the end**

Figure 1. The PRECEDE - PROCEED (Modified from Green and Kreuter, 1999)

PART I

QUANTITATIVE ANALYSIS

3 QUANTITATIVE ANALYSIS

The results of the quantitative analysis are shown in the following tables regarding:

- topics addressed
- target groups
- programme duration
- programme budgets
- type of behaviour targeted
- behavioural factors (determinants) targeted
- communicative instruments used
- regulatory instruments used
- type economic instruments used

Table 3 – Topics addressed

Topics	Number of case studies	Percentage
Environment in general	13	32%
Renewable energy	15	37%
Energy efficiency in general	22	54%
Energy efficient appliances	15	37%
Lighting	17	41%
Heating/cooling	21	51%
Non energy (transport, health)	23	57%

Number of topics per project	Number of case studies
1	10
2	8
3	7
4	4
More	11

25% of the cases address only one topic, ¾ are trying to achieve two or more objectives in 1 action.

Table 4 - Target groups

Target groups addressed	Number of case studies	Percentage
Consumers/citizens	28	68%
Households	24	59%
Youngsters	8	20%
Elderly	4	10%
School children	12	29%
Low income groups	3	7%
Employees	3	7%
Other	10	24%
Intermediary parties	6	15%

Total size of all target groups	338 769 641
Average size of target group per case study	9 410 268

The total size of target group is calculated as the total of numbers reported in different case studies although different formats of reporting have been used. Some case studies reported persons some households. The average size of target group per case study value shown in the above table is calculated based on 34 case studies which included the data required.

Although part of the cases use a segmentation method to address the target group more specifically, the average size of target groups shows that in many cases it is still 'the general public' that is addressed.

Table 5. Programme duration

Average duration of the programmes	2 years and 11 months

	Time frame	
	Continuing /repeated activity	**Once-only activity**
Number of case studies	24	9
Percentage	59%	22%

The average duration of programmes is calculated based on data submitted with projects with both start and end date. Projects that are reported ongoing without specifying the end date are not included in this calculation. Information on whether the programme was a once-only or a repeated activity was given for 33 programmes; the information was not available in 8 cases.

The outcome shows that more than half of the cases are part of an ongoing activity.

Table 6. Programme budgets

	All cases	Without the Bulgarian case Bg 5
Total budget	€2.2 billion	€138 million
Average budget per case	€63 million	€3.8 million

Some cases have reported annual budgets but not total budgets as required in the template. In these cases the total budgets have be recalculated having in mind programme duration. However, there is a risk of error. The average investment per case study is calculated based on 37 case studies that have reported the data required.

One case, the Bulgarian National Program for Renovation of Residential Buildings in Republic of Bulgaria (Bg 5) has the budget of €2.08 billion dominating the results. The main part of the programme funds are used for non-behavioural activities such as construction. Therefore, an average budget was calculated also for the remaining 36 other projects for which budget data was available. The result, €3.8 million is a better indication of the average size of a programme. It is likely that this exceeds by far the average size of programmes implemented in the Member States. The reason is that the project partners mainly reported cases where ex-post evaluation had carried out, which is more common for sizeable behavioural change programmes than the smaller ones.

Table 7. Type of behaviour targeted

	Type of behaviour targeted		
	Investment behaviour	Habitual behaviour	Energy behaviour in general
Number of case studies	29	31	19
Percentage	71%	76%	46%

Number behaviour types targeted by the programmes	Number of case studies
No behaviour mentioned	1
1 type	14
2 types	13
3 types	13

This table shows that a large part of the cases are not specifically addressed to 1 type of behaviour.

Table 8. Type of factors (determinants) targeted

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

The largest part of the cases is aimed at motivational factors by stimulating people to use less energy.

Table 9. Communicative instruments used

	Number of case studies	Percentage
TV/Radio		
Journalistic material	19	46%
Infotainment	13	32%
Advertising material	17	41%
Newspapers/magazines		
Journalistic material	28	68%
Infotainment	8	20%
Advertising material	20	49%
Others		
Internet based	21	51%
Digital channel	3	7%
Booklets/ brochure	32	78%
Information session	18	44%
Demonstrations	9	22%
Formal and informal education	19	46%
Personal advice	19	46%
Training and coaching	11	27%
Telephone help lines	11	27%
Benchmarks	10	24%
Labelling	6	15%
Others	6	15%

Number of communicative instruments used	Number of case studies
No information on communicative instruments reported	2
1 type used	4
2 types used	14
3 types used	21

A mix of communicative instruments are used in all cases. This may underline the assumption that planning and implementation are usually carried out well.

Table 10. Regulatory instruments used

	Regulatory instruments				
	Laws/ regulations	Permits	Participation in covenants /agreements	Enforcement	Others
Number of case studies	6	1	5	0	1
Percentage	15%	2%	12%	0%	2%

Number of regulatory instruments used	Number of case studies
No regulatory instruments used	34
1 used	2
2 used	4
3 or more used	1

Table 11. Economic instruments used

	Economic instruments					
	Subsidies/ grants	Taxes	Tax differentiation	Emission trading	Financing constructions	Others
Number of case studies	9	3	5	1	2	1
Percentage	23%	7%	12%	2%	5%	2%

Number of economic instruments used	Number of case studies
No economic instruments used	31
1 used	5
2 used	0
3 used	5

Tables 10 and 11 show that a combination of policy instruments are not often used in addressing energy consumers. Only very few cases include economic and legislative instruments.

PART II

QUALITATIVE ANALYSIS

4 PROGRAMME CONTEXT

Programme context = Various national circumstances and national and international policies which have an impact on programme design and should be taken into account in programme planning.

Each national behavioural change programme is designed in a context which is affected by national circumstances as well as national and international policies (EU policies, Kyoto climate change agreement). The context is a significant factor in the choice what kind of behavioural programmes are designed and implemented in a given country. However, context should not only be considered in programme design but changes in the context should be monitored and corrective actions taken in programme implementation, if necessary. Exploring the context is also the phase of problem orientation, definition and ex-ante research.

Various elements of the context can be identified. The following list covers most of them but is not exhaustive. After the list, some examples identified in the case studies are presented.

- Timing
- Polity/constitution (federal country vs. not a federal country)
- Regulatory framework
- Energy and climate policy objectives
- Prevailing energy and environmental strategies, action plans and communication programmes
- Political structures and institutional setting (implementing organisations, financing organisations, NGOs, public-private relationship)
- Market structures (manufacturers, vendors, multipliers)
- Climate
- Natural resources
- Demography and social context
- Energy prices
- Energy use by consumers and information available on it
  - Energy mix, break-down to different end-uses, use patterns
  - Building stock
  - Appliance stock
- Identified barriers
- Cultural features
- Campaign resources

The list of context elements should be understood as a checklist for the contextual analysis; each element and its relevance should be given some consideration. The importance of each element depends on national circumstances and, therefore, generic prioritisation of the context factors would not be very helpful.

Timing of the activities is quite important. The focus of public debate, unexpected environmental or natural events, evolvement of energy prices and EU-wide initiatives can all be either drivers for national campaigns or can strengthen their impact. For example, the Finnish Climate Change Communication Programme (Fi 3) had synergy with the EU-wide public information campaign on climate change in 2006-2007.

Polity
The polity is not as compelling factor in a non-federal country as it is in a federal one. However, in some cases even in a non-federal country local governments may have a significant role in promoting energy efficiency. This is the situation, e.g., in Spain. It may also be difficult to implement certain projects without their co-operation. Nonetheless, in a federal country it may be practically impossible to implement energy efficiency programmes initiated by the federal government. This is the case, for example, in Belgium (not a project partner) where the responsibility for energy efficiency belongs fully to the three regional governments. Similar stringent situation was not reported in the case studies but Austria mentioned the federal structure being an important consideration in programme design.

Regulatory framework
In some cases programmes were implemented to reinforce the impact of energy efficiency legislation. Examples were "Energy label" (Fr 6), salesmen training for white goods (E 8) and economic support for the renewal of white goods (E 7) which all aimed at enhancing the knowledge of the energy efficiency labels and increasing the proportion of efficient appliances in the market. UK EST Advice programme (UK 3) is part of the infrastructure to support and reinforce the government's Energy Efficiency Commitment (which is an obligation on energy suppliers to deliver energy efficiency savings) regulatory framework. EST's role is key to provide independent and impartial advice to consumers. It may also be possible to implement programmes making use of laws and regulations having directly little to do with energy efficiency. For example, Austria implemented an advisory programme build on the mandatory requirements on annual chimney sweeping (Climate Herald A 2).

Regulatory framework can also become an impediment for the effective implementation of behavioural change programmes. Bulgaria reported programme implementation being difficult due to missing parts in national legislation and regulation regarding, e.g., urban planning, building proprietor's property status, energy services contracting and implementation, financial incentives for both contractual parties. These contribute to the business climate.

Energy and climate policy objectives
One of the Swedish energy policy objectives is the transformation of the energy system towards a sustainable system based on alternatives to oil and electricity. Therefore, wooden pellets (among several options) are promoted (Wood pellet heating S 7).

Energy and environmental strategies, action plans and communication programmes
Several countries mentioned that they have a prevailing energy efficiency programme or that they implement a large-scale energy efficiency or climate change

communication programme. Behavioural change is often a key element in them. Examples include:

- Spain: the Strategy for Energy Saving and Efficiency 2004-2012 and the associated Action Plan for the period 2005-2007.
- UK: Climate Change Programme and Energy Efficiency Strategy
- Germany: EnergieEffizienz national information and motivation campaign
- Austria climate protection campaign (Klima:aktiv)
- France: "Energy savings, let's hurry, it's heating up" - national communication campaign

Political structures and institutional setting

Most programmes are implemented by national or local energy efficiency agencies or alike. However, depending on the institutional setting and local circumstances, other organisations (consumer associations, NGOs and professional associations) as well as even energy companies and private companies have implemented behavioural change programmes. Although a programme may be initiated by a national energy agency, several intermediary organisations may be involved including public-private co-operation. The Netherlands and Sweden emphasized the effectiveness of using intermediaries in their case studies; however, similar approach appears to be quite common.

Practically all countries emphasised the need to use existing institutions and infrastructures in programme design and implementation where effective to do so, although of course in some cases these may not already exist and new solutions need to be developed. The UK reported a long-term large-scale programme whereby a new energy advisory infrastructure was set up over ten years ago for information dissemination and execution of various campaigns (EST EEAC, UK 3).

Also Austria and France reported a well-developed and distributed energy advice infrastructure which provides various information services to the consumers. While not included in the case studies, also Sweden operates a similar scheme.

Several countries (Austria, Finland, Germany, the Netherlands and Spain) either presented energy efficiency programmes implemented by energy utilities or programmes where they had an important role. This creates an interesting "conflict of interest" with the utilities' objective to increase their sales in the liberalised energy markets. The energy service directive, on the other hand, calls for energy services provided by the utilities (among alternative approaches).

Market structures

Particularly programmes which promote new technologies (or just technologies in general) often call for addressing the whole chain from manufacturers to vendors, multipliers and final consumers.

In several case studies importance of addressing both consumers and multipliers such as planners and installers was emphasized in several projects, e.g., Climate active "heat pumps" (A 4), Climate active "solar heating" (A 6), Wood pellet heating (S 7), Energy efficiency campaign in households (D 1).

Climate
Climate is a significant factor both in terms of energy consumption as well as end-uses. It affects the need for heating and cooling as well as building codes, urban planning and the feasibility of solar energy. Many case studies presented programmes which were addressing various aspects related to heating and cooling. Several concentrated almost solely to these topics (see Table 2) while they also were a major feature of wider awareness and climate change campaigns.

Natural resources
Natural resources are a factor in choosing which technologies to promote in the programmes. For example, wood pellet heating can only be promoted if adequate forest resources exist (Wood pellet heating, S 7).

Demography and social context
In terms of development of energy-related behavioural change programmes, relevant factors in the social context are, e.g., age, gender, languages used, ethnicity, class, household types and ability to pay. These are also factors in market segmentation. They can also either enhance or impede access to assets, services, and public goods.

The case studies do not portray large differences in the social context or social diversity between or inside the countries. Rather, judging solely on the basis of the case studies, the countries and social issues faced by them appear surprisingly similar. Yet, differences exist. For example, there are different language groups in some countries (e.g. Finland) but this was not reflected in the case studies. In some countries (e.g. France, Germany, Spain Sweden and UK) there are large immigrant populations which were not mentioned. Despite the disappearance of former class societies, certain features remain in, e.g., France and UK. The reason for not capturing the differences could be the formulation of the detailed template which did not emphasise social considerations. The reason could also be that these are not considered important in terms of energy-related behavioural change programmes. In any case, they are worth consideration in programme design.

In countries with lower but growing GDP per capita energy consumption is growing rapidly in the household sector. People are buying more appliances because the markets are far from saturated. From energy efficiency point of view this can create equally an opportunity or a threat depending on how it is addressed. Effective information campaigns can help to ensure that the appliances purchased are efficient. However, behavioural change programmes may not always be adequate and incentives may be required.

The socio-economic status of consumers (ability to pay) can either impede or enhance their possibilities to invest in energy efficiency. Those with higher income have better opportunities to invest in equipment which may have a high investment cost but feature lower life-cycle cost or energy consumption. Those with lower income could probably gain more from better energy efficiency but may not be able to make the initial investments. In such situations, combination of different instruments is necessary. Careful consideration is required particularly in countries with large differences in income levels. For example, in the UK fuel poverty among the elderly is a real issue whereas in the Nordic countries with different housing structures and pension or welfare systems it is usually not a major concern.

Appliances can be used to further demonstrate social context. For example, who in families makes the purchase decision of appliances (white goods, small appliances, IT and electronics) and who uses them? If the decision to purchase white goods is made by the family together, small appliances are purchased by the wife and IT and electronics are generally purchased by the husband different communication strategies may be needed. The same applies to usage. Furthermore, Swedish studies have shown that the elderly often have older and less efficient appliances. Can specific strategies be formulated to address this target group? These are questions to be addressed in the planning phase but to do it effectively, programme designer needs to know the social context.

As said above, social considerations can have an impact on the access to services and public goods. In the partner countries, however, the public has generally equal access to information through quality education and access to information. Despite technical differences in the schooling system, the level of education is roughly the same and often similar communication instruments can be used. There are some differences, however, such as access to internet.

It appears that the social context is especially important when the new Member states are concerned. For example, due to on average lower income levels, the ability to pay may become more crucial concern than in the former EU-15.

Energy prices
In Norway rising energy prices put pressure on politicians to act. As a result a support and information programme for electricity saving technologies was introduced (Electricity saving in households, N 3).

Energy use by consumers
Information on the energy end-use by consumers and lack of information can both be factors which affect behavioural programme design. In the context of increasing energy intensity per capita - which is not a common occurrence in Western Europe - Spain has introduced several large-scale behavioural programmes based on detailed studies on energy use in households. Good background studies on energy mix, its break-down to different end-uses, appliance stock and end-use patterns can help in making informed decisions about campaigns.

The characteristics of the building stock and the construction market dictate where the largest energy efficiency potential exists and what types of behavioural change programmes targeting the building sector are feasible. Austria and Bulgaria reported that there is a large building stock which requires renovation (Climate Herald A 2, National Programme for Renovation of Residential Buildings Bg 5). This probably applies to many other countries as well and can be major driver in pursuing behavioural change programmes concentrating on existing building stock. In Finland, many home-owners build their own houses. They are targeted by a campaign promoting low-energy single family houses (Energy efficient house, Fi 4).

Identified barriers
Households have significant energy efficiency potential. Many strive for better energy efficiency by paying attention to the heating systems and their regulation, choosing

energy efficient appliances and lighting and using them prudently etc. However, it is a well known fact that the market does not fully deliver cost-effective savings autonomously. Various barriers explaining the gap have been identified. As an example, one of the attempts to systematically analyse the different barriers was the BARRIERS Project of the Joule III Programme (Sorrell S. et al, 2000), although its viewpoint was energy efficiency in organisations. However, most of the barriers indentified apply also to private consumers.

Most barriers applying to private consumers are mentioned hereunder:

- Imperfect information:
    - Lack of awareness of the cost-effective savings potentials
    - Missing or partial information on energy efficiency performance
    - Life-cycle costs get little attention the main emphasis being in the initial investment cost
- Principal agent problem/split incentives:
    - The typical example is the landlord-tenant issue where the landlord invests (or fails to invest) in energy efficiency but it is the tenant who pays the energy bills.
- Rational behaviour:
    - Energy efficiency is bundled-in with more important capital decision factors
    - Access to capital
    - Hidden costs (the time taken to find reputable installers or the costs of disruption)
- Behavioural barriers:
    - Credibility and trust (consumers may not trust source of information)
    - Inertia (the tendency to stick with the traditional approaches)
    - Values (lack of environmental awareness)
- Regulatory failures

Some of the above are not necessarily market barriers but are actually rational behaviour. For example, many potential investments compete for the consumer's limited time and money and the decisions made depend on their context.

At national level, the most critical barriers should be recognised. Most barriers probably apply to all countries but their significance can vary country by country. Behavioural change programmes are designed to address several of the above barriers, particularly those in categories 'imperfect information' and 'behavioural barriers'.

Due to the diverse nature of the barriers, a portfolio of policies is considered most effective, i.e. using also regulatory measures and financial instruments in addition to behavioural change programmes - or vice versa. At theoretical level these considerations are incorporated in the PRECEDE-PROCEED model where the choice of a mix of instruments happens in Phase 3.

In case studies, barriers have not been explicitly called 'barriers'. However, often it can be seen from programme design in the cases that barriers have been analysed conscientiously as this is portrayed in the programme implementation. In Norway, in the case Electricity Savings in Households (N 3) imperfect information on heating

system improvements was addressed by a behavioural change campaign which also featured subsidies to address problems in access to capital. However, the programme did not address the barrier 'credibility and trust' as less serious equipment suppliers tried to skim the market which could possibly be addressed by quality control. In Spain, two separate campaigns were launched to remove less efficient appliances from the markets. Imperfect information was being addressed by training salesmen regarding energy efficiency of white goods (E8) and access to capital was enhanced by a subsidy programme in the Community of Madrid (E7). In the Spanish case also regulatory instruments were involved because of the energy-label for the white goods. If a regulated EU energy label would not have been introduced, the credibility of information on energy efficiency given by the salesmen would probably have been perceived as poor by the clients (barriers 'regulatory failure' and 'credibility and trust').

Cultural features
Few cultural topics were mentioned in the case studies. However, the Spanish case on collection of fried oil from households (E 9) features some related to gastronomy. Such a project can only be implemented in a country where vegetable oil is used in large quantities in the national cuisine. The Swedish large stock of holiday residences (villas) could also be interpreted as a cultural feature (Heating in villa, S 5). While not mentioned in the case studies, saunas in Finland consume large share of household electricity while being a distinctive cultural feature of the country.

Campaign resources
The overall availability of funding for behavioural change campaigns may vary greatly depending, e.g., on the size of the country, the status of behavioural change as a policy measure and economic situation. However, it does not appear to be systematically the case that smaller countries implement smaller programmes. For example, the Swedish Campaign on climate change (S 6) had an annual budget of €3.3 million. The Norwegian Electricity savings in households (N 3) had a budget of €11 million; however, subsidies provided are included in the total. In some cases budgetary concerns have - among other missing elements of the national legislation and regulation - limited the activities. Examples include National Programme for Renovation of Residential Buildings in Bulgaria (Bg 5) and The Challenge for the Earth (Fr 5).

5 PLANNING

5.1 *Strategic plan*

Strategic plan = Preparing a strategic plan for a social marketing programme involves the following steps:

- setting the programme goals in line with policy goals,
- analysing the determinants of desired behavioural change,
- market segmentation and choice of target groups,
- choice of instruments,
- planning the organisation and management,
- risk analysis and back-up plan,
- programme testing and pilot campaigning,
- planning the resources, and
- planning the monitoring and evaluation.

Strategic planning is the first stage of marketing planning and defines the role of marketing in relation to the whole project. Many of the programmes operated with quite formal plans and explicit goal statements. The formal plan setting was a national feature; in some countries the whole campaign was formally planned from the beginning to the end and this was seen in every case conducted in that country. This was the situation, e.g., in the UK.

There are some important questions that must be answered when setting up the strategic plan of the program:

- What will be done?
- When will it be done?
- Who is responsible for doing it?
- How much will it cost?
- How long will it take?
- What will it deliver?

Answering all these questions involves careful planning. It also requires good co-operation between partners and stakeholders. The French case, "Energy label" (Fr 6) reported different ways of well-planned selection of target group. Technical and economic studies were carried out to analyse the national and European appliance stock in order to evaluate the energy and economic stakes of domestic appliance consumption. Also an analysis of the existing labelling and appliance standard scheme in the US was conducted and cooperation with the industrial sector was ensured. The UK case (UK 1) reported, for example, the following.

We employ comprehensive market research through a quarterly tracker and 'Green Barometer' survey to assess the effectiveness of our activity and to improve the understanding of the attitudes and behaviours of the UK population to inform future activities. A key focus of our work is the Energy Saving Week (ESW) campaign that takes place each year in the last week of October, at the start of the UK heating season. The impact of ESW is also evaluated.

As discussed in Chapter 9/Lessons learned, the recommended planning model for the design of energy-related behavioural programmes is the PRECEDE-PROCEED planning model. Therefore, the model is taken as the starting point in the discussion of the elements of the strategic plan in the following chapters.

5.2 *From policy goals to programme goals*

As defined in the PRECEDE-PROCEED planning model (see Chapter 2.3), **Phase 1 in programme planning involves diagnosing the relevant changes in behaviour and context (environment) to meet the <u>policy goals</u> and <u>programme goals</u>**.

In the BEHAVE Project, the policy goals considered are principally energy conservation, increased use of renewables and reduction of CO_2 emissions. Two cases, Swedish Don't Drink and Drive (S 1) and Finnish Campaign on Safe and Economic Driving (Fi 5), incorporated health and safety goals.

In EU Member states, more specific policy goals for the household sector/consumers regarding energy efficiency have been described in the National Energy Efficiency Action Plans (NEEAP) submitted in the context of implementing the Energy Services Directive. These plans define the energy savings to be achieved in all sectors, including in the household sector and describe the means how to achieve them. In addition, Member countries may have other energy efficiency or climate strategies where policy goals have been set (such as the Energy Efficiency Strategy for Spain or the UK climate change programme). Furthermore, in some countries local governments or larger communities might establish their own goals. However, many programmes have been implemented in time when no explicit national policy goals for households/consumers had been established yet. For example, this was the situation when the Dutch Energy Survival (Nl 12) was launched in 2005.

There are two principal ways how the policy goals are transposed into programme goals and actual programmes. The initiative can come from the government which has defined the role of behavioural change in reaching its goals and established priorities. At best, this approach might pay due attention to the cost-effectiveness of behavioural change programmes and other approaches such as legislation and regulation, financial instruments including taxation, R&D etc. However, in real life, such thorough analyses are rare. Alternatively, the initiative may come from national energy agencies or other stakeholders who propose programmes based on their best judgement of the policy goals (or their absence). This may be part of their official role in policy implementation. In this approach, many different factors affect the proposed projects ranging from programme history to the individual interests of the programme

designer. In real life, both approaches can often be somewhat arbitrary lacking transparency. The lack of transparency is reflected in the case studies which shed little light on the details of the process. One of the exceptions is the Energy Efficiency Strategy for Spain which proposes specific communication activities aimed at raising public awareness.

An example could be found where the programme was a national parliamentary initiative. The Finnish Climate Change Communication Programme (Fi 3) was launched as a parliamentary initiative as part of the implementation of the National Climate Strategy. This is a typical example of a programme with very broadly defined objectives (inform the general public about climate change). However, in the implementation numerous individual projects with more clearly defined goals were carried out. The Nordic Swan Label (S 4) represents yet a different type of initiative as its introduction was initiated by the Nordic Council of Ministers as an official Nordic eco-label.

One effective tool to improve the process would be the use of ex-ante evaluation whereby the (cost-)effectiveness of the programme needs to be demonstrated. Again, no examples were given in the case reports. However, it is likely that it is used in some, if not many, Member countries.

Behavioural Change

To achieve the programme goals, the programmes reported in the cases aim to have an effect on habitual behaviour (mentioned 31 times in the 41 case studies), investment behaviour (mentioned 29 times) or on energy behaviour in general (mentioned 19 times).

Phase 1 of the PRECEDE-PROCEED planning model includes also the analysis of the changeability of behaviour and it advices to start with behaviour which has the greatest impact and is most easy to change.

> Changeability: Few case included analysis results addressing the changeability of behaviour. There are various explanations: it was not reported, it has not been analysed or the programmes are implemented based on experience and tacit information accumulated to the programme designers. The last consideration is probably quite relevant given that over half of the programmes are either continuous activities or implemented after older similar ones. Inefficient ones would have been terminated.

> One example of formal analysis can be found from the Dutch Energy Survival case (Nl 12) where studies showed that the age group of 8-12 year old school children was most susceptible for information to be provided.

> Changeability is a topic which can be addressed in consumer segmentation. For example, green consumers (see Annex 3) are more likely to control their consumption in comparison to more traditional consumers.

<u>Impact</u>: The case studies did not include analysis results comparing the impact of influencing certain type of behaviour. The same explanations apply as in regard with changeability.

Most energy behaviour is habitual behaviour. However, without analysing the situation, it is not always clear which has higher impact, habitual or investment behaviour. Some investment decisions, such as choice to build a low-energy house or a decision to decline to buy a vehicle could have quite significant one-shot impact on energy efficiency as compared to use. Also in some smaller investments, such as cold appliances, energy consumption is dominated rather by the technical efficiency than the impact of use.

<u>Easiness of change</u>: The case studies did not include analysis on the easiness of change. Again, the same explanations apply as in regard with changeability.

Habitual behaviour is much more difficult to change than investment behaviour (planned behaviour) which is easier to influence by cognitive messages and facilitating instruments. In addition to cognitive messages, habitual behaviour needs to be addressed through influencing the social and institutional conditions that affect moral choice and social identity, and through addressing the situational conditions associated with specific actions (Egmond & Bruel, 2007).

Context

In the contextual analysis (see Chapter 4) various external elements have been identified and described. In this phase, it is necessary to conduct a contextual analysis trying to find answers to the following questions:

Which elements are relevant in our country?
What is their current impact on energy behaviour?
What needs to be changed to reach the programme goal?
(The implementation of these changes by different instruments is part of Phase 3)

Information on the impact of various contextual elements on programme design was abundant. For example, in the Austrian case study "Climate Heralds" (A 5) it was stated that national programmes requiring regional support can be difficult to implement in a federal country whereas national programmes implemented through other national structures can be easier to carry out. The same programme made innovative use of non-energy regulation whereby all households having a fireplace were required to organize annual chimney sweeping making it possible to disseminate information through the chimney sweepers. In the Finnish case study "Energy Efficient House" (Fi 4) the programme is heavily dependent on knowledge on the activities, interests and strengths of the numerous stakeholder and institutions whose co-operation and support is necessary to promote low-energy single-family houses. The number of co-operating parties in the programme is 23 plus the coordinator. More examples can be found in Chapter 4.

Goal setting is also closely linked with market segmentation (see Chapter 5.3) because programme goals should already address certain market segments which have been chosen as the target group: "The programme objective is to achieve A in target group B consisting of market segments C and D".

5.3 *The determinants of desired behavioural change*

Determinants of desired behavioural change = The factors are motivational, enabling or reinforcing. They need to be recognised, analysed and integrated into the strategic plan in such a way that they induce the desired behavioural change.

According to the PRECEDE-PROCEED planning model (see Chapter 2.3), **Phase 2 in programme planning involves assessing the determinants corresponding to desired behavioural change.** These are motivational (predisposing), enabling and reinforcing factors. Examples of motivational factors are awareness, knowledge, social norm, attitude, self-efficacy and intention and some socio-economic variables as income. The enabling factors are external to the individual such as financial, technical or organizational resources or new skills which need to be provided. The reinforcing factors include feedback and support such as advice.

The factors which the programmes aimed to influence were identified by the programme managers in the case reports. 37 cases aimed to influence motivational factors, 17 cases enabling factors and 16 cases reinforcing factors.

Assessing the determinants is closely related to market segmentation because the three factors need to be related to certain behaviour of certain target groups.

The analysis of the determinants was not always explicitly mentioned being part of the planning phase of the case programmes. Nevertheless, the determinants are evident in one way or another in most the cases. Apparently, in most cases there either has been analysis of the determinants at some level or the planning has been based, again, on the experience and tacit information accumulated to the programme designers. This just simply has usually not been reported.

It should be noted that most programme managers reporting the cases have never heard of the PRECEDE-PROCEED planning model or it has been introduced to them very briefly. Many programme managers are external to the BEHAVE Project and the theoretical paper produced in WP 2 was not yet available to the project partners when the detailed templates were collected. This explains the fact that the concept of "determinants" may not have been very familiar for the programme managers.

5.4 *Market segmentation and selection of target groups*

Market segmentation = Splitting the consumer markets into sub-segments that differ from each other in respect to their attitudes, values and socio-demographic features (class, income, age, education etc).

Target group = The market segments which the programme targets.

5.4.1 Market segmentation

As discussed in Chapter 5.2 and 5.3, market segmentation is an important pre-requisite for establishing programme goals and analysing the determinants of behaviour (Phases 1 and 2 of the PRECEDE-PROCEED planning model).

Segmentation forms an important basis for the success of a campaign, since finding homogenous subsets helps to formulate and implement programme goals and to reach the desired target groups. That is, the markets should be segmented at least to some extent.

In market segmentation, consumer markets are split into sub-segments that differ from each other in respect to their attitudes, values and socio-demographic features (class, income, age, education, etc). A thorough and systematic segmentation would involve finding out some core characteristics of the markets, in consumer markets, for example, the type of household (single households, couple without children, family with children…) or geographic differences.

However, in market segmentation it should be kept in mind that each individual has many alternative and overlapping roles (see Annex 3). Firstly, people act in double roles as consumers and citizens. As consumers, people look for direct fulfilment of needs and wants without considering sustainability. As citizens their actions are guided by long-term orientation taking environmental matters into consideration. Secondly, people have different roles in their daily lives in work, at home, and in social circles and leisure time activities. Thirdly, some other roles (the chooser and the activist) and the impact of green consumerism are described in Annex 3.

This information helps then to choose which segments to address (i.e. choice of target groups, see Chapter 5.4.2) and to position and design an appropriate marketing mix for each segment. The overall intent is to identify groups of similar consumers and potential target groups; to prioritize the groups to address; to understand their behaviour; and to respond with appropriate marketing strategies that satisfy the different preferences of each chosen segment. In the end, this leads to significantly improved campaign effectiveness. With the right segmentation marketing results can be improved because messages are directed to right target groups through the best channels.

The cases showed mixed results with this respect. There were plenty of well-planned campaigns. For example, the Netherlands' project "Energy survival" (Nl 12). In this case energy marketing was communicated to schoolchildren by dividing the market in smaller segments: children between the ages of 8/10-12 years, the 'tweens'. Although the target group still is huge, 2 million youngsters, it is possible to identify homogeneous features that apply to the whole segment. This helps to design the appropriate ways to communicate with this age group, which in the Energy survival case was realised by independent marketing research. Some cases reported a very careful preparatory phase in which pilot studies were conducted in order to find out what the current situation in a given field was and what kind of change would be needed. For example, the Spanish case concerning collection of fried oil from households (E 9) and all the UK cases were started only after a systematic field study.

However, in many programmes no segmentation or other formal needs assessment was conducted. Sometimes it was felt that the pressure for the project came from political interest and therefore the segmentation was not carried out (Electricity Savings in Households, Norway, N 3). In an Austrian case "Fair Energy" (A 3) it was stated that no deep analysis of the markets were necessary, given that the programme was targeted to whole private sector, i.e., all households of Upper Austria. It was claimed that an easy access to the address data of all households would have been sufficient for the success of the campaign which covered 550 000 households altogether. However, only 3000 energy checks were ordered and no information about the customer satisfaction was attained because there was no evaluation of the target group. In other words, the campaign was not planned all the way – despite the 100% coverage – because no information about the differences or similarities of segments and target groups was available. Thus, the goal of the campaign – the household, remained quite obscure and no results were obtained about how they used the energy check.

5.4.2   Selection of the target group

A target group is the primary group of people that something, in this case a social energy efficiency campaign, is aimed at appealing to. A target audience can be people of a certain demographic variables such as age group, gender and race, or psychographic variables, such as lifestyle features, attitudes and worldviews. Without knowing the target audience social advertising and the selling of a particular value and information can become difficult and waste of resources and funding. The choice of target groups should be based on market segmentation (see Chapter 5.4.1).

In the cases it was quite common to address the wide public as 68% of the cases mentioned the consumer and citizens as a target group and 59% of the cases households. More focused target groups were school children (mentioned in 29% of the cases), youngsters (20%), intermediary parties such as NGOs, social workers, teachers (15%), the elderly (10%), low-income groups (7%) and employees (7%). Sometimes other target groups, such as the media, were mentioned.

A large energy efficiency campaign was carried out by Germany in its "Energy efficiency in private households" (D 1) where the goal was to reduce energy consumption in private households. However, the target groups included all possible types of end users in the private sector, in short all the German households, as well as multipliers. In this respect, it is difficult to perceive how the campaign managed to reach all different types of households, since an important factor affecting the success of the campaign is the type of household. Different households are in different life stages and have different needs. E.g. a retired couple (in average) uses less energy and for different purposes than a family with small children. The interest towards energy campaigns may thus vary between these two households, a family with children may be more apt to absorb information about how to decrease energy bills while elderly couples may not pay much attention to the issues, since their energy consumption may be quite modest. Or like in the Dutch case "Energy box" (Nl 11), energy prices were not a reason to take part in the campaign.

The different school campaigns could be mentioned here to underline successful planning and targeting. Many of them showed that by concentrating on a single target group and using its own language and in its own familiar surroundings helps to combine also other stakeholders as indirect target groups. In school programmes this meant, for example, commitment of the teachers and the parents.

Somewhat surprisingly, elderly consumers form an important target group that was underrepresented as campaigns' target group. Today's senior citizens form a significant part of consumers. Many have money and are also willing to spend it. This consumer group in fact complains that they are not enough taken into account by companies and service producers. Companies are slowly awaking to their existence and more and more products and service packages are created also to this consumer group. Energy campaigns should not ignore elderly people. The group is not homogenous, however, and their potential to reduce emissions and attitudes to the environment are very different depending on socio-economic as with other sections of society. Depending on the pension and social security systems as well as housing structures, there also can be large differences between countries.

5.5 *Choice of instruments*

Instrument = Communicative, regulatory and economic instruments and structural provisions which are matched with the determinants of behaviour to induce the desired impact.

"I know that half of my advertising is wasted: The problem is that I don't know which half."
John Wanamaker

As defined in the PRECEDE-PROCEED planning model (see Chapter 2.3), **Phase 3 in programme planning involves choosing the instruments.** They need to be matched with the determinants of behaviour. Different types of instruments include communicative, regulatory and economic instruments. Sometimes structural provisions, namely changes in infrastructure and technical provisions, are mentioned as the fourth group of instruments. In Figure 2, some possibilities to match instruments and determinants are indicated. However, the table should be taken rather as an example of a matching tool than a definite model. It immediately raises some questions, such as why benchmarks are not considered to contribute to self-efficacy.

policy instruments:	Predisposing factors						Enabling factors				Reinforcing factors			
	Awareness	Knowledge	Organizational norms	Subjective norm	Attitude	Self-efficacy	External financial resources	External technical resources	External organizational resources	New skills	Feedback of peer organizations	Feedback of experts	Feedback of authorities	Feedback of customers
1.1 General Laws and Rules			2		1								1	
1.2 Specific permits			2		1								1	
1.3 Enforcement	1		2	1	2		1	1					2	
1.b Covenants and Agreements	1		1	1	2						2		1	
2.1 Subsidy	1				1		2						1	
2.2 Levy	1				1		2						1	
2.3 Tax differentiation					1		1						1	
2.4 Financial Constructions					1		2		1	1		1		
3.1 Information and promotion	2	1	1	1	2	1		1		2	1	1	1	1
3.2 Training		2			1		1	2	2			1		
3.3 Personal advice		2			1	2	1	2	1			1		
3.4 Demonstration	1	1			1	2	1			1	2	1		
3.5 Benchmarks	1			1							2	1		2
4.1 Infrastructural Provisions	1				1	1		2	1					
4.2 Technical behavioural steering	1				1	1		2	1					

Grey cells indicate that there is an effect on a determinant.
A number in a cell means: 2 is a primary effect; 1 is a secondary effect.

Figure 2: Some possibilities to match instruments with determinants of behaviour (Egmond & Bruel, 2007)

The selection of the detailed communication channels must start with a clear vision of target audience: individuals, groups, particular publics, or the general public. This effects to communicator's decision on what to say, how to say it, when to say it, and to whom to say it. It was referred already earlier to the Dutch case "Energy box" (Nl 11) which goes for an example of timing: the message should be sent in the right moment in order to penetrate target audience's consciousness on energy saving issues. Otherwise the message may fail to reach the target persons.

Individual attitudes, values and actions also influence in the degree and the extent to which a message penetrates consumer's awareness. Therefore, communication should be developed so that it 'cuts a dash'. In other words, marketers might want to put something into consumer's mind, change an attitude, or get the consumer to act. That is, the message sent should be seeking a cognitive, affective, or behavioural response.

In terms of communication channels, traditional channels still dominate: booklets and brochures were distributed in 78% of the cases and in 68% of the cases information was disseminated through journalistic materials. Personal advice as well as training were both provided in about half of the cases. New channels, such as infotainment were used in one third of the cases and digital channels in three cases. More detailed information on the frequency of different types of information channels can be found in Chapter 3 (see Table 9).

In the case-studies, all categories of instruments were used. Hereunder, some examples are given:

A. Communicative instruments, such as:
- Different marketing mixes ranging from leaflets to TV ads and open events at local level. For example, heat pump campaign in Austria (A 4) used both direct mail to inform possible customers and organised performance measurement of installed heat pumps.
- Internet was used in various ways ranging from basic information dissemination to e-learning courses (Training Plan on Energy Labelling for White Goods Salespersons, E 8), energy efficiency scans (Energy Efficiency Domestic Index, E 1) and making individual climate change commitments (Challenge for the Earth, Fr 5).
- Training and motivation of professionals, for example, training courses for heat pump installers, motivation of chimney sweepers by showing an educative film and this way verifying that partners are involved with the programme goal.
- Personal advice was provided to consumers in half of the cases. However, only France (Fr 8) and UK (UK 3) presented cases where completely new permanent advisory centres were established. In other cases advice was provided mainly through existing institutions.
- Although learning-by-doing has been recognised as a highly effective communication channel, demonstrations were used in only eight cases. Half of the cases were larger energy efficiency or climate change campaigns with multiple communication channels in use. Surprisingly, among the three eco-driving cases only in the Finnish one (Fi 5) demonstrations were reported as a communication channel.
- Although benchmarking/comparisons were used somewhat more than demonstrations, it was rare to use benchmarking as the sole or main communication channel. Instead, it was used in combination with other instruments, e.g. demonstrations. In campaigns promoting certain technologies, like wood pellets in Sweden (S 7), information on their performance was given in comparison with other technologies. When the Nordic Swan Label, presented by Sweden (S 4), is given to a product, it immediately differentiates it from its peers environmentally, i.e., benchmarks it positively.
- As stated in UK's National advertising campaign (UK 1) programme partners should be the ones that have environmental credential and not PR "greenwash". Therefore, it is worth carefully considering the use of celebrities or other famous people from the media as campaign ambassadors since they do not often fulfil the requirement of environmental credibility. Another example of using celebrities is the French case "Challenge for the Earth" (Fr 5). While the programme targets were exceeded in terms of CO_2 reduction, the activity level of the 40 celebrity "ambassadors" was considered somewhat disappointing.

B. Regulatory instruments:
- Legislation was behind all programmes implemented in connection with the EU energy label (Fr 6, E 7 and E 8).

- Two programmes, the Finnish energy awareness week (Fi 1) and German Energy Efficiency in Private Households Campaign (D 1) reported the programmes having links with voluntary agreements. However, the details of these links remained unclear from the case templates.
- The Swedish case Don't drink and drive (S 1) is an interesting case because in addition to legislation - strictly enforced with the threat of penalty - still a behavioural change campaign with strongly emotional messages was necessary. The case clearly demonstrates how difficult it is to change behaviour even in the existence of stringent legislation and when people already have adequate knowledge/awareness.

C. Economic instruments were also sometimes used as in the Norwegian case on Energy saving in household (N 3) where a monetary subsidy was paid to the customers who invested to electricity-saving heating technologies. In the Bulgarian National Program for Renovation of Residential (B 5) also tax differentiation and ESCOs are used in addition to subsidies.

D. Structural provisions, namely technical ones, were used in the Dutch Energybox case (Nl 11) where households were given a mix of items (e.g. energy-efficient lamps) to improve energy efficiency. However, the case could also be considered using an economic instrument because instead of providing subsidies or grants, equipment was provided free of charge. Examples of changes in infrastructure could not be found among the cases.

In the case studies, the process of matching the instruments with the determinants of desired behaviour is not transparent. It is not known whether programme managers have used any specific tools, similar to the matrix presented in Figure 2, or have they based their selection of tools rather on practical experience.

5.6 *Organization and management*

Programme organisation and management stood generally on two main pillars: local or national partners. Moreover, different level networks such as authorities, communities, NGOs and business companies (the societies for nature conservation, educational associations, environmental managers, business representatives) worked in close co-operation. The wide co-operation has its pros and cons, on the one hand, action can be divided between many parties and information can be disseminated widely but on the other hand, someone has to be responsible for the whole organisation and management of the program, which can be complex and time consuming.

In the cases reviewed, several problematic areas can be mentioned:

- lack of time
- lack of resources, and
- unclear division of responsibilities.

Difficulties in achieving well-defined organisation were demonstrated in the Swedish project "Wood pellet heating" (S 7). Cooperation and campaign organisation between

different partners was sometimes difficult signifying that the campaign lacked the person(s) / partner(s) that would lead the project according to plans.

These weaknesses described relate to designing and managing of value networks (= the partners and members who really carry out the different stages of the campaign) and marketing channels (= communication to target group). Those who are responsible for designing and managing the campaign must pay attention to the channels' members. That is, all the members must be selected, trained, motivated, and evaluated according to goals and a joint strategy defined for the whole campaign. Otherwise project members get confused and the campaign suffers. As the Swedish case report (Wood pellet heating, S 7) stated: "The joint steering group had some difficulties in organizing its work and coordinating the programme activities, and the communication gave unclear signals about who was doing what, and who was responsible for the campaign." Unclear roles may cause troubles and decision-making should not be split among too many members.

5.7   *Risk analysis and back-up plan*

Risk analysis = Analysis of the risks related to the campaign's overall effectiveness (success of communication, attitude and behaviour change, co-operation etc.), funding, exogenous factors and the consumers' perceptions of the risks from their perspective.

Back-up plan = Preparing a contingency plan to deal promptly with the situation if the risks materialize into problems.

5.7.1   Risk analysis

The risks that different social projects, in this case energy campaigns, contain are mainly related to the campaign's overall effectiveness (success of communication, attitude and behaviour change, co-operation etc.) and funding. Unlike construction projects, no large investments are generally made in these projects. The purpose is not to increase sales, per se, but rather active and motivate consumers or other target groups to act responsibly. This naturally may indirectly be seen in increased sales of energy efficient domestic appliances or use of heat pumps and pellet stoves for heating, for example. Therefore, the risk may stay quite low although unsuccessful projects would use resources that could be more effectively deployed elsewhere and could actually de-motivate consumers.

It must be emphasised, however, that just because of the low economic risk, the planning and preparation of different campaigns may remain insufficient and this in fact poses a risk in itself. In other words, once funds and other resources are offered, the campaign is executed but no evaluation of its effects is conducted.

Because not all the cases are only social by nature but involve also investments, actual building of for example, like in Spanish case, new bio diesel plants, the risk is real if

the campaign fails and no changes in consumption behaviour happen. The campaign succeeded quite well despite of the numerous barriers: "People collaborate in the recovering of used vegetable oil during the dissemination campaign and they are still leaving the used vegetable oil in the containers placed in the clean points around the cities. People's behaviour changes as they have access to information that they didn't know before. Also investors will have noticed that a biodiesel production plant could be a good business opportunity in the region."

A risk relates to conflicts between partners of the programme. When a campaign is put through a marketing channel there is always a potential for conflict and competition resulting, for example, from goal incompatibility, poorly defined roles and rights, perceptual differences, and interdependent relationships. Potential conflicts must be anticipated already in the planning phase as discussed above. The project management should view the project members in the same way it views its consumers or end-users. The management should, therefore, provide training programmes, market research programmes and other capability-building programmes to improve members' performance. In some case studies such things were implemented as part of programme implementation, for example, in French energy label project (Fr 6), sales persons were trained on energy issues regarding energy efficiency and energy labels. It is much more likely that when sales persons know the goals of the campaign they can transfer those to their customers.

5.7.2 Back-up plan

Back-up is an important factor for the success of the campaign. If problems occur there should be a contingency plan to handle the problem without interrupting the undertakings (timetables, goals) of the programme.

In some cases the need for a back-up was felt as quite irrelevant while in the others this was taken into consideration. Back-up planning was rarely referred to as such. The back-up was embedded in the preparatory phase and dealt usually with close engagement of the participants to the realizing of the programme.

From consumers' point of view the lack of back-up may be manifested in disinterest towards a product / a desired behaviour / campaign. As it was stated in the Austrian case "Climate herald" (A 2): "Do not overestimate peoples' interest in energy conservation in order to avoid too ambitious aims." Despite what the resources are there is no sense from consumers' standpoint if there is no support and advice for them that would inform them in difficult situations. This is the case with the use of complicated home equipments for example. The Dutch case "Energy box" (Nl 11) overcame this by focusing on the rational behind the project: "Facilitating energy saving investments by giving information and making it easy to order, and taking away unfamiliarity with products, energy costs and savings."

The Spanish case on collection of fried oil from households (E 9) confronted many problems and barriers in motivating consumers to use biodiesel. These were anticipated, however, in the preparatory phase and the campaign was despite these barriers a success at least to some extent and consumers were really activated to collect and recycle domestic oil.

5.8   *Programme testing and pilot campaigning*

Programme testing = Testing two or more concepts in a small sample of the target group before choosing the final concept.

Pilot campaigning = Implementing the programme in a smaller scale before full scale (e.g., national) implementation.

In marketing literature the concept "testing" relates to product or experience testing. In this report, concept testing regards especially experiences, since it is a question about developing a social campaign directed to increase energy efficiency by different means. It is self-evident that testing is needed in order to find out the reactions of consumers to certain stimuli. In this way feedback is obtained about the functional and psychological performance of the concept. Testing can yield valuable information about the potential programme effectiveness.

This procedure was applied to some case studies. It seems also that testing was implemented in the planning and preparatory phase, and this seems rational because concept testing is part of marketing planning. For example, in the UK:

> *We undertake media audits and stakeholder satisfaction work to further test the effectiveness of our activity and undertake/fund wider research on how best to communicate our messages and the policies needed to deliver this. For example our report on the role of education and schools in shaping energy-related consumer behaviour, the Linguistic Landscapes report on the evolving discourse of climate change in the UK and our work on the public acceptance of micro-generation technologies. (UK 1)*

In the Dutch case of Energy box (Nl 11) three marketing concepts were developed in order to test which concept would capture best end users motivation. The testing was found important, since it was found difficult to find a range of suitable products that could make up the variety of the choice list.

The review of the case-studies highlighted several points. First, testing the effectiveness of communication is important in order to be able to communicate in right manner to the target group. The campaign must use a language familiar to the target group. Second, consumers' decision to adapt new products is never self-evident. Their needs are not always those anticipated, for example, as the Energy box case showed, contrary what was thought people are not necessarily motivated in the energy saving issues when they receive their energy bill. It showed also that although offered for free, people may not become regular users of energy saving light bulbs. They may also reject a new product. Rejection becomes even more probable when it requires changes of usual consumption habits and routines. People are used to behaving in a certain manner and thus, changing that requires "selling" a new

lifestyle, which should ideally be motivating both in economic and behavioural terms. This brings us to the third point, to consumer-adoption process. It is easier to adopt a new, less consuming appliance if a consumer gets a relative advantage of it compared to the old one. This become evident in Energy box case: "Apparently it was difficult to find a range of suitable products that could provide variety in the choice list. As the Energy Box therefore mainly aims at energy saving light bulbs, and this was the most ordered product as well, it probably is not the best way to stimulate small investment behaviour."

Pilot campaigns are part of concept testing. The project "Open doors" (Greece, Gr 1) aimed at creating an innovative pilot mechanism for informing school children and their teachers on renewable energy sources and energy efficiency. The French energy label case (Fr 6) utilised pilot studies in testing the campaign first in local level and then in the national level. Finnish case of Energy awareness week (Fi 1) had also utilised pilot cases in developing the campaign in the forthcoming years: "…in the first year of the energy awareness week (1997) eight pilot cases were analyzed. That study gave a good basis for the implementation of the week for the following years."

5.9 *Resources*

Resource = Financial and human resources needed to plan, implement, monitor and evaluate the programme.

Lack of financial resources was named as a hindrance to campaign success or management in some case studies. This was the case, e.g., in Bulgaria (Energy efficiency law, Bg 10), since financial support was not secured. Budget was found insufficient also in Finnish campaign on safe and economic driving (Fi 5) and Austrian Climate Herald campaign (A 2).

Lack of project staff was reported, e.g., in the VVO Housing company's yard talk campaign in Finland (Fi 6) and the French Challenge for the Earth (Fr 5).

The French local energy information centres (Fr 8) faced problems with the qualifications of advisory staff who were relatively young and inexperienced as they were employed through government-aided temporary employment system at relatively low salaries.

5.10   *Planning of monitoring & evaluation*

Monitoring = Monitoring providing feedback to programme management to allow effective control and provides performance data for the ex-post evaluation of the programmes

Evaluation = Evaluation of the effect/outcome (behaviour changed and energy savings) of the programme as well as the systematic assessment of the programme (process evaluation).

> *It is very important to have a good monitoring and evaluation scheme in order to find out whether all project partners do their job sufficiently and the project meets the needs of the target group. (Austria A 2)*

Monitoring can be used to provide the programme management information on the success of the campaign to allow correct and prompt action if necessary to ensure that programme goals are achieved. Also the needs of the target group, i.e., the consumers or other end-users can be monitored by asking them questions about how they perceive a campaign. This is typically done by conducting a feedback survey where campaign-related questions are posed. The surveys are based on telephone calls, postal questionnaires or web-based elements.

An important part of monitoring is also to collect data on how the behaviour has been changed to allow ex-post evaluation after the campaign. Any comparative study is impossible to realize if there is no data available of the situation in the beginning of the campaign. Thus, it is impossible to find out the direction of the change. Therefore, a campaign should always start with an analysis of the current situation. The change may deal with attitudes and awareness. When it is question about behavioural change, there should be a measuring instrument that would inform about the real change.

Monitoring was sometimes left only on a hypothetical level. No evaluation of the success of campaign was done and therefore, no real developments for forthcoming projects were possible to do. This was clearly a weak point of such cases and the impression received was that there was no need to report about the overall implementation and realisation of the campaign especially in such cases that were labelled as pilot cases.

In short, monitoring and evaluation at appropriate level of detail need to be planned from the outset and resources must be secured.

More detailed information on the monitoring and evaluation actually conducted in the cases is given in Chapters 7 and 8.

6   IMPLEMENTATION

6.1   *Planning the implementation*

Even a brilliant strategic marketing plan counts for little if it is not implemented properly (Kotler 2003). The formulation of the strategic marketing plan was discussed in Chapter 5.

A question can be posed: how can a strategic marketing plan be implemented effectively? Marketing implementation is the process that turns marketing plans into action assignment and ensures that those are executed in a manner that accomplishes the plan's stated objectives (op. cit.). The implementation phase should address the questions: Who? Where? When? How?

Successful implementation depends on the following key elements:

- First, it requires an action plan that pulls all the partners and activities together. The action plan should show what must be done, who will do it, and how decisions and actions will be co-ordinated.

- Second, the organisation group's decision-and-reward systems –formal and informal procedures affect the implementation. This emphasises the importance of co-operation between different parties and in motivating them to work together for the shared goal.

  Motivation of the partners was sometimes difficult. For example, the Austrian case "Climate heralds" (A 2) stated that motivation of chimney sweepers was essential for the successful management of the campaign. However, there were big regional differences in the motivation of professionals which hindered the campaign implementation. This case shows that motivating the core partners is of enormous importance. If those are not ready to spread the campaign goal there is hardly good chances to get the target group (consumers) motivated.

- Third, it is also important to reward the target group; such an action was carried out in the Spanish case on collection of fried oil from households (E 9): "Dissemination of gifts and promotional objects such as stickers, kitchen magnets, kitchen cloths or textile bags to all those people who bring oil waste."

6.2   *Skills required*

According to Bonoma (1985), there are four sets of skills needed for implementing marketing programmes: 1. diagnostic skills, 2. identification of company level, 3. implementation skills, and 4. evaluation skills. The problems identified in the cases related typically to points 1 and 3. These two categories are discussed in a bit more detail hereunder.

Diagnostic skills: It occurred with some cases that marketing programmes did not fulfil expectations and it can be asked whether it was the result of poor strategy or poor implementation. If it was about poor implementation, what went wrong? Weaknesses relate to the overall commitment to the project goals and insufficient knowledge about how much labour force implementing a project requires. The main criticism of the operation regarding French case "The Challenge for the Earth" (Fr 5) was directed partly towards the implementation, the lack of ambition and the associated human means to carry the programme through. Also the amount people working full time was not sufficient.

Implementation skills: To implement programmes successfully, marketers need also following skills: allocating skills for budgeting resources, organising skills to develop an effective organisation, and interaction skills to motivate others to get things done. The Spanish case Sunrise Building (E 10) highlighted the importance of interacting programme goals and end users awareness. The weak point is the lack of training and awareness of the owners who live in the homes and the neighbours in the immediate surroundings, in everything to do with systems of energy efficiency as well as social relations since being the recipients of social housing constitutes a less privileged sector of society with reduced access to training in general.

6.3 *Detecting problems*

Detecting the problems in a timely manner depends on the existence of an effective monitoring and control system. Without monitoring it is difficult to discover the problems in a timely manner and to react to them promptly and in a correct way. Therefore, it can be considered as paramount in programme implementation. Monitoring and control is discussed in more detail in Chapter 7.

7 MONITORING AND CONTROL

Monitoring serves two objectives in programme implementation:

1. Providing feedback to programme management to allow effective control
2. Provides performance data for the ex-post evaluation of the programmes

The two objectives feature different types of monitoring which can be a cause of confusion in terms of terminology. To avoid confusion, the two objectives are discussed separately in the report:

a. "Monitoring and marketing control" (Chapter 7) deals with monitoring of the performance during programme implementation. Here, monitoring is the **ongoing** review of outputs of a programme /project that can be measured as the activity is ongoing and compared to planned outputs for performance control.

b. "Process and impact evaluation" (Chapter 8), although often uses data collected during monitoring, discusses ex-post evaluation. Here, evaluation is the assessment of the outcomes of a programme /project and is usually undertaken **ex-post** to understand impact and how the impact has been achieved. In this context, monitoring data is used in order to understand and provide supporting evidence of the outcomes.

At best, monitoring and evaluation give working tools to market and argue the goal of the programme.

Monitoring was conducted in varying ways in the case programmes, sometimes conscientiously, sometimes inadequately and sometimes not at all. In total, 32 cases out of 41 reported that monitoring had been conducted.

7.1 *Control*

In order to be prepared for possible surprises that may take place during the implementation of marketing campaign those responsible for the management of campaign should engage in constant marketing control. According to Kotler et al. (2005) marketing control means "The process of measuring and evaluating the results of marketing strategies and plans, and taking corrective action to ensure that marketing objectives are attained." It involves four steps, which help to control the overall process:

1) Remember your goals: "What do we want to achieve?
2) Measurement of performance during implementation: "What is happening?"
3) Evaluate performance: "Why is it happening?"
4) Take corrective action: "What should we do about it?"

Point one, the goals, relates naturally to the overall campaign design (see Chapter 5). In control and monitoring phase one should return to the starting points and keep in mind the goals checking whether they have been achieved. Points two and three, measurement and evaluation of performance, monitor the causes of any differences between expected and actual performance **during implementation**. Last point, taking corrective actions, is needed when there are gaps between the goals and the performance. These four phases are discussed below in context of the case studies.

7.2 *Starting from the goals*

Formal planning can yield many benefits for a social campaign, and vice versa, a superficially prepared plan cannot achieve the desired goals and may remain ineffective. Strategic planning and goal setting was discussed in Chapter 5.

An effective tool in helping to reach the programme goals is to establish performance indicators which can be monitored during programme implementation. They can also be of help in ex-post evaluation. A list of indicators used in the case programmes is given in Chapter 7.3.

The terminology "performance indicators" was rarely explicitly mentioned but it was clear from the programme descriptions that they had been formulated quite many cases. However, what remains more unclear is, have any target levels been established for the performance indicators. In the Austrian heat pump and solar heating programmes it was stated that although performance indicators were formulated, target levels had not been established.

7.3 *Measurement of performance*

The case studies utilised monitoring and gathered feedback by various means. A closer scrutinising of the monitoring methods used turned up the following indicators for monitoring the progress of the campaign:

- The number of print and electronic materials which were produced and distributed
- Number of people who attended the events
- Number of advertisements and radio spots for publicizing the campaigns
- The number of people who saw a TV campaign
- The number of re-orders of the campaign material
- The visitors at the web-site
- Market data versus claimed number of installations or investments
- The number of subsidy applications and amount of subsidies granted
- The number of contacts with advisors, topics of the contacts and advice given
- User opinions/satisfaction
- Measurement of used technology via database
- Measurement of energy savings and emission reductions

A slightly different set of indicators was listed in the Spanish case Economic Support for the Renewal of White Goods in the Community of Madrid (S 7): "The proper development of the Plan was monitored by checking that the discounts were applied correctly by the retail establishments, that the customers were informed that these were due to the type of domestic appliance they were purchasing, that they were supplied with proper information, and that that they were given the informative brochures, and that the salesmen had the required training. The increase in the proportion of class A domestic appliances was also confirmed."

An interesting point reported by the programme manager of the Dutch EcoDriving campaign (Nl 9) was that in a programme involving a multitude of partners not everything can be monitored. There seems to be a need to strike balance between the monitoring objectives and resources.

7.4   *Evaluation of performance during implementation*

The list presented above categorises the major types of monitoring that were used to get feedback of the campaign progress. Those included both qualitative and quantitative methods and instruments. The most typical performance evaluation methods were surveys and interviews and use of databases to record the activities (e.g. energy advice given).

There were cases where monitoring and performance evaluation was executed with careful planning and where also the attained information was made use of. For example, all the UK cases logically followed the same methodological pattern from the very goals of the programme to monitoring and the ex-post analysis of the campaign. Each campaign, however, modified the theoretical framework for its own specific purpose.

In long-lasting or permanent programmes, quite formal evaluations during implementation were reported. For example, in the operation and performance of French energy information centres (Fr 8) has been evaluated frequently. The German Campaign Energy Efficiency in Private Households (D 1) is planned to run from 2002 to 2008. It has been subject to frequent third-party evaluations during implementation, first twice a year and from 2005 once a year. Also the Swedish Climate Campaign (S 6), although it lasted only for three years, was evaluated during implementation.

Measurement of the investments made and of used technology was one effective way of control. This came into question in campaigns involving electronic equipments and similar. The number of applications and their distribution on supported technologies could be monitored continuously via the application database. Also the number of payments and total payments could be monitored the same way, together with the number of units of the different technologies actually installed. An example of such an approach is the Norwegian case Electricity Savings in Households (N 3).

The Nordic Swan Label (S 4) is the official Nordic eco-label. Approximately every three years the criteria documents are reviewed and products carrying the label have new, revised criteria to live up to. The process ensures continuous improvement.

Basically, monitoring of the markets and research results are prerequisites for the establishment of the new criteria.

7.5 *Taking corrective action*

Monitoring the ongoing actions is needed in order to secure the achievement of the goals. If any problems or conflicts occur, corrective actions need to take place.

In the case programmes, difficulties were identified relating to improving the visibility among the target group, enforcing both national and local support and interaction between project members, development of better product version according to the feedback, increasing the number of personnel, informing target group through interactive activities and repetition of information. It was also recognised during implementation that better preparation for the campaign and a need assessment of the target groups would have been necessary. However, corrective actions could not be made regarding the last two.

An interesting point was raised in the Spanish case "Energy Efficiency Domestic Index" (E 1) where it was emphasised that one of the success factors in of the campaign was daily monitoring in the launch phase. This allowed to detect flaws (which were not described in the case) quickly and to respond accordingly.

In the French programme Climate (Fr 1), a small CO_2 impact calculator was provided to the consumers. User feedback revealed the need to improve the tool and during campaign implementation a new improved version was provided.

In annually repeated programmes, which only lasted for a short time each year, corrective action was taken in the replication of the programme. For example, the Finnish case "School energy awareness week" (Fi 2) discussed widely the roles of different participants for the success of the campaign. Once the weak parts can be identified it is easier to concentrate enforcing them, in this case the parents and teacher supporting roles in motivating and educating school children for energy consumption issues. This applied to the general energy awareness week –case (Fi 1) as well. The lessons learned from monitoring and evaluation were transformed into an overall discussion of the success elements of the campaign. In its best corrections are thoughts and discussions about how to make things better without ignoring the real action.

When implementation is affected by problems in communication it is surely worth considering carefully. The Swedish case concerning the Nordic Swan label (S 4) explicitly brings this forth: "The information value in the Swan label is perceived by consumers to be rather low. Consumers do not really know what the Swan or Swan label stands for. Within many product groups almost all products have a Swan label. This is interpreted by consumers that the requirements have been reduced – while the truth is quite the opposite. This is a fact that the consumers many times are quite unaware of." One explanation to this is that consumers may have got tired of many different labelling systems that are also close to each others. This brings to the second point, consumers may also get lost with many labels: what does each of them mean,

how trustworthy they are etc. It requires lots of effort and involvement to understand and compare product labels and other features. The programme is ongoing but it is not clear if any corrective action will be taken.

8 PROCESS AND IMPACT EVALUATION

> Process evaluation = Systematic assessment of the programme for the purpose of improving its design, its delivery, and the usefulness of the quality of services delivered to the consumer.
>
> Impact evaluation = Evaluation of the effect/outcome (changes of behaviour and energy saved).
>
> Please note that different classifications exist but the taxonomy is not important in itself. Instead, it is important to give adequate consideration to the various aspects of evaluation regardless how they are classified.

The steps of the ex-post evaluation process are:

1. Deciding the evaluation objectives
2. Choosing the evaluation method
3. Data collection:
   - Establishing which data needs to be collected during programme implementation, if applicable in the evaluation method used
   - Collecting data through the monitoring process during programme implementation, if applicable in the evaluation method used
   - Collecting data ex-post if applicable in the evaluation method used
4. Conducting the evaluation and reporting the results
5. Disseminating the results and utilising them in future programme design

8.1 *Evaluation objectives*

Different types of evaluation can take place. In impact evaluation of behavioural programmes the interest is in the effect (change of behaviour) and outcome (e.g., energy saved). Process evaluation refers to "the systematic assessment of an energy efficiency programme for the purpose of improving its design, its delivery, and the usefulness of the quality of services delivered to the consumer" (Spinney et al., 1992).

One should note that full separation of process and impact evaluation can be quite difficult and might not always be feasible. Process evaluation supplements impact evaluation by exploring why savings were achieved. It may include examination of the adequacy of the data needed for subsequent impact evaluations. Another link is the consumer surveys which can simultaneously collect input on programme performance including satisfaction and potential free ridership. Integrating data collection efforts may result in more cost-effective evaluation. (Violette 1995) However, for practical reasons, the two types of evaluation are discussed quite separately in this report.

Below, some examples of evaluation objectives for process and impact evaluation are given.

Examples of process evaluation objectives
- programme context and its significance
- degree of meeting the programme objectives
- analysis of the cost-effectiveness (could also be classified as impact evaluation)
- identification of key actors (stakeholders) and their roles
- strengths and weaknesses in programme design
- strengths and weaknesses in programme implementation (e.g. programme management, coordination and staff)
- identification of barriers to successful penetration of the programme,
- exploitation of programme results and outcomes
- evaluation of non-response (non-participation)

Examples of impact evaluation
- changes in routine behaviour
- changes in investment behaviour
- energy savings or changes in specific consumption and consequent emission reductions
- benchmarking
- market transformation
- calculation of net impact by estimating the impact of free-riders, spill over effect and multiplier effect
- analysis of the cost-effectiveness (could also be classified as process evaluation)

In 25 cases out of 41 it was reported that no process evaluation had been carried out. However, in some of these cases information given included certain elements of process evaluation. It is possible that the respondent was not familiar with the concept of "process evaluation" or did not recognize the evaluation carried out to fall into this category of evaluation. For an example in process evaluation, please see the Norwegian case "Electricity savings in households" (N 3) in Chapter 8.4.

In total, impact evaluation was carried out in 29 cases out of 41. Both qualitative and quantitative impact evaluations could be found in the cases but not surprisingly, qualitative evaluation was more common. Yet, in quite many programmes it also had been possible to take quantitative evaluation to a level where energy savings and/or avoided CO_2 emissions were estimated.

Some of the cases including quantitative impact evaluation aimed at changing only a single variable, e.g. eco-driving (see Nl 9 and UK 5) or use of a particular technology (see A 4, A 6 and N 3). However, examples exist where an attempt has been made to quantify the savings from more horizontal programmes. Here, the challenge is attribution of savings to a particular activity. An UK example is given in Chapter 8.4.

A few examples of evaluation against a pre-formulated market baseline were presented as well. Target group attitudes were plotted in the UK case of eco-driving in Scotland (UK 5) through an on-street questionnaire of commuter drivers prior to the campaign, to achieve a baseline understanding of eco-driving awareness and

behaviour in Edinburgh and Glasgow. These results were combined with results after the campaign. In the German Energy efficiency campaign in households (D 1) the knowledge and attitudes of the public were measured before, during and after the campaign the "before-the-campaign" results forming the baseline. For more details on the German campaign, please see Chapter 8.4.

Evaluation of cost-effectiveness of the programmes was a rarity. This is somewhat surprising given the importance of cost-effectiveness in justifying financing decisions. The likely explanation is the difficulty of quantitative evaluation of the impact of behavioural change programmes.

Typically, not much effort was put in the cases on analyzing the free-riders, spill over effect or the multiplier effect. However, in some cases - particularly those aiming at promoting certain technologies - the multipliers were considered to be important in programme implementation or they might have been one of the primary target groups. This was the case, e.g. in the Austrian programmes promoting heat pumps (A 4) and solar heating (A 6) whereby training courses were organised for installers. In the Dutch EcoDriving campaign (Nl 10) the spill over effect was estimated. In cases promoting certain technologies, free-riders were considered as a potential problem because awareness raising was combined with the provision of subsidies (e.g. "Electricity savings in households" N 3 and in-car devices in the Dutch EcoDriving campaign Nl 10).

Few evaluations were reported regarding non-response, i.e., reasons why certain consumers in the target group participated in the programme or changed their behaviour and why others did not. One reason could be that this was not explicitly asked in the case template. Another reason could be that it is not being systematically analyzed. One example of an analysis of non-response was the Dutch case "Measurement is knowledge" (Nl 2) where it was discovered that 90% of the households could not use an energy metering device provided to them due to poor instruction manual. In two UK cases (National Advertising Campaign UK 1 and Sustainable Energy Network UK 9) low level of participation in one region of the country was recognised to be due to the "unfavourable demographic profile", however, without a clarification why.

8.2 *Process evaluation methods*

Independent programme evaluations typically contain both process and outcome evaluation. The main benefit of independent evaluation is an unbiased view. Self-evaluation - no matter objective or self-critical the evaluator tries to be - cannot reach the level of objectivity and independent evaluation can. The downside of an independent evaluation is, naturally, its higher cost. Examples of both self-evaluation and independent evaluation were presented in the cases. A combination of the two was used in the Finnish "Climate change communications programme" (Fi 3) where the evaluation was first conducted as a self-evaluation by the programme's steering group but and independent evaluation was commenced at the end of the programme.

The approaches available for process evaluation are questionnaires and interviews among the stakeholders (financer, executing agencies and target groups), site visits,

review of programme reports and other deliverables, review of the monitoring results and assessment of the impact evaluation results. These are rather qualitative approaches but more technical process evaluations can be conducted. Technical process evaluations use site visits and surveys to assess the technical aspects of programmes including procedures for selecting programme measures, assessing measure installations, and determining market baselines. Quantitative models can be used for market segmentation and targeting. (Violette 1995)

8.3   *Impact evaluation methods and techniques*

The level of effort put on evaluation in the cases varies considerably. In many cases the reasons for lower level of effort are quite self-evident including available resources, project size and type of activity. In some cases, more effort could have been put on the evaluation activity quite cost-effectively had it been planned from the outset of the programme. For example, in the Finnish Climate Change Communication Programme (Fi 3) it could have been possible to create a baseline though a survey to support later evaluations in a similar way is in the German Energy efficiency campaign in households (D 1).

One categorization of impact evaluation methods is the following: evaluations that use market information and evaluations that use consumer-specific information. Market evaluations can be further categorised into two sub-types: those using national policy models and those using market tracking data that can be gathered through aggregate market analyses. Market-tracking evaluations involve more focused studies of individual markets. Such analyses examine changes in manufacturer, distributor, retailer, and contractor/installer behaviour that could lead to increased adoption of energy efficient measures. The difficulty, however, lies in the separation of programme impact from other development in the market. It may be best suited to provide data for consumer-specific evaluations. Commonly used data in evaluations using consumer-specific information includes billing data, end-use metered data, site data, survey data and programme tracking data (monitoring results). (Violette 1995)

Most of the cases applied evaluations with consumer-specific information. However, examples of evaluations using market information (market-tracking) could be found. Typical examples of the latter were programmes aiming at training salesmen or promoting certain technologies.

Programmes promoting energy efficiency and renewables have most typically been evaluated using the following methods:

- direct measurement (end-use load data)
- billing analysis (energy bills or energy sales data)
- simple engineering estimate (without on-field inspection)
- enhanced engineering estimates (with on-field inspection)

Numerous different techniques have been taken to conduct the impact evaluation (all represented at least one of the case studies):

- analysis of survey results acquired by:

- o mail questionnaires
- o internet questionnaires
- o telephone interviews
- o personal interviews
- o opinion polls
- o consumer panels
- o testing of pupils
- o testing of course participants
- o feedback from course participants
- comparison of "before the programme" and "after the programme" survey results acquired by the above channels
- ex-post survey comparing the target group and non-participant control group
- analysis of survey results with attribution of results to various programmes
- engineering approach combining quantitative monitoring results and default values for savings
- market surveys

8.4 *Evaluation results*

The success of some campaigns was identified with the coverage of the target group by using different communication instruments. The assumption was that a good coverage signifies good implementation of the campaign goals. For example, although a campaign reaches 500 000 children by TV broadcasting that does not tell necessarily about the success of the campaign, if success is measured by the impact. It only reports the media coverage that may be given by media agent. Without feedback systems, that are monitoring and control, the evaluation of real effects of the project remains at a hypothetical level.

The detailed case template included a subjective evaluation of the campaign success (lessons learned). The section, filled in by the programme managers, included questions on how successful the campaign was considered by the financer, implementing agency and the target group. There was some controversy. The official opinion was very often that the project was considered success although no comprehensive feedback was collected. One explanation to the lack of monitoring was often that the project was experimental by nature, a pilot project and was therefore planned narrowly. The campaign designers may think that "doing the right things" (planning) is more important than "doing things right" (implementation). Both of them are of equal importance.

Due to the large stock of information, all evaluation results cannot be summarized here. However, a few examples are given to demonstrate the range of information which can be collected and analysed if monitoring and evaluation are planned from the outset of the programme.

Evaluation of the effect (behavioural change) and outcome (energy savings): Dutch case "Measurement is knowing" (Nl 2)

> In the programme, households were provided with a digital plug-in metering device to measure the energy consumption of their appliances. The evaluation

was carried out by internet-based questionnaires. On average, six appliances were measured. 66% of the attending households reported having taken action to reduce their energy consumption. 45% reduced stand-by power consumption and 30% replaced old light bulbs by more efficient ones. Other behavioural changes included reducing the use of a tumbler drier and replacing old white goods by more efficient ones. In outcome evaluation the energy savings were estimated at 250 kWh per household. The outcome evaluation method was not reported but it is assumed to be so-called "simple engineering estimate".

Evaluation of the effect (behavioural change): German case "Energy efficiency campaign in households" (D 1)

The programme is a 6-year (from 2002 to 2008) large-scale information campaign addressing the whole population. The programme results were regularly evaluated by national surveys. The identified changes in public awareness and attitudes between 2002 and 2006 are:

- Knowledge on the cost of stand-by power   +4%
- Recognition of the EU energy label   +11%
- Use of switched socket extension leads   +13%
- Appreciation of the cost savings by compact
  fluorescent lamps (CFL)   +8%
- Knowledge about the variety of CFLs   +13%
- Implementation of energy saving measures   +5%

Evaluation of the process and impact (energy savings and carbon emission reduction): UK case Energy Efficiency Advice Centres (UK 3)

The objective of the UK Energy Efficiency Advice Centres (EEAC) managed by the Energy Saving Trust (EST) is to help consumers save energy through efficiency measures and thereby reduce their carbon emissions. The two main types of advice provided by the EEACs are verbal advice and home energy check (HEC).

The EEACs have been subject to rigorous monitoring and evaluation. A record of customers is kept in a database. The database is able to identify which customers received which type of advice. The carbon savings impact is assessed through quantitative customer surveys (computer aided telephone interview). The survey is followed by an attribution process whereby the effect of an intervention is assigned to a particular cause or activity. In the case of the EEAC evaluation, it is determined if energy saving actions claimed to be undertaken by interviewees were due to EEAC advice. Information for the attribution is collected by a question in the survey. A reduction is made to account for a proportion of customers who state that they have used more than one EST consumer advice channel. On an annual basis, the savings are estimated at 47 000 tonnes of carbon with the lifetime cost-effectiveness of the programme assessed to be £7.2 tC (based only on the specific funding to

EST). Currently, EST assumes a cautious one year lifetime for behavioural measures; further research in the field has been identified as a key research priority.

Other evaluations carried out include calculation of the cost-effectiveness of the programme and conducting consumer satisfaction surveys.

<u>Evaluation of the process and the outcome (energy savings and market transformation): Norwegian case "Electricity savings in households" (N 3)</u>

The objective of the programme was to reduce electricity use by promotion and subsidising of air-to-air heat pumps, pellet stoves and steering systems for electric panel heaters. An independent ex-post evaluation was performed using mail surveys to households, telephone interviews with technology suppliers and meter reading information. The evaluation consisted of the following elements:

i)   Enova's management of the programme
        - documentation of the programme
        - communication with households and interest organisations
        - technology criteria
        - rejections and defaulted grants
ii)   Effects among the households
        - description of participating households
        - household satisfaction with the investment
        - energy savings and investment profitability
iii) Effects in the market
        - development in technology markets
        - development in the electricity market
        - social effects and profitability

Programme management got a positive evaluation regarding the application procedure, information and service. Around 50 000 applications were processed with a transaction cost of 10% of the programme resources. About 20 000 households actually received the subsidy of whom 92.1% had installed heat pumps, 6.2% pellet stoves and only 1.7% steering systems.

Free riding was a potential issue in the programme. Overall for the three supported technologies, around 53% of the participants said that they would have purchased similar equipment also without the subsidy. 14% would have purchased a "cheaper" model without the subsidy.

Total annual net energy savings resulting from the programme were estimated at 129 GWh, of which 110 GWh was electricity. The evaluation method used here a combination of "direct measurement" and "simple engineering estimate" as savings were calculated from meter readings and reported changes in other energy use.

8.5 *Reliability of evaluation results*

Little information was given on the reliability of programme evaluation results. Some observations, however, were mentioned regarding impact evaluation:

- UK reported having studied what are the differences between what people report to have done (e.g. in surveys) and what they have really done. Large discrepancies were identified between what people reported and what they actually had done (sometimes by 3 or 4 times) which are then taken into account when reporting carbon savings.

- Some respondents mentioned that in market surveys there can be difficulty to identify autonomous development from the impact of the programme. For example, the Austrian heat pump programme (A 4) faced this problem.

- Attention needs to be paid to sampling in order to avoid errors; the sample (for a survey) should be representative of the target group.

The UK example shows that great care should be exercised when impact evaluations are made using surveys. The respondents may not necessarily deliberately give false information as there is no direct benefit involved; some people will say what they believe is the right thing to do rather than what they actually do. They might also report planned actions. Furthermore, they could report how they perceive themselves behaving instead of how they really do without fully realising the difference. The same phenomenon can be observed in other value-loaded questionnaires. For example, there is usually a big gap between real and reported alcohol consumption.

Sample size is also a key issue particularly where the percentage taking action for each individual measure is a relatively low number and confidence intervals can be large.

PART III

LESSONS LEARNED

9 PRACTICAL, METHODOLOGICAL AND CULTURAL LESSONS LEARNED

This chapter summarises the lessons learned from the quantitative and qualitative analysis of the case studies. The discussion is divided into three parts (sub-chapters). The first part (Chapter 9.1) discusses conclusions on planning including references to contextual analysis. The second part (Chapter 9.2) discusses monitoring and evaluation. The third part (Chapter 9.3) draws directly from the case studies giving a summary of the key success factors reported by the programme managers. The practical, methodological and cultural lessons are discussed in each of the three sub-chapters.

The reader should note that the cases presented in this report do not necessarily represent the average energy-related behavioural change programmes in the Member States. The reason for this is that the cases have been subject to two selection processes. First, the partners have chosen which cases to file when the case template has been presented to them. Second, approximately half o the filed cases were chosen for more detailed data collection and analysis. These two steps have filtered the less "presentable" cases. However, also some "successful" cases were not selected to the more detailed analysis because they were too similar with other cases already selected.

The objective of this chapter is to summarise the conclusions made of the stock of data. The materials have not been processed into detailed instructions how to plan and implement a successful behavioural change campaign. Such guidelines will be developed in Work Package 4 of the BEHAVE Project.

9.1 *Planning*

Most programmes appeared to be initiated by programme managers and a few by the government; however, this was not very clear from the materials. A couple of programmes were initiated by other stakeholders such as the parliament or international organisations.

The exact process and method of setting of programme goals remains quite unclear of the case materials. Usually, some background information on the context was given but the link between energy and climate policy goals and programme goals was not visible.

The programme goals themselves were usually clearly defined, though in a qualitative rather than quantitative way. However, clear objectives are not sufficient. They should also be challenging but achievable, targeted and measurable. In quite many cases, the goals were not targeted. Instead, many programmes tried to offer "everything to everybody". It was not unusual that programmes included almost all possible target groups and covered almost all possible topics. However, focused cases existed as well. Because most of the programme goals were not measurable, it is difficult to

evaluate if they were challenging, yet achievable. Despite the lack of measurable targets, quantitative evaluations of results were made in some cases. The lack of measurability can be a hindrance for acquiring programme financing when other types of programmes "compete" over the same funds.

Many of the programmes operated with quite formal plans. In a couple of cases, planning was restrained by time constraints because of a political pressure to quickly establish an ad hoc programme or for other reasons.

The programme design was usually not based on scientific theories or evidence and, therefore, references to planning models were not made. However, exceptions could be found, e.g., in the Netherlands and in UK. Instead, design seemed to rely more on the experience accumulated to the programme managers and implementing organisations. Based on this practical experience, quite careful planning was carried out.

Case design had clearly included certain amount of contextual analysis. This could be seen from the case reports both explicitly and implicitly. The list of various contextual elements arising from the case materials is presented in Chapter 4 of this report. Few cultural considerations were reported. Among the most frequently mentioned contextual elements were national and international policies, the institutional setting, market structures, demographic and socio-economic variables and patterns of energy use. The frequency of reporting certain elements, however, should not be seen as an indication of their importance for programme design. Instead, their importance and applicability varies country by country and is also time-related.

Context plays an important role in programme design. It was sometimes seen as an impediment for implementing certain types of programmes. For example, national programmes requiring regional support can be difficult to implement in a federal country whereas national programmes implemented through various national organisation can be easier to carry out. In some other cases, context was the main driver for a programme. For example, high energy prices motivated at least one programme. Context factors, such as demography, socio-economic variables and geography are among the main variables used in market segmentation and hence important in planning.

Market segmentation and choice of the target groups is closely related to the definition of the programme goal. Some cases, particularly those using TV as the main communication instruments and those targeting school children and youngsters, featured careful market segmentation which was used in choosing the target groups. Other clearly defined market segments, such as larger houses using electric heating or people commuting in a certain region, were identified in others. However, as mentioned above, large number of cases addressed either the whole population or all households. In some of the cases targeting the whole population, more focused sub-projects were implemented.

In the cases a rather limited variety of policy instruments was used. Because of the project objectives, all cases were to contain at least one type of communicative instruments. Although regulatory and economic instruments were also used, they were used in a limited number of cases.

In terms of communication channels, traditional channels still dominate: booklets and brochures were distributed in 78% of the cases and in 68% of the cases information was disseminated through journalistic materials. Personal advice and training were both provided in about half of the cases. New channels, such as infotainment were used in one third of the cases and digital channels in three cases. Most of the cases did not provide information on how the communicative channels were chosen after the choice of the target groups; sometimes it was unclear which had been planned first. However, it could be seen from the cases that quite often the channels had been subject to careful consideration. Examples include the use of intermediaries well-known by the target groups, carefully planned TV programmes and school packages for children or providing the public with carefully designed climate change calculator to facilitate learning-by-doing.

Although the average size of a programme was sizeable at €3.8 million, many small programmes struggled with budget constraints. Also lack of project personnel and time constraints were reported.

The average duration of a programme was just under three years. Although some programmes had been running closer to ten years or longer, there were also numerous short-term programmes. This raises concern over the long-term impact of the activities. It should be noted, however, that some of the smaller programmes appear to be test campaigns for a larger programme or there were plans to repeat them later.

Conscientious risk analysis and back-up planning was a rarity. Few examples were presented. These cases showed the necessity of risk analysis and back-up planning as the problems faced were promptly solved.

The results regarding the planning of monitoring and ex-post evaluation in the planning phase were mixed. Almost all cases featured some kind of evaluation because it was a selection criterion for the cases. In many cases ex-post evaluation was planned from the outset of the programme and necessary information was collected during the monitoring process. In other cases monitoring was planned well and it was used for effective marketing control which managed to reveal problems in implementation. However, in nine cases out of 41 no monitoring was established. Monitoring and evaluation is discussed in more detail in Chapter 9.2.

The findings related to planning have been summarised in the following list. The findings are partly based on success factors and recommendations given by the programme managers and partly the results of the analysis. They could be further developed into, e.g., check-lists in WP4 of the BEHAVE Project.

Summary of the planning phase

- Summary of strategic planning:
    o Campaign managers are responsible for setting the strategic-planning process in motion.

- Summary of goal setting:
    o The programme goals should be established in line with policy goals

- o The goals should be clearly defined, achievable but challenging, targeted and measurable.

- Summary of market segmentation and target groups:
    - o Identify market segments based on some main criteria (geographic, demographic, psychographic, or behavioural)
    - o Divide them into target groups (distinct group of consumers or other end users)
    - o Find out their needs and characteristics of behaviour
    - o Test and validate

- Summary of choice of instruments:
    - o Based on the characteristics identify the best channels to reach the target groups and tailor material accordingly. Decide who spreads the message, how and to whom?
    - o The messages should seek a cognitive, affective or behavioural response. In practice, few messages take the consumer all the way from awareness to action. Paying attention to the campaign's communication objectives and message design is therefore of crucial importance.

- Summary of organisation and management:
    - o Ensure all participants support and understand their roles and responsibilities

- Summary of risk analysis and back up plan:
    - o Anticipate and plan for potential risks in planning phase; make a good analysis in advance of all possible threats; this helps you to react appropriately in case of crisis management.
    - o Devote time for preparation and motivate all the partners and value networks to the joint goal.

- Summary of programme testing and pilot campaign:
    - o Recognise differences in individual readiness to try new products, the effect of personal influence, and differing rates of adoption
    - o Allow sufficient resources to analyse the results and implement recommendations

- Summary of resource planning:
    - o Balance time, budget and personnel resources with programme goals.

- Summary of the planning of monitoring and evaluation:
    - o Plan your approach for monitoring and evaluation from the outset
    - o Monitoring results can be used to provide feedback to programme managers during the implementation allowing corrective action if necessary.
    - o Monitoring and evaluation is a great opportunity to get feedback of the overall success of the campaign.
    - o Identify and implement recommendations
    - o Plan to disseminate the results so others can learn.

9.2 *Monitoring and evaluation*

The case studies utilised monitoring and gathered feedback by various means. It was very common to follow, for example, the distribution of various materials, number of participants, web-site visitors, subsidy applications, contacts with advisors, market changes and user opinions/satisfaction. Monitoring results were used for marketing control and ex-post evaluation.

An effective tool in helping to reach the programme goals is to establish performance indicators which can be monitored during programme implementation and help in ex-post evaluation. The terminology "performance indicators" was rarely explicitly mentioned but it was clear from the programme descriptions that they had been formulated quite many cases. However, what remains more unclear is, have any target levels been established for the performance indicators.

Although mentioned only in one programme as a success factors, daily monitoring in the launch phase of a campaign may be worth considering depending on the programme type. In the case, conscientious monitoring allowed to detect flaws quickly and to respond accordingly.

Some kind of evaluation was carried out for most of the programmes because it was a selection criterion the case studies. It was most common that evaluation was carried out ex-post but in longer programmes also mid-term evaluations or in permanent programmes periodical evaluations were conducted. For simplicity, all these evaluations taking place during or after programme implementation are here referred to as ex-post evaluation. In few cases ex-ante evaluations were carried out, e.g., to establish the base-line for the activities. However, no attempts to evaluate the programme impact ex-ante were reported.

Process evaluation (25 cases) was slightly less common than impact evaluation (29 cases). Commonly mentioned problems included difficulties in the co-operation and motivation of the different implementing parties, problems in the communication channels and messages and lack of or excessively negative feedback. It was also recognised in some cases that planning should have been better (lacking e.g. background studies and needs assessment) and more time should have been allocated.

Evaluation of cost-effectiveness (which also could be classified under impact evaluation) of the programmes was a rarity. This is somewhat surprising given the importance of cost-effectiveness in justifying financing decisions. The likely explanation is the difficulty of quantitative evaluation of the impact of behavioural change programmes.

A multitude of different ex-post evaluation methods for programme impacts were reported. These ranged from participant surveys, testing and comparison with control groups to top-down method evaluating the impact of several programmes focusing on the same target group. However, the methods managed to capture much more frequently the outcome (e.g. energy saved) than effect (change of behaviour).

The choice of impact evaluation method depends on numerous factors such as evaluation objectives, programme characteristics, resources (money, personnel and skills), availability of data, institutional structure and infrastructures. The most common method appeared to be participant surveys conducted various ways (questionnaire, telephone, internet etc.), sometimes before and after the programme.

One difficulty faced by several programmes was the attribution of an observed market impact or survey results to a given programme. Another challenge was related to the reliability of results as in surveys people tend to exaggerate their energy efficiency actions.

The findings related to monitoring and evaluation have been summarised in the following list.

- Summary of monitoring and control:
  o Plan monitoring from the outset keeping in mind the needs of control during implementation and the needs of ex-post evaluation.
  o Keep the risk analysis and back-up plan in mind when planning monitoring.

  o Summary of evaluation:
  - Define the evaluation objectives, i.e., what you want to evaluate regarding the process and/or impact.
  - Decide the evaluation method and plan data collection accordingly.
  - Balance your evaluation objectives with the resources and needs (take account of the programme size, replication of the concept etc.)

9.3   *Success factors and weak points*

The following critical success factors for consumer campaigns are gathered from the case studies. These were either explicitly mentioned in the cases or have otherwise been identified in case evaluation. A more detailed list of the success factors reported in the case studies can be found in Annex 4 of this report.

- 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
- Referrals to previous users
- 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
- After sales marketing and follow-up
- Repetition

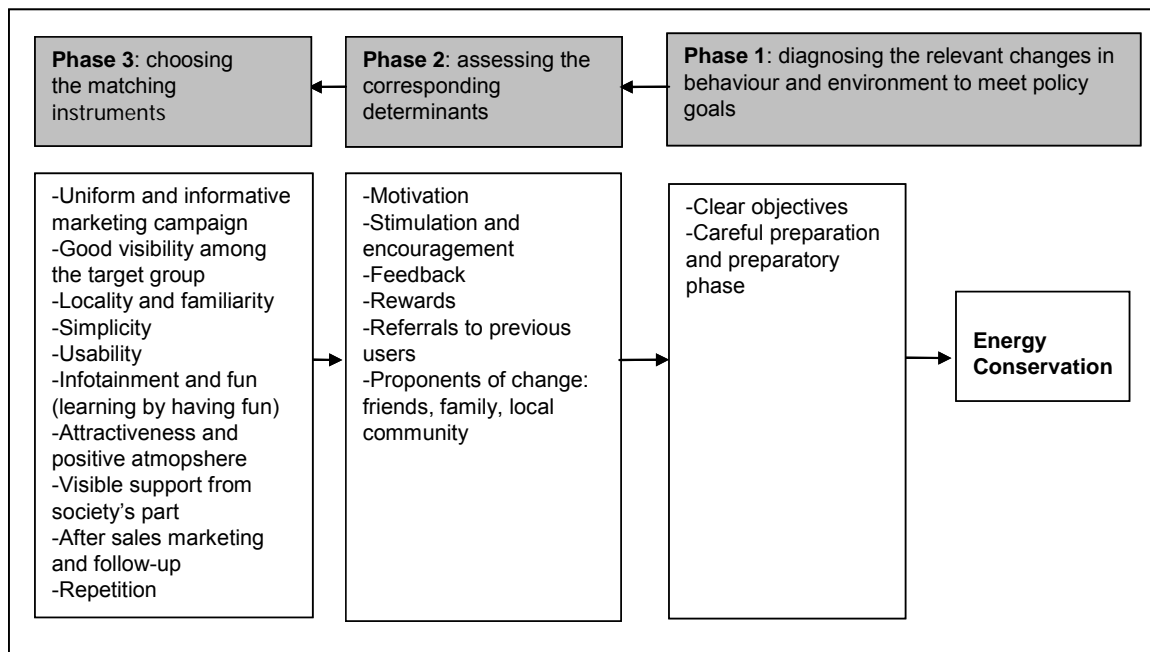In the following chart the success factors have been mapped inside the PRECEDE-PROCEED planning model.

Figure 3. The relation of success factors with the PRECEDE-PROCEED planning model

Annex 4 contains also a summary of the weaknesses reported in the case studies.

REFERENCES

Reports produced within the BEHAVE Project

Bruel, Renée (2007): BEHAVE, *Meta-evaluation of communicative programmes aimed at consumers*. Paper prepared for ECEEE summer study. SenterNovem.

Egmond, Cees & Bruel, Renée (2007): *Nothing is as practical as a good theory, Analysis of theories and a tool for developing interventions to influence energy behaviour.*

Haanpää, Leena (2007): *The unpredictable consumer: a report of the BEHAVE Project.* Turku School of Economics, Department of Marketing.

Other references:

Bonoma, Thomas V. (1985): *The marketing edge: Making strategies work.* The Free Press.

European Commission (2007): *Electricity Consumption and Efficiency Trends in the Enlarged European Union - Status report 2006.* Directorate-General Joint Research Centre, Institute for Environment and Sustainability.

Eurostat (2007): *Energy, Yearly statistics 2005.* Edition 2007.

Gabriel, Yiannis & Lang, Tim (1995): *The unmanageable consumer.* SAGE Publications.

Green L.W., M.W. Kreuter (1999). *Health promotion planning.* 3rd edition, Mountain View, California.

Kotler, Philip (2003): *Marketing management.* Upper Saddle River, NJ: Prentice-Hall.

Kotler, Philip – Armstrong, Gary – Saunders, John – Wong, Veronica (2005): *Principles of marketing.* Forth European Edition. Harlow: Pearson Education

New Internationalist (2006): *21st century consumers.*

Slater, David (2001): *Themes from the sociology of consumption.* Consumption, everyday life and sustainability home page. [WWW document]. URL http://www.lancs.ac.uk/fss/sociology/esf/themes.htm

Sorrell S. et al (2000). *Reducing Barriers to Energy Efficiency in Public and Private Organisations* (BARRIERS). Coordinated by the University of Sussex. The Joule III Programme, Contract number JOS3CT970022. 2000. http://www.sussex.ac.uk/Units/spru/publications/reports/barriers/finaltoc.pdf

Spinney, P. et al. (1992). *DSM Process Evaluation: A Guidebook to Current Practice,* Electric Power Research Institute. May, 1992. EPRI TR-100647.

Violette, Daniel M. (1995): *Evaluation, Verification, and Performance Measurement of Energy Efficiency Programmes.* Hagler Bailly Consulting, Inc. Report for the International Energy Agency.

ANNEX 1 - CASE TEMPLATE

A. General questions	
1. Name of programme	
2. Country	
3. Contact person *Name and email address of person that can provide more information*	
4. Goal *Please state the goal of the programme. If any subgoals, please name them too.*	
5. Target Group(s) (please tick box)	□ consumers / citizens (= individual) □ households (= the group of people forming a household) □ youngsters □ elderly □ schoolchildren □ low income groups □ employees □ other (please specify) □ intermediary parties
6. Size of target group *What is the size of the target group? Please give a number.*	
7. Topic(s)	□ environment in general □ renewable energy □ energy efficiency in general □ energy efficient appliances □ lighting □ heating/cooling heating and cooling should be asked separately □ transport □ other (please specify)
8. Start and end date of the programme	start month and year: end month and year:
9. Time frame of the programme	□ the activity is continuing or repeated (e.g. annual awareness week) □ the activity is once-only
10. Budget (total, in €)	€
11. Financier of the programme *What type of organisation financed the programme?*	□ national government □ national, regional, local energy agency □ regional government □ local government □ utilities □ consumer associations □ professional associations (e.g. lighting, housing, etc.) □ NGO □ other (please specify)

12. Implementing organisation	□ national government
	□ national, regional, local energy agency
	□ regional government
	□ local government
	□ utilities
	□ consumer associations
	□ professional associations (e.g. lighting, housing, etc.)
	□ NGO
	□ other (please specify)
B. Planning and preparatory phase	
13. The programme was aimed at which type(s) of behaviour?	□ investment behaviour (buying of energy saving bulbs, isolation of house, etc)
	□ habitual behaviour (turning of the heat, closing doors)
	□ energy behaviour in general
14. Aimed at: *which type of behavioural factors does the programme want to change?*	□ motivational factors (awareness, knowledge, social norms, attitude, intention)
	□ facilitating factors (external financial resources, external technical resources, external organisational resources)
	□ reinforcing factors (feedback of peers / experts / authorities)
C. Implementation phase	
16. Instruments *Which instruments have been used in the communicative programme?*	Communicative instruments
	Mass media instruments:
	TV/radio
	□ journalistic material
	□ infotainment
	□ advertising material
	Newspapers / Magazines
	□ journalistic material
	□ infotainment
	□ advertising material
	□ Internet based (e-learning, weblogs etc)
	□ digital channel
	□ booklets/ brochures
	□ information session(s)
	□ demonstrations
	□ formal and informal education
	□ personal advice (face to face, or through internet)
	□ training and coaching
	□ telephone helplines
	□ benchmarks/comparison
	□ labelling
	□ others (specify):
	Regulatory instruments
	□ laws and regulations
	□ permits
	□ participation in covenants and agreements
	□ enforcement / threat of penalty
	□ others (specify):
	Economic instruments
	□ subsidies/grants
	□ taxes
	□ tax differentiation
	□ emission trading
	□ financing constructions (meant to ease investments by innovative financing, like energy services schemes)
	□ others (specify):
	If regulatory or economic instruments are used, please give a

	description of their interaction with communicative instruments.		
D. Monitoring and evaluation			
17. Which type of monitoring/evaluation was used?	<u>Monitoring</u> □ quantitative <u>Process evaluation</u> □ qualitative <u>Effect evaluation</u> □ quantitative	□	qualitative □ qualitative
20. Links to websites and/or sources with more information			

Detailed template

A. General questions
A.1 Please provide a general summary of the programme.
This should include the context (partnership, main source of funding, how does it fit in the general energy policy), a brief description of the programme (objectives, field of activity, target audience, technology and approach followed), main results.

A.2 Please describe the goal of the programme.
What kind of behaviour has to be reached, by whom, when and where? When available, use quantifiable variables.

B. Planning and preparatory phase
B.1 Please provide a summary addressing the following topics:
- the rationale behind the programme
- type of analysis that has been carried out (i.e. needs assessment, segmentation of target group, study of target group, use of behavioural theories, etc)
- planning of monitoring and evaluation of the programme
- cooperation with other organizations
- looking back afterwards, what are the strong and weak points of the preparatory phase?
- how did the work in the preparatory phase contribute to the success/failure of he programme?

C. Implementation phase
C.1 Describe the implementation of the programme (max 2 pages), please address at least the following topics:
- how was the target group reached?
- co-operation of the programme organisation with other organisations on the implementation of the programme (i.e. joint actions, etc.)
- were the people involved in the programme trained for this work?
- looking back afterwards, what are the strong and weak points of the implementation phase?
- were any follow-up activities undertaken?

D. Monitoring and Evaluation
D.1 Please describe the monitoring activities addressing the following topics:
- what was monitored? (distribution of leaflets, no. of target group watching advertisements, raise in market share of products/services that were promoted in the programme, effect on CO2-emission and/or energy use, etc)
- how was it monitored? (i.e. by whom, data sources)

D.2 Please describe the evaluation activities addressing the following topics:
- evaluation process and procedure (evaluation objective i.e. what was evaluated, how was it evaluated, etc.)
- the effect of the programme in terms of outcome and the reasons for this outcome
- handling of free riders, spill-over and rebound etc. effects
- describe the process evaluation if any was undertaken (cost-effectiveness, co-operation of stakeholders, customer/consumer satisfaction etc.)
- was the goal of the programme (as mentioned in Q. 4) reached?
- who undertook the evaluation activities? (the implementing organisation, an independent organisation hired for the evaluation, or an evaluation committee)

D.3 Please describe the factors that explain the success or failure of the programme and address at least the following points:
- clear focus of the objectives of the programme
- segmentation of the target group
- channels used to reach the target group
- intermediary organisation that were involved

D.4 Please describe the lessons learned
- positive and negative lessons learned
- have the lessons learned had an effect on the design of similar programmes?
- problems encountered and how they were dealt with
- success factors for replication elsewhere in Europe
- describe what you would do differently if you were to help others in replicating the programme

D. 5 Please describe if the programme was considered a success
- the official opinion
- your personal opinion (will be treated confidential, please write on a separate page)

Was the programme considered a success by *(1 = complete failure, 10 = total success)*
the financier: 1-2-3-4-5-6-7-8-9-10
the implementing agency: 1-2-3-4-5-6-7-8-9-10
the target group: 1-2-3-4-5-6-7-8-9-10

ANNEX 2 - PROJECT CONTEXT

1. Energy trends in the household sector in EU-27

The most important energy carriers used by the households are electricity and gas followed by oil. Households also use renewables, district heat and coal etc. but to a lesser extent. Transport sector programmes – and hence energy use in the transport sector - is out of the scope of the BEHAVE Project which focuses on stationary energy use.

In 2005, final electricity consumption totalled 2 756 TWh in EU-27 of which 799 TWh can be attributed to the households. The proportion of households out of the total was 29%. Electricity consumption in the household sector has grown by 12.5% from 2000. (Eurostat, 2007). Despite this increase there is little knowledge at European level, where the electricity is used, what is the status of efficiency of the installed and sold equipment and what is the likely impact of the past, present and planned policies (EC, 2007).

Total final consumption of natural gas (i.e., excluding use for power production and non-energy use) was 3 600 TWh of which the households accounted for 44%. Gas consumption in the households sector has increased by 14% from 2000 to 2005. (Eurostat, 2007)

Also energy consumption per capita in the European households has grown. It increased by 5.3% from 2000 reaching 7 350 kWh/capita (632 kgoe/capita) in 2005. (Eurostat, 2007)

The gross domestic product of EU-27 has increased by 8.5% from 2000 to 2005 (Eurostat, 2007). Hence, energy demand in the household sector has been growing faster than GDP. It is not explained by population growth which was 1.8% over the same period. In addition to the development of economy and population, other important factors in the development of household energy consumption are the number of households, the evolvement of floor space and the increasing range of energy consuming products available to consumers, e.g., home computers at lower costs. The European trends towards smaller households and increased floor space per inhabitant contribute to the growth. The number of households grew twice as fast as population in EU-15 and almost three times as fast in EU-25 from 2000 to 2004.

2. New drive in energy efficiency improvement

Improved energy efficiency enhances several energy policy objectives adopted by the EU and its Member States. First, energy efficiency is recognised to be the fastest and most cost-effective response in the battle against climate change. An additional environmental benefit is improved air quality, in particular in densely populated areas.

Second, debate on security of supply issues has intensified due to Europe's growing import dependency, tightening demand-supply situation in several countries and numerous large-scale blackouts which occurred over a short period of time. By 2030,

on the basis of present trends, the EU will be 90% dependent on imports for its requirements of oil and 80% dependent regarding gas (DG TREN www-pages).

Third, high level of energy efficiency provides economic benefits such as direct savings and competitive advantage. The EC estimates the savings potential at €60 billion (DG TREN www-pages). Energy efficiency also improves living conditions and enhances social equality by reducing fuel poverty. One of the main factors behind the renewed interest in energy efficiency, however, is the need to respond to high energy prices. These political and market drivers have created a great momentum for energy efficiency improvement.

Important strategic papers dealing with energy efficiency have recently been issued by the EC, namely the 'Green Paper on Energy Efficiency - Doing More with Less' (2005) and the 'Energy Efficiency Action Plan' (2006). Among other policies and measures, these papers emphasize the importance of raising energy efficiency awareness. The Green Paper on Energy Efficiency states that information dissemination and education are two under-used tools for enhancing energy efficiency. In the Energy Efficiency Action Plan one of the priority actions (Priority Action 8) is raising energy efficiency awareness.

The action taken at the EU-level does not stop at strategic level but has taken the form of new legislation. The policy setting is defined by several important legislative initiatives all having direct or indirect impact on energy consumption of consumers, namely:

- Directive on the promotion of end-use efficiency and energy services 2006/32/EC ("Energy services directive"): The Directive establishes a 9% indicative energy conservation target for the Member States for the period 2008-2016.

- Directive on the energy performance of buildings 2002/91/EC: The Directive was enacted because the buildings sector accounts for 40% of the EU's energy requirements and offers the largest single potential for energy efficiency. The directive aims to ensure that building standards across Europe place a high emphasis on minimising energy consumption.

- Framework Directive for the setting of eco-design requirements for energy-using products 2005/32/EC ("Eco-design Directive"): It is estimated that over 80% of all product-related environmental impacts are determined during the design phase of a product. Against this background, Eco-design aims to improve the environmental performance of products throughout the life-cycle by systematic integration of environmental aspects at a very early stage in the product design.

- Directives on minimum efficiency requirements for household electric refrigerators, freezers and combinations thereof (96/57/EC), new hot-water boilers fired with liquid or gaseous fuels (92/42/EC) and ballasts for fluorescent lighting (2000/55/EC).

- Directives on energy labelling of domestic appliances: household electric refrigerators, freezers and their combinations (94/2/EC, 2003/66/EC), household electric ovens (2002/40/EC), household air-conditioners (2002/31/EC), household dishwashers (97/17/EC, 1999/9/EC), household lamps (98/11/EC), household washing machines (95/12/EC, 96/89/EC), household combined washer-driers (96/60/EC) and household electric tumble driers (95/13/EC).

- Regulation on a Community energy-efficient labelling programme for office equipment (2422/2001/EC).

The European Commission has announced that the minimum energy efficiency requirements and the energy labelling scheme of domestic appliances will be updated and extended to new appliance groups. Minimum energy requirements, energy labelling and the eco-design directive as well as unilateral agreements by trade associations all aim to ensure that the energy-using equipment offered to the consumers are increasingly energy efficient. However, regulation and technological development do not diminish the role of the consumer. The consumer still needs to make educated choices and be able to use the equipment efficiently. This requires behavioural change programmes both among the end-users and vendors. Furthermore, in some cases also removal of financial barriers and removal of the worst performing products from the market are necessary. These needs have been addressed in several cases.

Increased use of renewable energy sources entail some similar benefits as energy efficiency such as reduction of import-dependency and reduced CO_2 emissions - however, depending on the local circumstances, sometimes with higher cost.

The European Commission's White Paper for a Community Strategy sets out a strategy to double the share of renewable energies in gross domestic energy consumption in the European Union by 2010 (from the present 6% to 12%). The main features of associated the Action Plan include internal market measures in the regulatory and fiscal spheres; reinforcement of those Community policies which have a bearing on increased penetration by renewable energies; proposals for strengthening co-operation between Member States; and support measures to facilitate investment and enhance dissemination and information in the renewables field. (DG TREN www-pages). The Directive on the promotion of the electricity produced from renewable energy source in the internal electricity market (2001/77/EC) establishes indicative targets on member countries for the share of renewables in electricity production in 2010. This directive, however, only concerns consumers in an indirect way by enhancing the availability of "green electricity" in the market, although it does seek to remove barriers to the implementation of microgeneration at the household and community level.

While the number of EU acquis addressing energy efficiency is increasing also Member States have developed their own policies and measures. Extensive information can easily be acquired from the MURE-database (http://www.isis-it.com/mure/) or from the measures database of the International Energy Agency (http://www.iea.org/textbase/effi/index.asp).

ANNEX 3 - THE CONSUMER

> How should we think about the consumer? As a god-like figure, before whom markets and politicians bow? A weak and malleable creature – a mere pawn in corporate games played in invisible boardrooms? A political trendsetter with the power to save the planet? In reality, despite huge efforts to constrain, control and manipulate them, consumers themselves can and do act in ways that are unpredictable, inconsistent and contrary… (New Internationalist 2006; cf. Gabriel & Lang 1995)

Consumers have not only the right but also the responsibility to protect themselves instead of leaving this to someone else (Kotler et al. 2005). How should the argument be understood when talking about environmental change and individual person's responsibility? How should an individual consumer do her or his bit in preventing the change? Or is the responsibility rather on shoulders of government and municipals? And how should the consumers then be activated and motivated to take stand to energy saving issues with their own behaviour?

1. Green consumerism

Social, cultural and economic factors of society are assumed to set the framework for green consumerism. Each country has its own traditions, norms and taboos. This sets limits to designing and planning of a Social marketing campaign especially when a same concept is replicated in different countries.

The programme management should examine consumers' attitudes and values towards environmental issues in general (e.g. environmental concern) and the way they in the particular country think about and use the products towards which the campaign is directed before planning a marketing programme. The cultural barriers in the target country must be identified. Understood widely, cultural dimensions can mean:

- the social organisation of society
- the heavy reliance on the welfare system (e.g. in Finland) or the class hierarchy (e.g. in United Kingdom)
- religion (the secular approaches of Western countries)
- customs and rituals
- values and attitudes, for example, towards environmental protection
- education provision
- political system and infrastructure
- language

If we think about green consumption and purchase situations, individuals are put in trade-off situations where they have to make choices between the environment and their own needs, wants and desires. The battle between individual needs and the environment easily leads, however, to a moral and puritanical standpoint that

consumption "is a bad thing we should do without." (Slater, 2001) In environmental debate, such standpoints come up in the context of modern consumer culture, which, on one hand, deregulates desire and, on the other hand, operates as an engine for generating an endless amount of new desires.

Making consumers feel guilty for the buying decisions they make should be avoided. Awareness may create a guilty feeling in some users, as was reported by French case "Climate" (F 1). Today's consumers are not very willing to bargain about their own standards of living. People with low environmental concern tend to prefer free-market solutions rather than government policy, and shift the responsibility for solving environmental problems on others. Free riding is, by definition, a problem typical to green consumerism. This came up in a Finnish Climate change communication campaign (Fi 3), which reported the attitude change of Finnish people: people's readiness to make changes in their lifestyles to a more green direction has increased while in the same time there have not been any real changes in their consumption habits. This demonstrates the fact that attitudinal and behavioural change are different. The key is to convert attitudinal change into action.

Moreover, green consumers are more likely to control their consumption in comparison to more traditional consumers and therefore, the environmental impact of green behaviours is direct. For example, the decision on whether or not to purchase a car tends to have much greater environmental impact than changes in the use of the same vehicle. This aspect involves the consumer's responsibility to control her/his consumption choices. There are people who are altruistic by nature, and therefore regard environmental issues, such as energy saving, an important matter. This came up in some of the case studies as well; those already motivated take best part in the campaigns.

One way to overcome the typical problems is to emphasise in marketing the positive sides of green purchase decisions and making low carbon products aspirational. That is, consumers want to know what they benefit when putting their money on greener – and often more expensive – product alternatives. The cost-benefit thinking should be more clearly adopted in green marketing. From one case-study came also an interesting marketing concept "intelligent purchasing" (Germany) that sounds like fun and also "flatters" consumer for her/his good choice. In short, show the advantages without moralising.

With regard of green consumption there are some core elements that influence it. Some of them are presented in figure below.
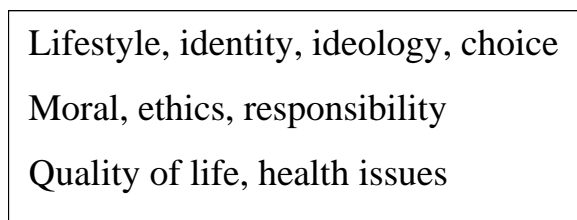
Lifestyle, identity, ideology, choice

Moral, ethics, responsibility

Quality of life, health issues

Figure 1. The elements that affect environmentally responsible consumerism

The designers of marketing should take these influencing factors into account. However, in questions about human beings it is impossible to give any universal list that could be applied to every individual. Chapter 2 discusses the unmanageable consumer.

2. Different roles of consumers

When thinking about the motives for consumption it is worth being aware that the individual who stands in the background of the purchase and other consumption decisions has many alternative and overlapping roles. Gabriel and Lang (1995) have presented many of them, of which the most prominent ones regarding green consumption are presented here by utilising also the article "21st century consumers" (New Internationalist 2006).

Altogether, consumers' different roles set challenge to the management and design of a social campaign in which focus the consumer is. It is difficult to foretell what appeals consumers and motivates them to take action. Nonetheless, each of these roles depicts naturally one kind of generalised image of consumer. In reality, an individual consumer is a mix of different aspects and different roles are activated in different situations. But still when thinking about green consumption, these may give some food for thought for marketing managers.

Citizen – consumer

There is a powerful tension between the concepts of citizen and consumer, people acting in double roles: as consumers and as citizens. People's acts as consumers cannot be detached from their actions as citizens especially when it comes to sustainability. In brief, people, as consumers, act with a short-term orientation looking for the direct fulfilment of needs and wants without considering sustainability. As citizens their actions are guided by a long-term orientation, where the individual takes into consideration environmental matters and also shows responsibility towards others. The concept of a citizen implies both control and balance over rights and duties and active participation as members of society. Moreover, in the role of citizen, individuals are supposed to take a moral standpoint when making their choices.

In recent years the re-emergence of the idea of citizen has been applied, not surprisingly, in the context of environmentalism. Environmental citizenship entails the emergence of exactly the kind of individual described above, an active individual that feels no fear to defend the rights of the majority and who carefully evaluates different alternatives and moral questions when making decisions. He/she also knows, cares and acts with responsibility towards the environment. Environmental citizenship calls for individuals, for example, to take part in government-directed top-down informative campaigns that strive for a better environment via the activation of consumers, such as the campaigns to reduce climate change that where topic in many case studies.

Currently, political culture is poised between giving primacy to voting or shopping. Since the late 20th century, consumerist values have spread and mutated throughout

society. They have turned politics into a spectator sport and politicians into competing brands. They have eroded welfare systems and promoted the achievement of freedom, happiness, good health and education through individual choice exercised through the market.

The concept of citizen-consumer was pondered over in some case studies. In Greece's case (Gr 1) the campaign leant quite heavily on the citizen. The campaign goal was to create informed and aware citizens of 6-12 years old children who, when adults, will seek the best means to use energy.

Likewise, in one UK case the activities had "the dual objectives to engage and inform citizens about how they can live lower carbon lifestyles as well as providing them with practical help and solutions on a range of measures which can be taken in the home."

The chooser

Choice is a core value at the heart of consumerist culture. The underlying rationale is 'the more choice the better' for consumers, the economy and society. But it has its limitations. Choice without information is not real choice, yet how can consumers get all the facts they need? Choice is also not absolute. 'I choose to drive to the supermarket in my car' can close off other options such as: 'I choose to buy all my food from locally owned shops I can walk to'. Much so-called 'consumer choice' boils down to relative trivialities, compared to matters of life and death, political and civil rights, or the future of the planet. Surely choice should not just be a matter of which product to select, but also of whether and how to consume.

These issues were maybe not so visibly seen in the case studies, although some of them discussed, for example, the importance of freedom of choice. The Spanish case on salesmen training for white goods (E 8) paid attention to delivering information to consumers in order to help them to make environmentally better choices.

The activist

A long tradition of individual and collective consumer activism across the world has taken many forms: campaigns, legal cases, education, whistle-blowing, direct action. The Irish gave the 'boycott' its name, but Americans practised it much earlier against the British in the struggle for independence, as did the people of the Indian sub-continent following Gandhi's lead. The 20th century co-operative movement enabled some consumers to take control of production. In the US, consumer advocate Ralph Nader rallied activists to fight against corporate greed. Today a new wave is bringing together different existing strands of activism and trying to restructure consumption completely, on more ethical and ecological grounds, exposing and rejecting exploitative conditions, unfair trading relationships, pollution and waste.

3. The unmaking of consumer culture

If one has to make specific proposals of how to unmake individuals, households, consumers and customers of their habitual consumption patterns, the campaigns should take as their starting point 1) understanding individual choice as one affected by utilitarian, differentialist and culturalist elements and 2) unlocking of structural restraints on people's choice. It has been said that the unmaking of consumer culture happens by consumers' own initiatives, by deregulating advertising, by offering collective services and rearranging working time.

"The new environmental imperative of climate change provides a new opportunity to engage individuals and communities. A great deal is now understood about how (and how not) public policy can change citizen behaviour. Public policy and Government leadership play a key role in developing the institutional framework, but social networks are also critical." (UK)

4. Consumer rights

Traditionally: The right not to buy a product that is offered for sale
The right to expect the product to be safe
The right to expect the product to perform as claimed

Today also: The right to be well informed about important aspects of the product
The right to be protected against questionable products and marketing practices
The right to influence products and marketing practices in ways that will improve the 'quality of life'

Environmental protection policies still vary widely from country to country, and uniform worldwide standards are not expected for another ten years or more. Although the countries of the BEHAVE Project have developed environmental policies and are increasing public expectations, many countries such as China, India, Brazil and Russia are in only the early stages of developing such policies. This is the current situation also in Bulgaria where first steps are now taken towards better energy behaviour. State support for its development is crucial.

Also from consumers' point of view, governmental support is one basic element to promote successful and efficient social campaigns. This support is often manifested in economic terms either by direct subsidies in prices of energy efficient products (cf. Spain, Economic Support for the Renewal of White Goods in the Community of Madrid, E 7) or by other economic instruments (taxation).

Moreover, environmental factors that motivate consumers in one country may have no impact on consumers in another. For example, collecting fried oil from households may work in Mediterranean countries but couldn't work and be recycled in Nordic countries because the use of vegetable oil differs a lot between North and South. Even inside the boarders of one country national structures may pose a hinder to apply one

strategy (cf. Austria). Thus, it is important to create general politics and then translate these policies into tailored programmes that meet local regulations, expectations and ways of actions.

ANNEX 4 - INVENTORY OF SUCCESS FACTORS AND WEAK POINTS IN CASE STUDIES

Annex 4 contains the success factors and weak points which have been identified by programme managers in the cases. Some of the factors have been repeated in multiple cases whereas some of them are specific to an individual case.

Some of the comments could first seem somewhat conflicting. For example, usually it is preferred to involve multiple organisations at different levels (national, local, horizontal) whereas in some cases it has been difficult to encourage them commit to a joint objective under clearly defined programme management. In this case the former comment has been included under "success factors" whereas the latter one under "weak points".

INVENTORY OF SUCCESS FACTORS
(reported by the programme managers)

CONTEXT

- "Seize the moment!" Sometimes correct timing is everything. How are the energy prices developing? What are the hot topics of public debate? Are there European or national campaigns which create synergy?
- Consider how the diverse needs of the different regions within the country can be met. Ensure appropriate level of control under national brand, whilst providing sufficient flexibility to meet local requirements.
- Make a good analysis in advance of all possible threats; this helps you to react appropriately in case of crisis management
- Technical studies (data on consumption, appliances, consumption habits, level of energy efficiency, most efficient solutions, lifetime of behavioural energy efficiency measures etc.),
- It was suggested in one case study to implement on-going (quarterly) research study to track three core areas;
    - Attitudinal macro drivers on; awareness and belief of climate change, attitudes towards government intervention, attitude towards taking personal responsibility, degree to which cost saving is important
    - Macro climate behavioural change model, to look at the population at a macro level and assess belief in climate change and willingness to change or take action
    - Behavioural change at a specific action level.

PLANNING

The planning process
- Enough time needs to be allocated to the planning phase. In several cases it was mentioned that the programmes had to be planned too quickly.
- Flexibility of the planning process without excessively strict guidelines or timetable. The planning of a novel programme type may be subject to less prejudice that that of a conventional type in a particular country.
- Stepwise development from local to national level has worked well in some cases. Also starting from pilots was suggested. In some others, it was reported that a national initiative which was brought strongly to the local level had worked well too.

Objectives and target groups
- Establish clear and realistic objectives.
- Market segmentation (target groups): careful consideration of the target group/market segmentation (concentration on, e.g., young people, the elderly, larger households, low-income households or those with electric heating) and social marketing strategy for each of them.

Messages
- Showing the advantages of energy efficiency without moralising. Making actions appear both meaningful and achievable.
- Providing feedback to the participants. Feedback could be individual with benchmarking information. Particularly positive feedback was considered as motivating.
- Up-to-date communication approach: humorous and modern language, bright colours, life-style pictures etc.
- Involving several parties in developing the materials.
- Involving target group members in the design of the campaign materials (teachers, youngsters etc.).
- If certain technologies are promoted, they should be robust.
- Provide a high level of accuracy and consistency in the information and advice messages being given to customers, including a common branding.
- The fast changing nature of the discourse of climate change means that it is important to ensure messaging remains relevant to the target audience. Independent discourse analysis has shown that campaigns need to avoid the use of scare tactics and to demonstrate that individuals can make a difference in tackling climate change.
- Because many other messages/events/activities compete over the limited resources (time, money) of the target group, careful planning is essential.

Communication channels
- Learning-by-doing and demonstrations (participatory and interactive approaches) rather than solely cognitive messages. Use of practical tools (e.g. consumption meters, calculation devices) or providing concrete energy saving equipment.
- Do media research (viewer rates etc.)

- Use of a mix of communication channels. Note, that the effectiveness and opportunity to use channels changes over time.
- Use of likeable well-known public figure as a spokesperson (local heroes or green ambassadors).
- Results of learning are partly teacher dependent – the commitment and enthusiasm of the teacher is important
- High level of technical implementation: excellent materials and only quality equipment/appliances should be provided etc.
- TV-based campaigns were considered very successful by programme managements. The reasons could be TV's status as the main media for the general public or the considerable amount of preparation for such a campaign together with the involvement of highly qualified professionals.

General simplicity and practicality
- Simplicity: clear messages, easy access, simple application.
- If subsidies are involved, the application process should be straightforward. There should also be unambiguous specifications regarding the technologies that were supported. For example, in a Spanish example, subsidies were given directly in retail outlets for domestic appliances. However, avoid market disruptions.
- Good logistical system when consumers need to be reached individually in programme implementation. Use existing infrastructures if available.

Institutional aspects
- Use of neutral intermediary organisations instead of messages directly from the government which is not "a trusted" source from the point of view of the public.
- Driving customers to take action on the back of advice whilst maintaining impartiality.
- Networking and co-operation with different organisations, which brings multiplier effects (helps in reaching more participants), providing more communication channels, improving cost-effectiveness, reducing ambiguity and ensuring that there are no "gaps":
  - Involvement of local energy utilities and local organisations.
  - Involvement of existing professional, information, training and commercial organisations. (However,.)
  - Involvement of the whole product chain from manufacturers to retail to consumers.
  - Creating media interest to enhance indigenous sustainability.
- Avoid conflicts of interests. Furthermore, there could be diversity of interests, e.g. even within one group of stakeholders.
- Using personal contacts to involve the companies and decision makers.
- If the project is implemented in a federal country, additional challenges caused by this should be given due consideration in programme planning.
- Verify in advance whether all stakeholders are sufficiently informed and are in line with the project goals.

Instruments
- Use of a mix of instruments at policy level, e.g. awareness raising and economic or regulatory instruments.
- Use of a mix of instruments at programme level, e.g. goal setting with feedback.

IMPLEMENTATION

- Establishing a project steering group with people from different administrative sectors or otherwise involving them.
- Use monitoring results for sharing the best practices and taking remedial measures during the programme implementation.
- Train you advisors and helpdesks.

MONITORING AND EVALUATION

- Planning a robust monitoring and evaluation approach from the outset. Continuous improvement based on evaluation results.
- Monitoring the campaign launch (detection of flaws, collection of frequently asked questions, instructing advisors and trainers) provides an opportunity for correcting action.
- Use a team of multidisciplinary specialists, also those in communication and training, to formulate questionnaires and interview questions used in evaluation. Questions must be clear and not open to different interpretations. Pre-test the questionnaire. Train the interviewers.
- Strike a balance between the risk of free riders and the cost of trying to avoid them all.

GENERAL ASPECTS

- International exchange of knowledge and experience.
- Long-term approach is preferred. However, examples of successful short-term campaigns exist.

INVENTORY OF WEAK POINTS

(reported by the programme managers)

CONTEXT

- In some cases general low environmental awareness or low educational level of the target group creates additional challenges. How to reach customers who are unaware or apathetic about domestic energy consumption issues?
- There have been difficulties in extending a programme to all regions in a country.

PLANNING

The planning process
- Too short preparation phase.
- No behavioural theories were used in programme design

Objectives and target groups
- No needs assessment was done.
- The campaign should have been segmented more clearly to the different target groups. The messages could have reached the target groups better.

Messages
- Negative feedback de-motivated people.
- Quality problems with the service (advice etc.)
- The rules how to use the campaign logos and "the look & feel" should have been more precise
- More comprehensive consultation of various institutions should have been carried out in design of the campaign and materials. This could also have helped in dissemination.
- A pre-test should have been run on the material produced – prior to its broadcast – before a target audience to evaluate its effectiveness, quality of the messages, understanding, etc.
- Existence of disinformation: outdated technical facts, rumours, urban legends etc.

Communication channels
- During a TV campaign, there was not enough attention given to other information channels such as a web-site with more information.
- During a campaign addressing children, consideration should also have been paid to addressing the parents and involving the schools.
- Consumers had excessive expectations for services (advice etc.)

- The possibility of continuous use of material after a campaign targeting schools was not recognised
- Marketing of the campaign for the possible participants did not fully succeed and face to face marketing instead of distributing leaflets or invitations could work better.
- More interactive contents at the web-site would have increased the number of visitor (but also requires a lot more resources)
- Internet training course for salespersons was not found effective.
- Lack of personalized attention.

Institutional aspects
- Conflicts of interest.
- More commitment of the participating organisations and companies was expected.
- Problems in building up the networks and motivating multipliers, particularly, when they have no economic gain.
- The composition of the programme consortium was criticized.

IMPLEMENTATION

- Quality problems with equipment, props, manuals etc.
- Challenges related to the specific features of the promoted technology.
- Logistical problems when consumers needed to be reached personally
- Inadequate information on all relevant stakeholders.

MONITORING AND EVALUATION

- The evaluation did not adequately address actual behavioural changes.
- It is difficult to document long-term effects on energy behaviour, particularly in terms of energy units. There is no robust information of the lifetime of energy savings generated by behavioural change.
- Dissemination of the results should have been improved.

GENERAL

- Bad luck (e.g. bad weather in outdoor events, coinciding competing activities for the target group)
- Too tight budget compared to objectives, unexpected budget cuts or continuous financial insecurity hampering long-term view.
- Resource constraints limited the possibilities to deliver the offered services causing frustration in consumers (advice etc.).
- It was not possible to set up a programme which identifies unequivocally the market effects of the programme.