

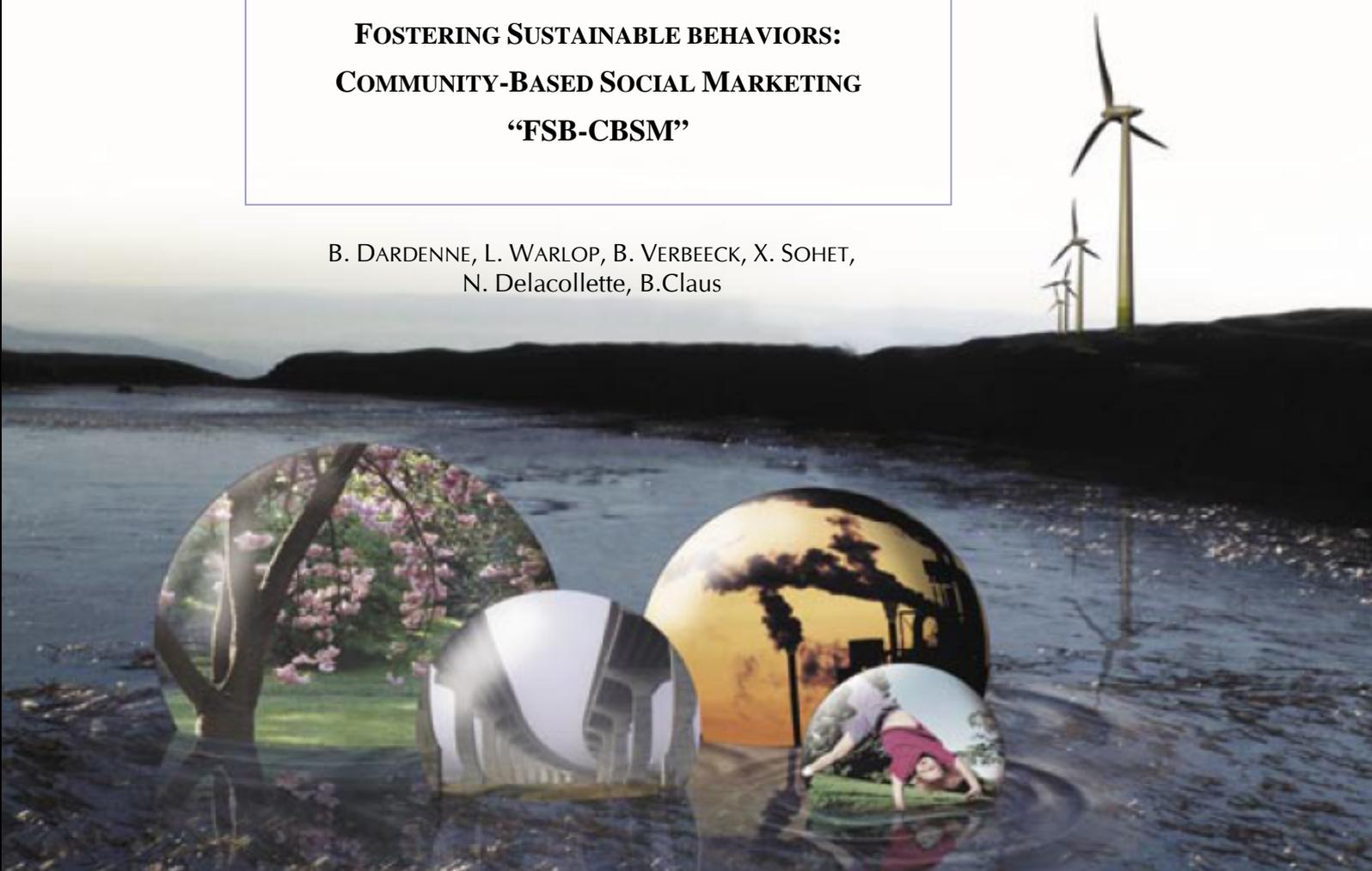
SSD

SCIENCE FOR A SUSTAINABLE DEVELOPMENT



**FOSTERING SUSTAINABLE BEHAVIORS:
COMMUNITY-BASED SOCIAL MARKETING
“FSB-CBSM”**

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ENERGY 

TRANSPORT AND MOBILITY 

AGRO-FOOD 

HEALTH AND ENVIRONMENT 

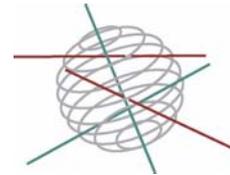
CLIMATE 

BIODIVERSITY 

ATMOSPHERE AND TERRESTRIAL AND MARINE ECOSYSTEMS 

TRANSVERSAL ACTIONS 

SCIENCE FOR A SUSTAINABLE DEVELOPMENT
(SSD)



Transversal Actions

FINAL REPORT PHASE 1
SUMMARY

**FOSTERING SUSTAINABLE BEHAVIORS:
COMMUNITY-BASED SOCIAL MARKETING**

FSB-CBSM

SD/TA/11A



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B. Dardenne, L. Warlop, B. Verbeeck, X. Sohet, N. Delacollette, B.Claus **Fostering Sustainable Behaviors: Community-Based Social Marketing “FSB-CBSM”**. Final Report Phase 1 Summary. Brussels : Belgian Science Policy 2009 – 6 p. (Research Programme Science for a Sustainable Development)

Developing sustainable behaviors has become a major objective for our society and for political leaders. However, although most people express a positive attitude toward ecology and sustainable behaviors, they often fail to modify their former behaviors toward greater sustainability. Social marketing campaigns aim at promoting sustainable behaviors. Unfortunately, these campaigns are not always successful and their impact is seldom assessed. This research project aims at identifying the best levers to change individuals' behaviors toward greater sustainability and at developing marketing tools and strategies that could efficiently influence people's behaviors.

This project has four main objectives. The first objective is to determine how people classify sustainable behaviors and which behaviors are perceived as similar. A first study was run in order to investigate the subjective similarities of several sustainable behaviors and to identify the subjective dimensions used to classify these behaviors. The results indicated that participants classified sustainable behaviors into 3 categories. The first category included behaviors such as *buying second-hand products* or *replacing ordinary paper with recycled paper*. Most of these behaviors involved consumer choices. This first category seemed to be linked to decision-making and to be composed of behaviors requiring a lower level of control and cognitive resources. The second category included behaviors such as *driving one's car more calmly* or *cycling / walking for short distances*. This category was composed of more "active" behaviors, which required some kind of regulation and a higher level of control and cognitive resources. Finally, the third category appeared as less important and was composed of very specific behaviors reflecting eating habits, such as *eating fresh fruits and vegetables rather than deep-frozen ones* or *eating meat less often and replacing it with a vegetarian meal*. In a second study, we analyzed data from the Ecological Footprint measure. This measure is composed of 10 questions about the sustainable behaviors participants do or do not demonstrate. Statistical analyses allowed us to determine which behaviors were similar. These results partially confirmed the results of study 1. However, our interpretation of the between-category differences needs to be validated. For this purpose, we are currently running a follow-up study, which will help us to identify the meaning of the distinction we found.

The project's second objective is to identify the cognitive, emotional and psycho-social antecedents of sustainable behaviors. Usually, intentions and behaviors are predicted from three variables: The attitude toward the behavior, the subjective norm and the perceived behavioral control. However, this model of behavior prediction is very cognitive and does not leave space for variables such as feelings and emotions. Consequently, we aimed at highlighting additional variables that are strong determinants of sustainable behaviors and that

could be efficient levers to trigger these behaviors. In a first set of 2 studies, we investigated the impact of attitudinal ambivalence on sustainable behaviors. Attitudinal ambivalence is a simultaneously positive and negative evaluation of a given object. The first study indicated that ambivalence significantly improved the prediction of intentions toward ecological action, besides the "traditional" predictors of intentions (attitude, subjective norm, and perceived behavioral control). Results indicated that the more people are ambivalent toward sustainable behaviors, the less they intend to take some form of ecological action. The second study revealed that the feeling of being accountable for one's behaviors negatively influenced attitudinal ambivalence. In other words, the more people feel accountable or responsible for the presence or lack of sustainable behaviors, the less ambivalent they feel. Ambivalence, in turn, influences actual behaviors. The less people are ambivalent, the more they report showing sustainable behaviors. Although the impact of attitudinal ambivalence on sustainable behaviors has been demonstrated in our studies, the mechanisms by which ambivalence exerts its influence still remains unknown. In order to shed light on these mechanisms, a follow-up study is about to start.

In order to attain the project's second objective, a second line of research investigated the impact of emotions on sustainable behaviors and intentions. Our studies have focused on moral emotions, in other words, emotions that are a consequence of the evaluation of a behavior or situation. In the literature, the most commonly studied moral emotions are pride, guilt, anger and shame. These emotions are often seen as a consequence of one's own behavior; however they can also be aroused due to someone else's behavior (in which case we can talk of "vicarious emotions") or due to a social group's behavior (we then talk of "collective emotions"). Our studies investigated both own and vicarious (or collective) emotions and were carried both in Liège (by the ULg team) and in Leuven (by the K.U.Leuven team). Their results indicated that vicarious and collective emotions influenced behavioral intentions and sustainable behaviors, whereas individual emotions appeared as clearly less efficient. Moreover, in most studies, vicarious (or collective) guilt was the best predictor of the intention to behave in an environmentally-friendly way. Our results indicated that vicarious guilt triggered a wish to repair for the other's "wrong" behavior. This wish to repair reinforces the intention to demonstrate sustainable behaviors, which in turn leads to the actual behaviors.

These first studies regarding emotions thus established a clear link between vicarious / collective emotions on the one hand and sustainable behaviors and intentions on the other hand. Consequently, in a second step, we focused on the induction of these emotions. Indeed, in order to finally meet the project's third objective (developing social marketing tools and strategies), we needed to assess the possibility and the effectiveness of using specific emotions

to modify people's behavior. In a set of 2 studies, we first induced different types of emotion and then assessed participants' intentions and actual behaviors toward the environment. Of special interest, these studies used the Ecological Footprint measure in order to induce a specific emotion. The Ecological Footprint is therefore used in a dynamic way as a social marketing strategy, and no longer as a simple measurement tool. In line with the correlational studies, results indicated that the induction of guilt led to a greater intention to demonstrate sustainable behaviors than was the case with the induction of pride and without any induction of emotion. Furthermore, in one of the studies, only the induction of collective guilt led to actual sustainable behavior. The behavioral measures of the other studies are still being analyzed.

Finally, in line with the project's second objective, a third line of research focused on the impact of the physical and social environment on sustainable behaviors. For this purpose, we examined the differences between communities in order to discover what could explain the presence or lack of different types of sustainable behavior. Any attempt to change people's behaviors through psychological mechanisms is naturally bounded by the extent to which the physical, social, and economic environment of an individual affords these behaviors. One may be motivated to cycle or take the bus, but this will not manifest in actual behavior if the traffic environment is too dangerous for cycling, if the distances to be traveled are too large, or if there are not enough bus stops in the community. In order to study these differences, we are analyzing a very large set of data collected by Ecolife and the WWF, containing ecological footprint estimates and (limited) personal data of more than 16,000 respondents. As the postal code of the respondents is part of the data, we can connect their answers to a host of economic, political, and physical environment indices for each of these communities. We seek to find infrastructural, economic, and social context factors that can be related to a facilitation of sustainable behaviors. An obvious example would be the number of bus stops in the vicinity, which can either promote bus use or prevent people from replacing a car trip with a bus trip. A first model linking respondents' perception of the environment to the presence or lack of sustainable behaviors has been completed. However, this model might be improved by using more advanced statistical methods and by including more data related to infrastructures. We are currently working on gathering these additional data and developing a more complex model.

We also plan to study whether an adjustment of the context in which people demonstrate behaviors could lead to more sustainable behaviors. We will try to find out whether an application of the well established placebo-effect can be successful in having people adjust their behavior to be more ecologically friendly. In a pilot study focusing on car driving, participants were asked to "drive" a driving simulator, which was described as having been programmed to simulate a car of a given brand. This car brand was associated either with a rather sporty and

"aggressive" type of car or with a more "quiet" type of car. Although the driving simulator was actually programmed the same way in both conditions, people drove faster and used the brakes more when they thought they were driving the first type of car than when they thought they were driving the second one. This result indicates that sustainable behavior could be influenced indirectly through environmental cues and through mere labeling of people's behaviors and environment.

The project's third objective is to develop and assess tools and strategies aimed at improving social marketing campaigns. This objective is based on the results of the two previous objectives and will mainly be developed during the project's second phase. We intend to develop marketing techniques and recommendations (for social marketing campaigns designers and political decision-makers), which could be applied in various real settings. A first pilot study has focused on the framing of ecological messages. Indeed, marketing campaigns often develop the idea that an individual's sustainable behaviors will have positive consequences on a long-term basis and for people in general, or even for people they don't know (for instance, people living in developing countries). However, it has been shown that individuals are more sensitive to the consequences of their actions both for themselves and for those they are connected with and on a short-term basis. Consequently, social marketing campaigns might be more successful if they describe the short-term consequences of people's actions for themselves rather than their long-term consequences on strangers. We tested this idea in a pilot study. Although non significant (because of sampling problems), the results indicated that the framing could have a different effect on men and women. A second study correcting for the sampling problem is currently being run.

Finally, the project's fourth and last objective is to communicate about our research and results. We intend to publish our results in scientific journals as well as in documents targeting a practitioner audience. We also intend to write recommendations for policy makers. We will work on this last objective during the second phase of the project.