INHERIT

Implementing Triple-Win Case Studies for Living, Moving and Consuming that Encourage Behavioural Change, Protect the Environment, and Promote Health and Health Equity

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CHAPTER 1
INTRODUCTION

1.1 Background and aims of this report

INHERIT (INter-sectoral Health and Environment Research for InnovaTion) aims to change lifestyles and behaviours in the pursuit of health, well-being and environmental sustainability whilst simultaneously securing improvements in equity across society – a "triple-win" (1). INHERIT explores how policies and interventions in the areas of living (green space and energy efficient housing), moving (active transport) and consuming (food and food production) may contribute to: improving health (win 1), ensuring sustainable environments (win 2) and contributing to greater equity for all (win 3).

In pursuit of these aims, the INHERIT partners have collaborated in identifying, evaluating and, in some cases, implementing, a wide variety of inter-sectoral policies and interventions intended to achieve the above-mentioned triple-win. Fifteen case studies were selected for inclusion in this report. The INHERIT case studies, which are spread across Europe, aim to encourage healthy behaviour and/or address key environmental stressors for health by encouraging people to change their lifestyles and behaviours and support the environment and sustainability. Through these efforts, it is hoped that people live and behave in ways that sustain good health, the environment and promote health equity.

This report aims to provide systematic descriptions of the implementation of the 15 selected INHERIT case studies and offer insight into context-specific issues and decision making that are crucial when implementing initiatives. The framework that informed the assessment of the implementation processes is the Consolidated Framework for Implementation Research (CFIR) (2). CFIR offers a pragmatic guide for approaching complex, multi-sectoral, multi-level interventions. It identifies what kind of information should be collected to provide insight into implementation processes. This can help facilitate improved processes for successful adaptation when transferring or scaling up such interventions. Too often, interventions that work in small-scale pilot studies fail to live up to expectations when rolled out to a larger regional or national context, or when they are transferred from one country to another. A wide array of contextual factors will influence implementation and produce foreseen as well as unforeseen effects. An implementation report such as this plays an important role in elucidating how and why contextual factors influence the outcomes of interventions. Furthermore, rich descriptions of the implementation process are valuable for obtaining an improved understanding of summative outcomes.

1.2 The structure of the report

In this introduction, we outline the purpose of the report and how the INHERIT case studies were selected and implemented. We begin by describing, in outline, the 'INHERIT Model'. This 'relational model' was developed by the INHERIT partners and is a key issue and analytical tool for the INHERIT case studies. The INHERIT Model is central to the Common Analytical Framework (CAF) and draws on the insights of behavioural change theory and logic modelling (3). In this report, we illustrate the utility of the Model by using it to improve understanding of, and assess, triple-win initiatives like those chosen for examination within INHERIT.

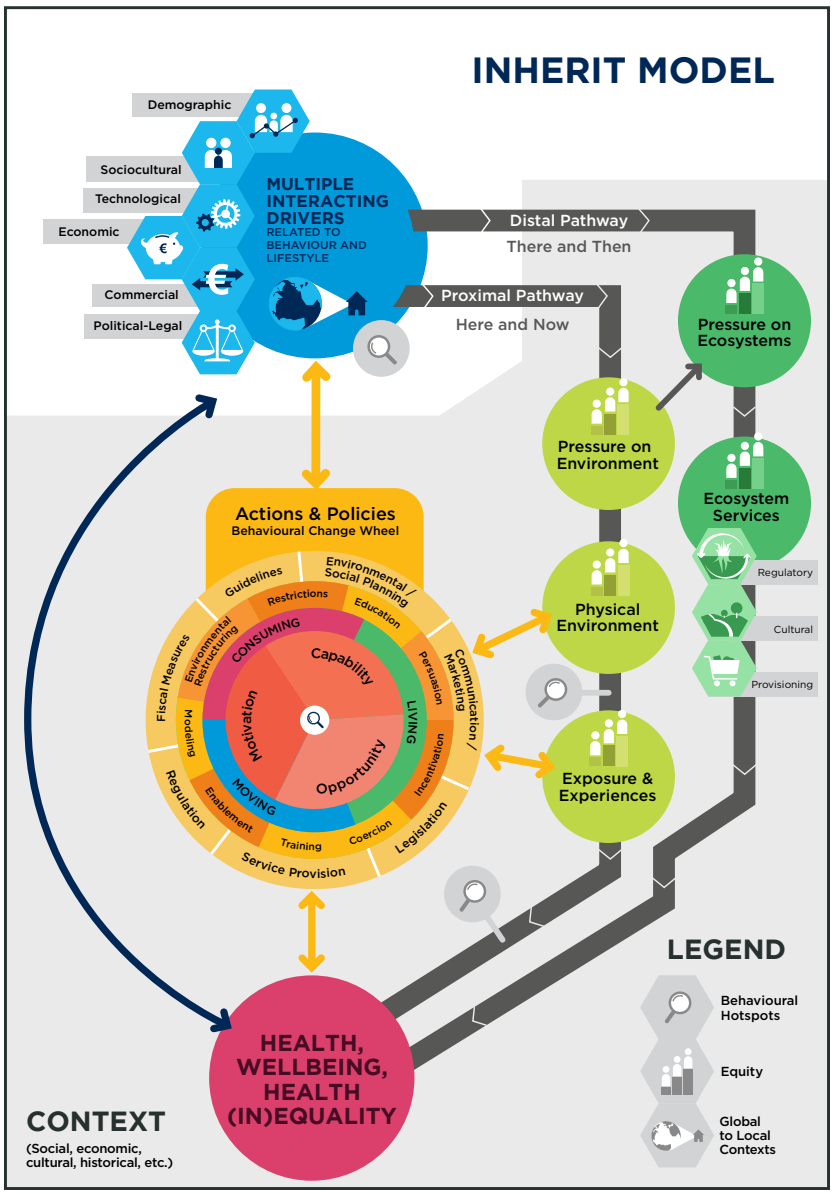
In the main section of the report, each INHERIT case study is described, outlining the local context and the objectives of the intervention and the implementation process. Included is also how each case study can be represented by the INHERIT Model and how they may contribute to change behaviours, protect the environment and promote health and health equity. The last section concludes this report by extracting some major insights across the diverse INHERIT case studies and contexts.

CHAPTER 2
THEORETICAL AND METHODOLOGICAL APPROACH

2.1 The INHERIT Model

The INHERIT Model, (Figure 1) comprises interconnected components offering a way to frame, describe and assess the relationship amongst the environment, human health and well-being and other important factors. The INHERIT Model facilitates an understanding of how policies and actions can affect lifestyles and behaviours and the causal pathways and mutual influences amongst environmental stressors, health equity and contextual factors (4). Additionally, it provides a basis for the qualitative, quantitative and economic evaluation of multi-sector policies and actions.

Figure 1. The INHERIT Model



The INHERIT Model is a 'relational model' built on concepts used in the long-established "Drivers, Pressure, State, Exposure, Effect Actions (DPSEEA) Model" (5) and subsequent derivatives (6, 7). Such models have been successfully applied to the domain of environmental and human health policies (8, 9). The INHERIT Model describes the relationship amongst multiple interacting drivers and includes "distal" as well as "proximal" manifestations of these drivers and vice versa; how local actions might influence global trends (4). The INHERIT Model frames issues, offers a basis for examining policy opportunities and places emphasis on addressing the causes and impacts of human behaviour in an era of global environmental change (for more details see reference (4).

The proliferation of smartphones, for example, with its associated impacts on health and well-being, equity and sustainability reveals the utility and flexibility of the INHERIT Model as described below. Driven by technological advance and other societal transitions, smartphone use creates pressures on both the Model's proximal and distal pathways. From a European perspective, pressures on the proximal pathway can manifest as changes in the physical environment in "here and now". These might include localised production-related pollution and an accumulation of e-waste. However, for Europeans, the most health-relevant proximal change may come simply from the fact that there is a proliferation of mobile phones in use. The proliferation of smartphones to which the population have ready access results in significant and widespread use of smartphones. Whilst conferring some benefits, in combination with the pervasive presence of social media, it has the potential to generate stress, diminish well-being and reduce physical activity for individuals and social groups. None of the proximal environmental changes described occur uniformly, and the distribution of environmental hazards and 'goods' (potential benefits) is inevitably socially—and spatially—patterned due to the influence of many contextual factors. The INHERIT Model is capable of representing these interconnections. Whether, and in what way, the health and well-being of specific individuals or groups within society are impacted by environmental change is also hugely dependent on the contextual factors that influence exposure and vulnerability. These interacting factors inevitably lead to differential exposures and experiences of the environment and confer differing levels of vulnerability. Relevant contextual factors include demographic variables, socioeconomic status, behaviour and individual health status. This richness and diversity of context can also be represented in the INHERIT Model.

On the distal pathway, identical drivers that promote the proliferation of smartphones exert pressures on the environment beyond Europe. Even if recognised, these may appear temporally and/or spatially remote for Europeans. In the case of smartphones, such distal changes include damage to ecosystems and the services they provide for the affected populations due to, often unregulated, e-waste streams and the extraction of rare minerals used in smartphone production. The INHERIT Model's attention to contextual factors allows these issues and the potential inequalities they generate to be fully explored.

A defining feature of the INHERIT Model is the focus on behavior. It can serve as a tool for more in-depth analysis of the role of behaviour when analysing problems and shaping policy in this complex area, and how behaviour can be modified to achieve better outcomes for health, and equity and sustainability (10). Magnifying glass icons are added at four points in the INHERIT model to represent behavioral hotspots, where it is believed behavior and lifestyles can be influenced most effectively by policies and actions to contribute to healthier, more equal and sustainable societies.

2.2 Making the link between the INHERIT Model and the case studies

This report will briefly describe the link between the INHERIT Model and each case study to illustrate how the intervention might contribute to tackle pressures locally by providing opportunities, capabilities and motivation for behaviour change. The descriptions will also focus on how changes in the behaviour of individuals, groups and/or institutions, in turn, can contribute to lessening pressures on health, inequity and sustainability in the proximate environment. Lastly, some anticipations are made in terms of how such (accumulated) local changes might influence the underlying drivers "there and then", which are the root cause for the above-mentioned unsustainable developments.

All 15 INHERIT case studies address the situation in a specific locality. Each examines an intervention, policy, initiative etc. that tries to change behaviour or lifestyle directly or indirectly in ways which will deliver a triple-win. The purpose of the evaluation is to establish whether the intervention actually delivers the triple-win. It is obvious that the contribution to the triple win from any intervention etc. is more easily quantified where that contribution is experienced within the locality where the intervention takes place. The 15 interventions to which the case studies relate are however all chosen because they have theoretical potential also to limit or reduce damage to ecosystems at global level – or, put in another way, to promote global sustainability. Changes to global ecosystems resulting from a local intervention, policy, initiative etc. may of course be plausibly anticipated but are seldom directly measurable, still less attributable to a specific local intervention. Thus, in evaluating whether a local intervention etc. delivers the sustainability component of the triple-win, the evaluation team are required to reach a conclusion based on the interpretation of a range of evidence (some theoretical and beyond the study itself).

2.3 Selecting the INHERIT case studies

The 15 INHERIT case studies were selected from a pool of more than 100 promising practices from across Europe, all of which are gathered in the INHERIT database. INHERIT partners contributed to the database by identifying and describing promising practices in the areas of living, moving and consuming. To be selected as an INHERIT case study that would undergo qualitative, quantitative and/or cost benefit evaluation, the promising practice had to meet a set of criteria developed by the INHERIT partners. The criteria list was determined partly by the need to make sure that the chosen INHERIT case studies could be implemented according to the INHERIT timeframe and budget, and partly by the case studies' aptitude for scientifically sound evaluations (e.g. data availability, scale of practice, number of participants). Inclusion of innovative elements and the need to ensure a geographical and thematic spread across the areas of living, moving and consuming also guided the selection process. Below is a full list of criteria that informed the selection of INHERIT case studies.

1. Should be knowledge based (combination of knowledge from users, experience, research)
2. The underlying theory of change should be linked to the Common Analytical Framework (CAF):
   - Planned action – intended outcome
3. Should include cross/multi-sector-involvement
4. Should involve users and other actors, ownership – empowerment – co-creation
5. Should address at least one of the INHERIT areas of living, moving, or consuming.
6. Actors responsible for implementing the intervention should be willing to commit and meet the resource requirements.
7. Scalability: should involve the possibility to be more widely implemented for a larger impact on behaviour change
8. Should fall under one of the following categories: a) existing policy or intervention that is ongoing, b) existing policy or intervention that has recently ended, c) an existing policy or intervention with added elements that will potentially improve its triple-win effects or d) introduction of an intervention or a policy to a new context.
9. Collection of new data should be done during 2018 at the latest, allowing the reasonable expectation of interim outcomes being available by early 2019.
10. Should target or have an impact on people facing socioeconomic disadvantages.
11. Population affected should be of a suitable size for modelling or evaluation.
12. Resources needed for implementation/evaluation should not exceed the available budget.

2.4 The 15 INHERIT case studies

The included INHERIT case studies represent a wide range of actions both thematically and in terms of the geographical spread across Europe (see Table 1 and Figure 2 below). Thematically, the described INHERIT case studies include actions directed at changing the physical environment, strengthening social relations and addressing matters of exposure. Some INHERIT case studies aim at changing life-styles directly through educational and motivational programmes, including general use of technical applications or devices. The INHERIT project grant agreement suggests that the selected INHERIT case studies could be divided into these four types: 1) a new element is added to an already implemented intervention, 2) the case transfers one or more elements from one promising practice to another, 3) an aspect of a promising practice that had yet to be assessed is now under evaluation or 4) the case study introduces a promising practice into a new context. However, as the case studies developed, an additional three types evolved. These included: 5) an existing promising practice is scaled up, 6) a research study is designed from scratch to test theory, 7) a new initiative is implemented.

On average, INHERIT allocated 10,000 euros for expenses linked to the implementation and evaluation of the intervention. Due to the variation in the complexity of the case studies and the level of costs in the respective countries, funding was re-allocated across the INHERIT case studies as necessary.

It is important to note that what constitutes 'implementation' and evaluation varies widely across the case studies. In some cases, the available funding was used to implement an entirely new, relatively small scale initiative (e.g. Gardening with Green Gyms and Meat Free Monday, piloting the Place Standard tool in new contexts), in other cases funding was used to study a larger-scale initiative or policy that was already being implemented (e.g. STOEMP/Gent en Garde). Other INHERIT case studies involved the incorporation of a new initiative and subsequent study of that within an existing programme (GemüseAckerdemie). The report aims to describe and analyse this wide array of initiatives to draw general conclusions in relation to the implementation, transfer and scale up of the selected triple-win case studies.

The 15 case studies are shown in Table 1, which also highlights the specific INHERIT partners that were responsible for facilitating the implementation and evaluation of each INHERIT case study.

Table 1: INHERIT case studies

	Name of INHERIT case study	Responsible INHERIT partner	Country of implementation
1.	Eco Inclusion	Federal Centre for Health Education (BZgA)	Germany
2.	Food Garden	National Institute for Public Health and the Environment (RIVM)	Netherlands
3.	Gardening with Green Gyms and Meat Free Monday	University College London, Health Equity Institute (UCL)	United Kingdom
4.	GemüseAckerdemie	Collaborating Centre on Sustainable Consumption and Production (CSCP)	Germany
5.	Gent en Garde/STOEMP	Gezond Leven	Belgium
6.	Lifestyle e-coaching	Philips Electronics and Prolepsis	Netherlands and Greece
7.	Malvik Path	Norwegian University of Science and Technology (NTNU)	Norway
8.	Place Standard	Riga City Council and National Institute of Public Health	Latvia and The Republic of North Macedonia
9.	PROVE	Lisbon University Institute (ISCTE-IUL)	Portugal
10.	Restructuring Green Space	National Institute for Public Health and the Environment (RIVM)	Netherlands
11.	Restructuring Residential Outdoor Areas	Swedish Public Health Agency (FOHM)	Sweden
12.	Retrospective Analysis on Energy Efficient Investments	University of Exeter Medical School, European Centre for Environment (UNEXE)	United Kingdom
13.	Sustainable Food in Public Schools	University of Alcalá (UAH)	Spain
14.	Thinking Fadura	Basque Centre for Climate Change (BC3)	Spain
15.	UrbanCyclers	Charles University Environment Centre (CUNI)	Czech Republic

Figure 2. Map showing the geographical spread of INHERIT case studies across Europe.

2.5 Monitoring the implementation process

The total time frame for implementations within the INHERIT project was 20 months from September 2017 to April 2019 (though the time for implementation varied for the individual case studies). This involved not only the intervention implementation process but also the planning of the implementation and the evaluation. In most INHERIT case studies, the implementation lasted for 10 months, starting in March 2018 and ending in December 2018.

This implementation report presents a synopsis of each specific INHERIT case study's data collected by the INHERIT partner responsible for monitoring the implementation of the case study (see Table 1), hereafter called 'the responsible INHERIT partner'. Also presented in this report is the information collected by the designated coordinator (Work Package 4 Lead), the Norwegian University of Science and Technology (NTNU), which oversaw the implementation processes of the INHERIT case studies. The information on the INHERIT case studies was assembled by the NTNU coordinator from the following elements:

Implementation plan: Each responsible INHERIT partner was asked to make a Gantt chart that listed the activities and monitored their timing. Activities here were tasks related to the intervention itself, communication with target groups and or other audiences, meetings between stakeholders involved and meetings between the responsible INHERIT partner and the local implementer. The responsible INHERIT partners were also asked to monitor these activities, identify central documents and strategies, archive minutes from meetings with partners and target groups/users and log activities throughout the implementation period. Approaches for public engagement and community participation were also registered including the use of social media (e.g. specific platforms, frequency of usage). Partners and local implementers were asked to log any unplanned or unforeseen events during the implementation process, as well as key barriers and facilitators that were noted in relation to the implementation.

Template for reporting on the implementation process: This template was to be filled out by responsible INHERIT partners in close collaboration with local implementers that provided local expertise to support the responsible INHERIT partner in the implementation of the INHERIT case study. The template helped structure and standardise information on a range of topics such as main goals, actors and sectors involved in the implementation, strategic foundation, key activities and needed resources, as well as barriers and facilitators to the implementation.

General information on the INHERIT case studies: This included information from local implementers' websites, case descriptions provided by responsible INHERIT partners and materials already gathered in the INHERIT database. Emerging issues were also discussed throughout, notably in the regular monthly teleconferences with the work package leads and consortium partners, to anchor the approach in the INHERIT consortium and ensure a shared understanding of the development of the project. The NTNU coordinator also arranged regular online meetings/teleconferences with the responsible INHERIT partners to obtain further insights. Some of the INHERIT case studies (n=8) received site visits from UCL (n=6), EuroHealthNet (n=1) and NTNU (n=1) to gain further insight into the INHERIT case studies.

Based on these materials, a first description of each specific INHERIT case study was drafted and returned to the responsible INHERIT partner to verify and ensure that the case study was accurately described. All responsible INHERIT partners were also asked to provide additional information regarding details in their case studies.

CHAPTER 3
THE INHERIT CASE STUDIES

The case study descriptions are structured in a standardised manner, though they vary in length and level of detail due to variations in the complexity of the available material and the scope of the interventions. Each case is linked to one or more of the strategic areas of living, moving and/or consuming. This is indicated by the following symbols at the beginning of each description:

LIVING
(green space)

MOVING
(active transport)

LIVING
(energy efficient housing)

CONSUMING
(food and food production)

Each INHERIT case study description starts by outlining its local context, background and objectives. Next, how the INHERIT case study is anticipated to contribute to the triple-win goals of better health, increased health equity and more environmental sustainability is further illustrated. A description is included, relating each case study to the INHERIT Model. Then, for each case study, the implementation process is described according to actors and sectors involved (including user involvement) and key activities linked to the implementation process. Necessary resources are highlighted, and the strategic foundation in central documents/laws or political/administrative institutions are stated before summarising facilitators and barriers for the implementation.

Each description concludes with reflections on the specific case's potential for transference and scaling up. Following this, the lessons that can be drawn from the described implementation are set out. These individual descriptions of the INHERIT case studies then form the base for the concluding chapter in this report.

3.1 Eco Inclusion

RESPONSIBLE INHERIT PARTNER:
FEDERAL CENTRE FOR HEALTH EDUCATION (BZGA)

SETTING/CONTEXT:
CITY OF PFORZHEIM, GERMANY

Background

The energy consumption and waste disposal of households constitute both a health issue as well as an economic issue for occupants. In addition, households' energy consumption and waste disposal habits are key drivers of climate change. Concurrently, policies and programmes to improve home energy efficiency and reduce household waste are pivotal in promoting health and environmental sustainability. And since carefully designed heating and waste disposal systems can be subverted by occupants, individual behaviour plays an important role when it comes to sustainability and health in these matters (1).

The focus of this action is on the housing environment for refugees in Pforzheim, Germany. The City of Pforzheim experienced challenges linked to the housing situation of refugees. These were grounded in abundant energy consumption and waste disposal habits. Prior to the action, the housing situation was characterised by over-heating and insufficient ventilation, energy waste and a lack of recycling. This led to high expenses for energy use in both collective and private housing for refugees and put a strain on the municipal budget (as the City covers energy costs for refugees during the first year). Refugees also experienced that these matters put strains on neighbourhood relations and contributed to the stigmatisation of the refugee community. Together, this situation was potentially threatening to health through bad indoor climate, vermin and conflict, reinforced social inequality through unnecessary expenses and social stigmatisation, and was unsustainable due to energy waste and insufficient recycling habits. To try to solve these matters, the City of Pforzheim initiated Eco Inclusion.

Eco Inclusion aims to raise knowledge about, and enable refugees to apply strategies for, energy-efficient housing and recycling-friendly waste disposal. The overall objective is to achieve responsible, environmentally friendly use of energy and handling of waste and reduce the target group's exposure to health risks related to improper heating and ventilation of housing spaces and waste disposal. Moreover, the initiative aims to support social integration of refugees by reducing neighbourhood conflicts and homelessness caused by indebtedness and home evictions. A long-term objective is to raise willingness to rent housing/apartments to refugees.

Peer multiplier training session. © City of Pforzheim

Specifically, Eco Inclusion seeks to establish and train a group of "multipliers" (volunteers) amongst the refugee population about energy-efficient living and waste disposal. Multipliers will contribute to informing and sensitising refugees on the abovementioned issues and provide them with practical advice and equipment to save energy.

OBJECTIVES OF THE INHERIT CASE STUDY

The objective of this INHERIT case study is to evaluate the potential of the intervention that seeks to increase knowledge about energy consumption and waste disposal, thus contributing to closing the gap in health between refugees and the majority population. Moreover, the case study aims to understand how partners from different sectors can work together to make this intervention happen and identify facilitators and barriers to inter-sectoral collaboration. A sum of 10,000 Euros from the INHERIT project financed costs related to implementation and evaluation.

The Eco Inclusion evaluation study was developed and conducted by the BZgA team in close collaboration with the University of Düsseldorf, the City of Pforzheim, and under the supervision of research teams at UCL, England (quantitative studies), RIVM, the Netherlands (qualitative studies) and NTNU, Norway (implementation studies).

The mixed methods evaluation included a focus group interview with stakeholders and quantitative data collection that assessed increased knowledge about energy consumption and recycling systems. The evaluation study itself was carried out by the University of Düsseldorf in collaboration with the BZgA.

MAKING THE LINK WITH THE INHERIT MODEL

Eco Inclusion targets individual behaviour and aims to bring minor adaptions in the physical and social environment. It seeks to increase refugees' exposure to knowledge and equipment that might enable them to develop healthier, more economical and more environmentally-friendly energy use and recycling habits.

Eco Inclusion aims to change behaviour by building capacity through the improvement of knowledge on the subjects of adequate heating, energy-saving strategies and recycling systems, and by offering opportunities to apply this knowledge by distributing energy-saving devices. Matters of motivation are addressed by making the economic and health benefits visible, and by being trained by peers.

On the proximal pathway, Eco Inclusion might improve health and well-being through better indoor climate and reduced risk of contamination and vermin. It can potentially contribute to reduced social inequality by helping to save expenses and lessening conflict between neighbours, thus creating a more

inclusive city. On the distal pathway, the reduced use of electricity and reductions in food waste both have the potential to improve sustainability by easing pressures on global ecosystems.

Implementation

ACTORS AND SECTORS

Those involved in the planning and execution of Eco Inclusion were the public sector both at the local (City of Pforzheim) and the national levels (BZgA), the private sector (including the private Institute Weeber & Partner), non-profit companies (The Gesellschaft für Beschäftigung und berufliche Eingliederung (GBE)) and volunteers (refugee multipliers), as well as refugees (as the target group). The City of Pforzheim, Weeber & Partner and GBE have a longstanding cooperation as partners in previous projects.

Roles and responsibilities were distributed amongst the public, private and volunteer participants. The BZgA initiated the case study and was responsible for public administration at the national level and for carrying out the scientific monitoring. Activities linked to the evaluation study itself (analysing the questionnaire, conducting a focus group interview) were carried out by the University of Düsseldorf.

The City of Pforzheim, represented by the Head of Social Planning and Controlling, was mainly responsible for the implementation of the case study. The daily management and realisation of the project were carried out by the City's Integration Management department. This implied recruiting and motivating the multipliers, contributing to the organisation and advertisement of the workshops and managing public relations, such as press invitations. Additionally, an Integration Manager was present at all peer training workshops and at some home visits to refugees' households.

Weeber & Partner is a private Institute for Urban Planning and Social Research. They acted as the City of Pforzheim co-partner and were responsible for developing the training programme for the multipliers and conducting the first and the third day of the training. The Gesellschaft für Beschäftigung und berufliche Eingliederung (GBE) is a city-owned, non-profit company responsible for employment, qualification and labour market integration for vulnerable population groups (unemployed individuals, migrants, persons with disabilities).

Weeber & Partner and GBE were involved in the development of the training concept, conducted the second day of the multiplier training and performed electricity-saving checks in refugees' homes together with the peer multipliers as part of a practical training. Electricity-saving check ("Stromspar-Check") initiatives have been available for 10 years throughout Germany. They consist of free, individual and home-based counselling on

A peer multiplier provides counselling to a refugee on the use of electric devices and electricity savings in his home. © City of Pforzheim

Peer multipliers during a training session.
© City of Pforzheim

efficient energy use and savings to low-income households receiving social assistance benefits, including the subsidised provision of an energy savings kit.

Nine volunteer refugees completed the training to become multipliers. They were then responsible for advertising, organising and conducting information and awareness-raising workshops for several refugees in the participants' native language. Most of the multipliers also participated in energy-saving checks and home visits. Other key actors were refugee community members (the target group), associations of landlords and cooperative building societies (another target group, linked to the aim of facilitating housing for refugees by promoting acceptance of refugees as tenants) and local media representatives (as recipients and distributors of information about the project).

During the implementation of the project, some changes in responsibilities occurred. First, the daily co-ordination and implementation of the initiative were passed over from the Head of Social Planning and Controlling to the Integration Manager. The Integration Manager also took a more central role in initiating and supporting the organisation and conducting the training workshops with refugees. This task was originally assigned to the multipliers alone, but they felt the need for more support in this task.

KEY ACTIVITIES

Key activities centred on the development, planning and implementation of the project and relevant tools (such as the training workshop for multipliers). The first step was the development of the Eco Inclusion concept in consultation with the City of Pforzheim and BZgA. Next, local partners (GBE and Weeber & Partner) were included for initial coordination, including clarifications of respective roles, tasks and time planning.

An important early task was the recruitment of volunteers amongst the refugee population, which was carried out by the Integration Management of the City. The recruitment was conducted by advertising the project, distributing an information sheet in various communities, and through established personal contacts. A group of nine multipliers who originated from Afghanistan, Iraq, Iran, Pakistan, Morocco and Syria (seven men, two women) were identified and recruited. All multipliers had an A2 level of German (indicating that the person can express her- or himself adequately in everyday situations).

The training concept for the multipliers was developed by Weeber & Partner and the GBE. The training workshops consisted of three half-day sessions and included an overall introduction to 'waste disposal', 'ventilation' and 'heating' (Day 1), followed by the topics of 'energy use and savings in the home' (Day 2), 'living and renting an apartment in Germany', and some knowledge on methods and didactics of communication (Day 3). The workshop was carried out by personnel from both Weeber & Partner and the GBE. It was concluded by the multipliers conducting two home visits to refugees' homes, with support from the co-partner GBE. The home visits entailed a general check and documentation of the

Training for peer multipliers. © City of Pforzheim

housing situation, counselling about energy use and provision with a set of energy-saving devices.

After having completed the training, multipliers were responsible for conducting information and awareness-raising workshops for refugees. From August 2018 until the end of February 2019, nine (half-day) information and discussion workshops with a total of 143 refugees were conducted. Additionally, during the project period, multipliers also started to accompany the integration managers of the City of Pforzheim to give energy-saving tips to the target group via one-to-one consultations. These activities continued until the end of March 2019, with both home visits and four more workshops in various settings (collective refugee accommodations, family centres and school classes). Lastly, the creation and dissemination of information about the project to target groups and the general public, landlords' associations and housing/building cooperatives was planned and achieved; this included, amongst other material, a short video with information about energy saving for refugees.

Inter-sectoral cooperation occurred between all co-actors and throughout the implementation. The City of Pforzheim (public administration at the local level) and BZgA (public administration at the federal level) collaborated through discussions about the relevance of the project; consultations about the project concept; consultations for preparation of the application for funding; co-funding of the project as well as ongoing consultations on the implementation process. The City of Pforzheim, Weeber & Partner and GBE cooperated during the planning and implementation of the initiative, including during the development of the concept for the training of peer multipliers and the conduction of the training.

RESOURCES NEEDED

To implement the Eco Inclusion initiative, various resources were needed. First, the implementation of the initiative involved eight employees (two from the City of Pforzheim, two at Weeber & Partner, four at GBE) with dedicated working time for these tasks, which implied that the co-partners needed to have resources to dedicate staff to the implementation. Moreover, the implementation relied heavily on the involvement of volunteers. Some of the multipliers worked in paid employment and conducted the project activities during their time off. They received a small allowance for their commitment, and the costs of local travel were reimbursed. Equipment consisted of technical energy-saving devices (e.g. moisture meter, different kinds of lamps) and information/training materials (leaflets, brochures, press releases, training materials). Other economic costs were linked to renting training/workshop venues, catering, translation and interpretation. Time emerged as a crucial resource. The original time frame of five months was too short to raise awareness and train 200 refugees. For this reason, the implementation period was extended by three months.

STRATEGIC FOUNDATION

The decision to implement the initiative was taken at the top (municipal) level by local decision makers (City of Pforzheim), based on the existence of specific challenges generated by the refugee housing situation. It, thereby, addressed actual and urgent needs for action from the side of the local decision makers and administration.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

A major facilitator for the implementation was the existence of structures for Integration Management in the City of Pforzheim (like in all other cities in the state of Baden-Wuerttemberg). This ensured that there were personnel dedicated to the social integration of refugees, and that contact with the refugee communities could be established.

Next, previous and trustworthy relationships between the co-actors (the City of Pforzheim and the volunteer sector (GBE), their co-partners from the private sector (Weeber & Partner and GBE), the Integration Management of the City and the peer multipliers from the refugee community) was highlighted as a main facilitator. This was critical in ensuring a common understanding amongst the actors involved and establishing ownership for the project. It also facilitated a smooth and rapid response to problems, enabled an open debate about potential difficulties, and was a motivating factor for the partners and multipliers.

Motivation to participate in the project, both in the target group and in the group of implementers, was a crucial facilitator for the implementation. The target group's (refugees) and the main implementer's (the City of Pforzheim) motivation was linked to perceiving the goals as relevant and important. For the multipliers, the chance to "give something back" to their host country emerged as a strong motivator for participation. Moreover, identification with the project and the opportunity to gain skills that might support integration into the labour market were crucial for ongoing motivation. The main implementer (City of Pforzheim) was also motivated by the need to reduce financial pressure due to extensive energy use in collective housing facilities for refugees, as well as concerns about the integration of refugees.

Lastly, the application of inclusive strategies during the planning phase was described as an important facilitator; it promoted a common understanding of the project's objectives, which served as a main driver for continuous commitment and motivation. Moreover, inclusive planning led to a beneficial clarification of roles and responsibilities from the beginning.

The main barriers were linked to the involvement of the multipliers. They include the varying levels of engagement, motivation and availability, as well as the multipliers' need to balance voluntary commitment with other responsibilities. Additionally, some required more support from the implementer than originally expected, and the implementers highlighted that they had not anticipated the amount of work associated with participation. Overall, the implementation plan underestimated the time and resources needed. Accordingly, the duration of the project was extended by three months to reach the target number of 200 refugees.

An important aspect in this regard was the lack of supportive "official" systems that could provide legitimacy for the multipliers. Some multipliers encountered distrust from the refugee community, who could be reluctant to engage in a dialogue as they were unsure about the motives. The multipliers mentioned that this was linked to the fact that they did not have an "official function" in the Integration Management of the City of Pforzheim or the initiative and, therefore, could not prove their function to their fellow refugees, e.g. through an official identification badge.

The peer multipliers teach refugee families about energy efficiency and savings in an inclusive way. © City of Pforzheim

Barriers were also linked to matters of language and culture. These were anticipated, but they nevertheless impacted the implementation. For example, the requirement of having a minimum skill level in German did limit the number of potential peer multiplier candidates. Moreover, lower German language skills amongst female refugees (compared to male refugees) restricted the opportunities to engage female refugees as multipliers. Content and methods for the peer training needed to be well-adapted to the multipliers' level of German. When developing information material and a methodical design for the workshops, the implementers also had to take into account that the refugees participating in the workshops were partly illiterate. Cultural misunderstandings occurred in the cooperation between the City's representatives and multipliers that were linked to, for example, norms about appointments. These factors could lead to stressful situations, and those involved needed to improvise a lot.

Transferring and scaling up

Eco Inclusion ran smoothly in the local context of Pforzheim. However, in order to scale up or transfer this approach, some important issues should be considered. First, there is a need for a wider network and involvement of more varied stakeholders in the planning and implementation processes. For example, involving the association of property owners might improve the willingness of property owners/cooperative building societies to offer rental agreements to refugees. Other potentially important co-actors are the Jobcenter Pforzheim (responsible for payment of social assistance benefits and the integration of refugees into the labour market); local schools (as children were very responsive to the new knowledge, and emerged as "advocates" of the new behaviour at home); religious/faith (in particular, Muslim) communities, as they could link knowledge and skills to motivational and spiritual aspects of life; as well as local energy suppliers (that could provide information on energy saving) and NGOs or charity organisations (that could contribute to spreading information about the project). As a consequence of this experience, implementers in Pforzheim started to intentionally target young minor refugees through integrating two information workshops in the VABO (vocational school classes for preparation to employment without knowledge of German language) initiative, which took place at the end of March 2019.

Another crucial issue is the support for multipliers, both with respect to providing opportunities for exchanging knowledge and for skill building, for example, conducting meetings with all nine peer multipliers, offering support systems that could provide them with legitimacy, or helping them to balance this engagement with other aspects of life (for example, by offering payment).

Moreover, appropriate strategies for involving and recruiting female refugees both as multipliers and participants need to be developed or applied in better ways. Women in the refugee community often

have an important position in household management and are important actors for behaviour change in families. However, they may need to be approached in a different way than men.

Moreover, creative ways of transferring knowledge, for example, through short videos, might help to effectively scale this intervention.

Lessons learned

- Pre-existing formal structures and earlier experiences of cooperation between collaborating partners constituted key facilitators for the implementation of the Eco Inclusion initiative.
- Involving more stakeholders in the planning and implementation of Eco Inclusion could have contributed relevant knowledge and increased the impact of the project.
- Providing volunteers with structural support and legitimacy could have improved the implementation.
- Building trustworthy relationships, motivation and a sense of ownership amongst implementers, volunteers and target groups was crucial for achieving behaviour change amongst refugees.
- More time than expected was needed for training the refugees.

3.2 The Food Garden (De Voedseltuin)

RESPONSIBLE INHERIT PARTNER:
NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENT (RIVM)

SETTING/CONTEXT:
ROTTERDAM, THE NETHERLANDS

Background

It is often the most deprived, vulnerable and socially excluded groups in a society who experience the greatest environmental risks and burdens and the worst access to environmental goods and services (11). Greater attention to social equity considerations in the design of policies and programmes addressing environmental issues has the potential to reduce such problems. Actions should be created on the ground, which integrate environmental, social and economic concerns (1).

The Food Garden (De Voedseltuin) was initiated in 2010 by Sjaak Sies. He saw an opportunity to grow food for the local food bank at a former industrial area by the harbour in Rotterdam. The aim of the Food Garden is, through the help of about 50 volunteers, to produce organic vegetables and fruit for families and homeless people who are connected to the Dutch Food Bank. Approximately 7,000 households use the food bank because they cannot afford enough food.

The Food Garden stretches out over around 7,000 m^2 of land and produces organic fruit and vegetables. Water for use in the garden is being recycled, and an 8km path connects the garden to a park and other green areas. Since its beginnings, the Food Garden has gradually expanded. In 2016 and 2017, it transformed into a "food park", as it was included in an initiative called Broedplaats (The Breeding Ground). The Broedplaats involves a wider set of initiatives and stakeholders collaborating towards a healthier and more sustainable city.

People facing socioeconomic disadvantages are provided with an opportunity to volunteer in the garden to grow crops. Volunteers working in the garden, especially those who are unemployed, are empowered by learning new skills and expanding their social networks. Once a month, the volunteers cook for visitors in homeless shelters using fresh vegetables from the garden. The Food Garden also delivers vegetables to a restaurant for homeless people and to inhabitants in a low-income neighbourhood. Educational activities, such as workshops on permaculture and growing vegetables, are organised, and school classes from the local primary and secondary schools can visit. The garden is also open for visits from businesses in the area.

What used to be an industrial area, the Food Garden now provides fresh produce to nearly 7,000 households around Rotterdam. © Menno Leutscher

In 2017, a multi-functional container home was set up on the premises. This was meant to be an area for education, meeting, development and research, and it was designed to be as sustainable as possible, including a helophyte filter for natural water treatment, a biomeiler (a large compost pile from which heat is extracted that can be efficiently used) for heating, rainwater collection and solar panels for sustainable energy.

With all these activities within and in association with the Food Garden, the project has aimed to contribute to sustainable development and social integration in the region of Rotterdam. The garden is now a green space with a park-like character in a developing city area, and its activities seek to connect companies, idealistic organisations, local inhabitants (of different social classes) and nature lovers.

OBJECTIVES OF THE INHERIT CASE STUDY

The Food Garden was chosen for inclusion in the INHERIT project due to its potential benefits for healthy sustainable consumption and social integration of people facing socioeconomic disadvantages. At the same time, the programme contributes to developing new green spaces in an industrialised area. It provides a place where people can meet across social divisions and contributes to making the city healthier and more sustainable.

The INHERIT case study concerning the Food Garden focuses on gaining insight into barriers and facilitators for inter-sectoral cooperation when developing, maintaining and expanding an urban food garden. Since the Food Garden had been up and running for six years when the INHERIT project started, the activities during the INHERIT project period have been related to the evaluation of the inter-sectoral cooperation in the initiative. A sum of 4,800 Euros from the INHERIT project financed costs related to implementation and evaluation.

The Food Garden evaluation study was developed and conducted by RIVM in close collaboration with the Voedseltuin team (implementers). The method for evaluation included a focus group interview with stakeholders from the cooperation chain of the Food Garden.

MAKING THE LINK WITH THE INHERIT MODEL

The Food Garden entails changes to the physical environment: changing a former industrial area into a food park, connecting this area to a cycling route and a park area, producing organic fruits and vegetables and supporting active transportation and green leisure. This is done with strong support from volunteers and local stakeholders.

This increases exposure to healthy food, physical activity, social integration and pleasant green spaces, particularly amongst people from deprived neighbourhoods, residents who are long-term unemployed and former homeless people. It offers possibilities for participating in garden work, expanding social networks and building capacity and skills.

On the proximal pathway, this might result in improved health and well-being of the volunteers and people living in poor socioeconomic circumstances through changes in their fruit and vegetable consumption, improved social networks and improved working skills. Equity can potentially be improved by providing increased access to fruits and vegetables to people facing socioeconomic disadvantages, through their local food bank. Additionally, people who have been homeless and/or have been out of the job market are motivated to work in the Food Garden. On the distal pathway, scaling up permaculture gardens and environmentally friendly ways of producing and harvesting seasonable fruits and vegetables may result in a sustainable city with less detrimental impacts on global ecosystems.

Implementation

ACTORS AND SECTORS

The Food Garden initiative involves actors within the public, private and volunteer sectors. The Food Garden administrative board consists of a director, a representative from Pluspunt (a work activation centre), a volunteer coordinator, a business coordinator, a treasurer, a volunteer representative and a garden coordinator. The Municipality of Rotterdam provides the Food Garden with financial support and volunteers.

The target group of the Food Garden initiative are disadvantaged families, a part of whom receive food packages from the Rotterdam Food Bank. In addition, the Food Garden wants to support vulnerable people and give them an opportunity, from their own strengths, to obtain work opportunities and experience social inclusion. This support is provided by recruiting volunteers from groups

The Food Garden supports vulnerable populations by giving them opportunity for work and social inclusion.
© Menno Leutscher

facing socioeconomic disadvantages who find themselves outside the job market. These people are involved in meetings, consulted and given a say in the decision-making at the Food Garden.

Together with Pluspunt, the food catering organisation Tafel van Zeven, the herb garden de Rotterdamse Munt, a new public place called Buitenplaats Brienenoord and the neighbourhood kitchen Wijkkeuken van Zuid, the Food Garden forms part of the *Healthy Green Learn Work* chain, which collectively offers around 250 learning/working spots for people from Rotterdam who need assistance to participate in society. The Food Garden represents a learning and work training site for some of these people. Through Rotterdam Cares, students come and help in the garden every Monday. The service *Work and Income* of the Municipality of Rotterdam sends people to the garden who need work training. Recently, the Food Garden, together with Pluspunt, set up a working relationship with formal health partners (Antes, a psychiatric centre; and CVD, a foundation centre for voluntary and professional social services).

The cooperation between Pluspunt and the Food Garden is central. Pluspunt is a work activation centre or people who are roof- or homeless that offers meaningful daytime activities. One of these activities is volunteering at the Food Garden. Pluspunt supplies the care, and the Food Garden supplies the daytime activities. This cooperation is the start of a new way of thinking about and funding green initiatives, and these types of initiatives are increasingly being seen as health initiatives that contribute to public health. By taking part in the Food Garden initiative, these volunteers assist in producing food for low-income households whilst working towards their own integration into society.

Due to limited resources, the Food Garden primarily relies on volunteers. A permanent team of volunteers (approximately 50) trains those who are newly recruited. Of these individuals, about 20 people receive a salary. They are advised about arriving on time, working together and taking responsibility. Twenty of the volunteers have been unemployed for a long time due to various reasons, such as psychological challenges, problems with debt and addiction. Three of the volunteers are retirees, who find it to be a meaningful daytime activity. Others volunteer alongside other jobs.

KEY ACTIVITIES

A central activity within the Food Garden is that of tending the plants and herbs in the garden. This is done using a permaculture method, and volunteers are taught and trained according to these methods. Essential here is how social aspects are considered integral to sustainable agriculture.

All volunteers participate in 'the production garden' and 'the learning garden'. They learn about gardening, sowing and harvesting. They also participate in various workshops on topics such as edible flowers, composting, making cultivation plans, natural vegetable gardening, natural pest management, polycultures, food forests and permaculture.

On Wednesday evenings and Thursday mornings, harvested fruits and vegetables are prepared for packing. The food packages are then distributed to people in need from the De Paardenberg community centre in the Transvaal area. People that live below the poverty line come to the centre to collect their food package. Volunteers help distribute the packages.

Five days a week, volunteers in collaboration with Pluspunt cook with and for people from the neighbourhood who have a low income, are homeless and/or socially isolated, using fresh vegetables from the Food Garden. The Food Garden also provides activities for learning and practice designed for children, youths and students. Moreover, the Food Garden reaches out to other groups in the local community. It offers local inhabitants a possibility to contribute to, and get involved in, the garden by donating money in return for being invited to a harvest party in the garden and/or harvesting plants or herbs. As a means to involve businesses, the Food Garden initiated a programme for companies to adopt a food circle in the garden. By sponsoring the circles, the Food Garden can use the means to buy materials, seeds and tools, and a nameplate with the company name to be displayed in front of the food circle. Sponsoring companies can enjoy a free outing at the Food Garden.

RESOURCES NEEDED

Coordinating and running of the Food Garden, with its many initiatives, requires various resources. It relies very much on a group of key personnel with expertise in permaculture food growing, harvesting, food packaging and distribution, volunteer training and pedagogic teaching of children and students, as well as networking skills and knowledge about the local community to maintain and expand the initiative. Whilst many of the tasks related to the gardening, sorting, packaging, transport and administrative work are carried out by volunteers, the professionals who perform the training of the volunteers are paid to do so. In addition, the materials and garden maintenance require steady funding. Another great expenditure is that of renting the ground. The area is owned by the municipality. The municipality does not want to

A volunteer pushes a wheelbarrow during routine maintenance of the Food Garden. © Menno Leutscher

sell the ground to the Food Garden, so the program is dependent on prolonging the rental contract. Below is a more detailed list of key resources needed:

- Space for the garden
- A garden coordinator and business coordinator for 16h a week each
- Director for 4h a week
- Assistant garden coordinator and assistant concierge filled in by volunteers
- Volunteers (about 15 to 20 volunteers work daily, with a total of over 40 volunteers)
- Seeds and gardening equipment
- Knowledge of permaculture and gardening
- Networking skills
- Funds, crowdfunding campaigns, support by the municipality

STRATEGIC FOUNDATION

The Food Garden is locally anchored in a collaborative network called Green Connection (a green ribbon of social green initiatives in that area). Through this, it is connected to several local social green initiatives, such as a work activation centre, the municipality, and others. The Food Garden is also anchored in the Delfshaven local neighbourhood network, which is in contact with inhabitants and their networks, associations, district pastorate, housing corporations, professional and informal welfare, care providers and schools. Furthermore, the Food Garden is an active player in several local, national and international knowledge networks. The cooperation they have with the Pluspunt work activation centre has gradually intensified, and the boards of Pluspunt and the Food Garden have some members in common.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

The high availability of volunteers, the support from the municipality and the location near the Food Bank have all been important factors for the successful operation of this initiative. Another central facilitator has been the availability of a green space area that could be allotted for the Food Garden.

Additionally, the initiative has benefited from cooperating with a network of welfare organisations. The collaboration has allowed for several synergy effects; all the actors involved could expand their practices and achieve more. The network-building efforts strengthened social entrepreneurship in the city of Rotterdam and positively influenced motivation amongst the actors involved. The network could have benefited even more from these collaborations if achievements had received more financial support from the municipality.

Other facilitating factors are the area's accessibility; it attracts people who come to relax, play and socialise. This, in addition to having a good reputation in the area, have contributed to its success. Moreover, it has been crucial that the initiators took the time to build up an organisation, with the right

people at the implementation and funding levels. Dedicated persons are essential. Sharing stories and exchanging experience and knowledge have also been key. Having different ways of financing and funds is important to allow flexibility in the budget. In addition, being proactive instead of merely reacting to developments is crucial. Anticipating changes and developments in national laws or municipal changes is important.

Previously, during the harvest high season, the Food Garden could supplement about 400 food packages with fresh fruits and vegetables on a weekly basis. An important development that affects the project's productivity is that of the Food and Commodity Law. The project has seen a decline in number of weekly produced food packages due to stricter requirements provided by this law. The Food Garden may no longer store their harvests with the food bank. Therefore, the Food Garden started developing food stamp cards that are being distributed amongst users of the food bank to come pick up vegetables in the garden.

The Food Garden depends on external funding sources. The financial balance is negative, since the garden does not generate financial income. This creates some uncertainty. The Food Garden would have liked to have more flexible budgets from different funds in the Municipality. Bureaucracy can be difficult at times, especially since this is an initiative that merges activities belonging to different sectors. However, the Food Garden has been creative and started a business model in which finances come from public, private and collective sources.

Transferring and scaling up

To transfer or scale up the Food Garden, some important considerations should be made. First, there is a need for a wide network of stakeholders involved, from several sectors (public, private and civil). Furthermore, the initiative presupposes a firm anchoring in two particular sectors: green initiatives and social and welfare services. Succeeding, thus, demands engagement and a willingness to cooperate from both sectors. In addition, the urban development sector of the municipality should think of this type of initiative as a green health institute and not as 'a temporary and kind of nice initiative'.

Lessons learned

- The permaculture approach was suitable for merging social and environmental interests.
- Binding agreements about funding between the private, public and volunteer sectors were crucial.
- The merging of work activation, health promotion and social entrepreneurship approaches was beneficial.
- All actors would have benefitted from a more integrated, cooperative and active involvement from the municipality.
- Commitment from the societal development sector is crucial, especially from the departments that engage in public and preventive health.

3.3 Gardening with Green Gyms and Meat Free Monday

RESPONSIBLE INHERIT PARTNER:
UNIVERSITY COLLEGE LONDON (UCL)

SETTING/CONTEXT:
GREATER LONDON, UK

Background

Childhood obesity continues to be a public health challenge in all parts of Europe, and evidence indicates that the negative impacts on both physical and mental health and wellbeing are significant and may extend into adult life (12). Children's relationship with food, their lifestyles and how to change this in a desirable direction have thus received great attention. It has also been pointed out that food growing activities in community or school gardens may encourage a healthy diet (13, 14, 11).

This intervention introduces the combination of two promising practices to a primary school in London: Meat Free Monday (MFM) and Green Gyms (GG). In practice, this entails developing a school garden and linking the activities of gardening to a curriculum, alongside having a meat-free (plant-based) lunch once a week. The aim is to encourage children to develop healthy dietary behaviours, increase physical activity and increase the use of green space in the school.

Meat Free Monday is a not-for-profit campaign that aims to raise awareness of the detrimental environmental impact of eating meat and encourage people to help slow climate change, conserve precious natural resources and improve their health by having at least one meat-free day per week. The MFM school programme includes ideas for teachers, tips for students, information for parents and advice for caterers.

The Conservation Volunteers (TCV) created and runs Green Gyms® across the UK. TCV is a voluntary sector organisation that is funded by the public sector and private organisations. The aims of Green Gyms® are to improve health and the environment at the same time. The objectives of GG are twofold, 1) to improve health and well-being – by increasing or maintaining fitness, reducing isolation and supporting better mental well-being and 2) to increase employability – by increasing knowledge, skills and confidence. Green Gyms® are free outdoor sessions where people are guided in practical activities, such as planting trees, sowing meadows and establishing wildlife ponds. General Practitioners now prescribe Green Gyms® sessions to patients to encourage them to improve their health and well-being. Green

Gyms® are a weekly activity that runs for three to four hours at a local community facility such as a park, usually in the daytime on a weekday. Green Gyms® are available to everyone; average turnout per week typically ranges from six to 20.

Green Gyms® implemented in a school setting are called School Green Gyms. School GGs are implemented in some parts of the UK with a similar objective to improve children's physical and mental health. However, implementation of School GGs has been discontinued in England.

THE OBJECTIVES OF THE INHERIT CASE STUDY

Guided by the idea of the triple-win, UCL proposed within the INHERIT project to combine the two promising practices – MFM and School GGs, with the title Gardening with Green Gyms and Meat Free Monday, to develop a complex intervention for improving children's healthy eating behaviour, increasing their physical activity, improving the physical environment and reducing inequalities by addressing children of different abilities and diverse backgrounds.

A school in London was selected for the intervention, and the intervention involved designing and developing a garden in the school's location; providing a meat-free meal for the pupils once a week; engaging children in regular gardening activities operated by Green Gyms®; and linking gardening activities with the curriculum through outdoor learning.

The objective of the INHERIT case study was to identify and evaluate the potential of this intervention for a triple-win i.e. better health and well-being, improved environmental conditions and reduced health inequalities, as well as understand how partners from different sectors work together to make the intervention happen. Finally, the barriers and challenges of inter-sectoral collaboration were investigated. A sum of 15,630 Euros from the INHERIT project financed costs related to implementation.

The evaluation study of this intervention was developed and conducted by the UCL team in close collaboration with Green Gyms®, Meat Free Monday and the London school (implementers) and research teams at RIVM, the Netherlands (qualitative study) and NTNU, Norway (implementation study). The mixed methods evaluation included: focus groups, interviews, questionnaire surveys, children's drawings and use of accelerometers.

MAKING THE LINK WITH THE INHERIT MODEL

Gardening with Green Gyms and Meat Free Monday aims to change the institutional environment (physical environment and social context) of school children by incorporating Gardening with Green Gyms and Meat Free Monday into school activities as well as the curriculum. This way, children's exposure to physically active outdoor activities is increased, they take part in a social activity, increase their contact with nature, and reduce stress levels.

Thereby, Gardening with GG and MFM seeks to change behaviour by offering opportunities to participate in gardening activities, to build capacity by learning about gardening and plant-based healthy diets, and to increase motivation amongst both teachers and children by incorporating these activities into the curriculum and regular activities of the school.

On the proximal pathway, health and well-being might be enhanced by increased physical outdoor activity, more social participation, as well as a healthier diet for participating children. Exposure and

Such interventions may improve sustainability through plant-based diets, increasing green space, and biodiversity.
© Matluba Kahn

experiences in physically active outdoor activities can increase mental health and well-being. Equity is potentially improved by increasing opportunities for children of different abilities and socioeconomic backgrounds to participate in outdoor activities, learning to link what they grow and eat with health and wellbeing. On the distal pathway, when these types of intervention are scaled-up, sustainability might be improved by promoting a plant-based diet, increasing green spaces and biodiversity in the school setting and encouraging pro-environmental behaviour amongst children. This has the potential of reducing pressures on the "here and now" but also on global and future ecosystems.

Implementation

THE ACTORS AND SECTORS

Sectors involved in the planning and execution of the Gardening with Green Gyms and Meat Free Monday were NGO and non-profit organisations (GG and MFM), the primary school and the university (UCL researchers).

Actors engaged in coordinating and implementing the combination of the two practices in a primary school in London included members of the school staff, the GG's managing director and community education officer, the MFM campaign manager and UCL researchers. The target groups for the initiative were pupils of the school.

Roles and responsibilities were distributed amongst the actors involved in the intervention. The school head teacher and assistant head teacher agreed to inform the local borough, school caterer and parents about the planned interventions. Year 5 class teachers collaborated with the GG community education officer in planning, preparation and execution of gardening activities and worked with interlinking gardening activities in the school curriculum. The children participated in parts of the planning, such

as developing the initiative's Charter and getting the safety and security regulations straight for the outdoor activities. The GG community education officer led the gardening activities with the children. The work with ongoing planning, budgeting and logistics was shared amongst the GG officer, school staff and UCL researchers.

The MFM campaign manager supported the GG gardening activity by providing information on healthy eating and ideas for lesson plans. UCL researchers liaised with all key stakeholders about activities and timeline and tracked the progress. Sixty Year 5 children (9 to 11 years old) participated in the gardening activities led by the GG officer.

In addition to all the key actors mentioned above, two volunteers were involved in the implementation. The volunteers helped in outdoor gardening activities.

Children have ownership over their gardens being involved in their development. © Matluba Kahn

KEY ACTIVITIES

Key activities coincided with central tasks tied to the different phases of the implementation process. As a first step, UCL researchers organised meetings with the GG's community education officer and the MFM campaign manager to gain an understanding of what could be done together and how the available resources could be utilised. UCL researchers also started collecting information about recent interdisciplinary inter-sectoral interventions as a means to build knowledge, explore opportunities and learn from the experiences obtained from these interventions.

Based on these first steps, UCL developed an action plan together with a plan for funding and budgeting. Subsequently, UCL started looking out for interested schools through the networks of MFM, Bartlett School of Architecture, Institute of Education and GG. Once a school that was interested in trying out the intervention was found through the GG network, planning meetings were arranged between the school head teacher, deputy head teacher, a GG representative and UCL researchers. They agreed upon pilot activities and timelines.

Informational meetings were held with parents, and informed consents were collected from both parents and the participating children. UCL and GG engaged in the purchase and provision of

Child holds a worm, a prized sign of healthy soil. © Matluba Kahn

protective clothing, gloves and boots for children to wear in inclement weather out of the INHERIT pilot study budget. UCL researchers collected data for impact evaluation through questionnaires, accelerometery, focus groups with children and children's' drawings.

During the implementation period, Green Gyms gardening activities with children led by the GG outdoor and community education officer were carried out at the school for two hours a week (and will continue over the entire school year). Activities thus far have included clearing the area, weeding, making the raised beds ready for plantation, sowing seeds in paper packages for germination, den building, learning about making a fire and fencing. A Meat Free Monday session with children was conducted by the MFM campaign manager. During the session, the MFM campaign manager talked about climate change, the impact of animal food production on the environment and climate. She presented some vegetables to the children, asked them questions, and let them taste the vegetables. The children participated in a rhyme based on Meat Free Monday.

RESOURCES NEEDED

The coordination and implementation of the Green Gyms® and Meat Free Monday required various resources. First, it required the actors involved to have enough time to participate in meetings and execute the intervention. The actors that invested the most time to contribute to the planning and implementation of the intervention were UCL researchers, by communicating and liaising with all key stakeholders, the GG community education officer that led the gardening activities, the class teachers who participated in the activities along with the GG officer, the assistant head teacher who liaised with UCL, and the MFM campaign manager who contributed by providing information.

Funds were also needed for carrying out the intervention. The project budget was predominantly spent on equipment (e.g. gardening equipment for sowing, weeding, watering and harvesting, clothing for children) and materials (e.g. seeds, soil and planting). The GG community education officer and the MFM manager were paid by their respective employers.

Children working together to maintain their gardens.
© Matluba Kahn

STRATEGIC FOUNDATION

The project was strategically founded in the UCL project group (implementing the practice), however the project was led by another project group (GG supported by MFM) and implemented in a local gated community (primary school), delivered to a target group (Year 5 children).

The gardening activities themselves were the most important in terms of anchoring this practice. Children loved to be outdoors, and hands-on learning is fun and can be remembered in the

long term. Outdoor activities were also important for developing social skills, cognition and executive functioning.

Linking the gardening activities with the Meat Free Monday programme (linking growing with consuming) is also crucial and can contribute to a better understanding of what children eat and how it might affect their health.

The most important element is the sustainability of the programme, which can only be ensured if the activities are part of the school curriculum. Teachers are likely to be more motivated to take children outdoors if this is part of a prescribed curricular activity instead of a fun outdoor activity.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

The interest and motivation amongst the various actors involved in helping children change their health behaviour and learn about environment and sustainability at all levels were the main facilitator for the implementation. Green Gyms® was supportive in the implementation of the activities led by one of their outdoor and community education officers receiving salary from TCV. The Meat Free Monday campaign manager was enthusiastic and ready to lend any support for the implementation of a meat-free day at the school. The school authority, head teacher and class teachers were also supportive in the implementation of activities and collection of data.

The main positive effect of having all these users involved in the planning was the creation of a sense of belonging to and ownership of the project amongst the users. The users started owning the project rather than merely being a part of it. The children were highly enthusiastic about the outdoor gardening activities, and this enthusiasm was a good motivator for all partners.

Spending more time outdoors gardening is a great basis for physical activity and social interaction. © Matluba Kahn

The practice fits well in the context to tackle childhood obesity through outdoor activities and healthy eating.
© Matluba Kahn

On a policy level, the UK Government school approach, which is committed to both the United Nations Convention on the Rights of the Child and to being a healthy school, was a critical facilitator. The practice fits well in the context of the commitment demonstrated by the UK government to tackle obesity in children.

The main barrier at all levels was limited resources – personnel, time and money. The implementation of the project required commitments from partners on top of their regular work commitments and extra time needed for planning and participation that could not be supported by the budget. The participation of the GG community education officer in leading the gardening activities in the school was funded by TCV, as that was not supported by the INHERIT funding. Since the GG community education officer's time was not funded outside the two hours paid for by TCV, she was unable to spend more time in planning beforehand for the whole term. This applies to the school as well; the teachers could not spend time with GG personnel beforehand in order to plan how these activities could be integrated with the curriculum. This represents a potential risk regarding scaling up and sustaining the outdoor gardening activities after the end of the INHERIT project. Moreover, regarding this exact intervention, greater involvement could have entailed greater benefits for the children.

There were issues regarding finding a school. It took more than six months to find an interested school. Advertisement was circulated via networks, but no school responded to that. The communication amongst sectors was not very smooth due to time constraints and delays, and UCL had to spend a considerable time contacting different partners and moving things going.

Challenges remained in terms of curating healthy meat-free lunches catered by the school. The school already had a meat-free Thursday, but the menu was not particularly healthy. Communication with caterers on the part of the school has not happened again due to time constraints. Information is yet to be gathered in terms of whether packed lunches brought by children had meat-free options on Thursdays.

Children learn first-hand skills of gardening.
© Matluba Kahn

Another important barrier is weather and/or the time of year the project is implemented. Winter is not ideal for growing fruits and vegetables. Activities in winter comprise less sowing and harvesting fruits and vegetables and more maintenance of the garden, weeding and preparing the garden beds for sowing/planting.

On a policy level, the lack of good strategies for implementing the above-mentioned policies and the lack of formal integration of outdoor activities with the curriculum could be regarded as central barriers. To overcome these barriers, the school gardens and their connected outdoor activities could be recognised as key policy agendas supported by local boroughs. If such anchoring in policies occurred, integration of gardening activities within the school curriculum could allow teachers to have an adequate amount of designated time for these activities.

Transferring and scaling up

Whereas GG and MFM are well-designed programmes, the combination of GG and MFM is a new project and a less explored idea in Europe. The pilot was conducted in only one school but has potential for further development. Wider implementation and evaluation are required to determine its impact across the population and its ability to scale up and transfer to other schools and contexts. Recognition of the practice at the policy level and support from policymakers, local authorities and public health agencies are necessary to scale up and transfer the practice.

Lessons learned

- Inadequate funding and lack of time for planning, preparation and implementation may have impacted the quality of the implementation.
- It is important to anchor the initiative in local, regional and national plans, such as the school curriculum, guidelines for school caterers and overarching policies.
- The intervention could be expanded to other schools to provide more knowledge on the intervention's potential and create stronger evidence.

3.4 GemüseAckerdemie (Vegetable Academy)

RESPONSIBLE INHERIT PARTNER:
COLLABORATING CENTRE ON SUSTAINABLE CONSUMPTION AND PRODUCTION (CSCP)

SETTING/CONTEXT:
GERMANY, 12 SCHOOLS IN DEPRIVED AREAS/CHILDREN WITH SPECIAL NEEDS

Background

Considerable attention has been directed towards urban children's lack of contact with nature. Research indicates that there are numerous cognitive, mental, physical and social benefits of allowing children adequate contact with nature (15). Furthermore, the number of children who are overweight is continuously rising in Europe. The current eating culture characterised by unhealthy diets, lack of knowledge about food production, nutrition and handling of food waste contributes to local pressures linked to health, equity and sustainability. Evidence indicates that restoring urban children's contact with nature can provide cumulative, long-lasting health benefits (16) and food-growing projects can stimulate an interest in food (14). Research on school garden programmes shows that such programmes can have a positive effect on the preference for and intake of vegetable and are more effective than nutrition education when it comes to positively changing these dietary outcomes (13).

The GemüseAckerdemie, meaning Vegetable Academy, aims to re-establish children's contact with nature and increase their knowledge about growing food and eating healthily. It started as a pilot in 2013, and since then, it has expanded to a programme of 400 schools and kindergartens in 2019. GemüseAckerdemie involves training for teachers to give lessons to children on the theory and practice of growing food. As part of the programme, children are made responsible for tilling a school garden, including sowing, fostering and harvesting vegetables. The children are also encouraged to think actively and critically about their own actions concerning the food they consume and the effect these choices have on the environment. The aim is to motivate children to see themselves as responsible actors in creating a more sustainable future and increase their interest in biodiversity through play and practical experiences. Though children in kindergartens and schools are the focus in GemüseAckerdemie, all generations (teachers, parents, experts, voluntary mentors) are included in the concept and are expected to learn from each other.

Currently, 400 schools and kindergartens in Germany, Austria and Switzerland are implementing the GemüseAckerdemie. Impact reports conducted yearly clearly show that the initiative has had a significant impact on the participants' way of thinking and acting; they feel more involved with nature and value their food more after they have experienced how much work it can be to grow crops. The GemüseAckerdemie has been awarded several prizes since its start-up.

OBJECTIVES OF THE INHERIT CASE STUDY

The GemüseAckerdemie was chosen for inclusion in the INHERIT project due to its potential benefits for health, well-being and health equity. At the same time, the programme improves the school or kindergarten environment by creating new green spaces. It also enables behaviour change at an early stage in life.

The INHERIT case study focuses on the GemüseAckerdemie PLUS programme, which is dedicated to schools and kindergartens that are situated in underprivileged areas, has a strong focus on integration, and/or where children with some form of disability attend. In GemüseAckerdemie PLUS, the participation fee for the school or kindergarten is lower than in the standard programme, and more assistance is provided during the planting-and growing- season.

The objective of the INHERIT case study has been to gain insights into how volunteers can be recruited to the PLUS programme in greater numbers, and whether working as a volunteer and assisting the teachers and children in the vegetable gardens leads to healthier and more sustainable diets amongst the volunteers. Additionally, the knowledge and experiences from the study will contribute to the development of a tailored, online platform that can serve as a long-term support structure for the recruitment of volunteers. Lastly, the INHERIT case study has sought to gain insight into the processes of inter-sectoral cooperation between the association Ackerdemia e.V., the schools/kindergartens and the volunteers. A sum of 9,980 Euros from the INHERIT project financed costs related to implementation and evaluation.

The GemüseAckerdemie evaluation study was developed and conducted by the CSCP team in close collaboration with the Ackerdemia e.V. team (the implementers) and under the supervision of research teams at RIVM, the Netherlands (qualitative studies) and NTNU, Norway (implementation studies). The mixed methods evaluation included focus groups with stakeholders and interviews with teachers and volunteers.

MAKING THE LINK WITH THE INHERIT MODEL

GemüseAckerdemie targets the behaviour of children, teachers and volunteers in schools. The programme seeks to change behaviour by offering opportunities for children to participate in gardening experiences as part of their everyday lives. It addresses issues of motivation by providing opportunities for contact with nature and skill-building in gardening, healthy, plant-based diets and eco-friendly and nature-preserving sustainable solutions.

On the proximal pathway, health and well-being can possibly be enhanced by promoting a healthier diet, providing positive experiences and relevant knowledge and strengthening local social relationships. Equity might be enhanced by levelling out opportunities to follow a healthy diet. Sustainability can potentially be improved through increased small-scale, sustainable food production and more green space, as well as increased positive attitudes towards sustainable solutions. Population health may

also be improved through improved access to practical and theoretical knowledge on the sustainable small-scale production of healthy food at an early age. In terms of health equity, promoting plant-based diets would benefit disadvantaged groups more since they have poorer health and worse diets. On the distal pathway, sustainability might be enhanced through the reduced consumption of red meat and an increased provision of green spaces.

Implementation

ACTORS AND SECTORS

Four groups of actors constitute the key actors in this programme; 1) the Ackerdemia main office (Ackerdemia e.V.), with the GemüseAckerdemie regional managers or local networkers, 2) the schools and kindergartens, with the responsible teachers and nursery staff, 3) the children and their parents and 4) the volunteers. Hence, the sectors involved are a non-profit organisation (Ackerdemia e.V.), the public sector (schools and kindergartens) and civil society (the children, their families and volunteers). Sectors that are indirectly linked to the programme, providing, for instance, the seeds and plants bought by Ackerdemia e.V., are farmers and private businesses.

The non-profit organisation Ackerdemia e.V. administers and coordinates the programme on a national level, whereas regional managers from the organisation have a more hands-on job in relation to the implementation of the programme in local schools and kindergartens. Regional managers train and advise teachers and volunteers, whilst the teachers' responsibility is to implement the GemüseAckerdemie programme and teach the children about the theory and practice of growing food. Volunteers are expected to support the teachers and be additional responsible adults, helping in the garden and answering questions from the children. Volunteers are, in some cases, also needed to water the crops and weed the gardens during holiday seasons when schools are closed.

The users that are targeted by the GemüseAckerdemie PLUS programme are children in schools and kindergartens in underprivileged areas and children with some form of disability. Teachers and volunteers also benefit from taking part in the GemüseAckerdemie PLUS programme, even though they are only a secondary target group.

KEY ACTIVITIES

The key activity of the GemüseAckerdemie PLUS programme is to work with schools and kindergartens in underprivileged areas or with children with disabilities. Jointly with their teachers, the children learn about the theory and practice of growing and harvesting vegetables. To reach these objectives, the teachers are trained and supported by the association Ackerdemia e.V. Teachers are provided with instructive and fun materials to use in their teaching, receive weekly updates during the growing season about proceeding with the garden work and obtain support to build the gardens and plant the vegetables.

Recruiting volunteers and matching them with nearby schools and kindergartens is also part of the activities of the GemüseAckerdemie PLUS programme. This has included developing and extending an online platform where volunteers can register and obtain quick access to information. As part of the pilot, the Ackerdemia team has also proactively searched for potential volunteers by contacting local volunteer networks, universities and local businesses (in the area of gardening). The programme has

Children learn and witness the entire lifecycles of the food produced. © Katharina Kühnel.

been improved in terms of the information given to volunteers. Volunteers are also offered more extensive advice about handling specific situations with the children.

The Ackerdemia team has been responsible for receiving applications and establishing requirements for volunteers. The team provides the volunteers with information and knowledge, matches them with schools and kindergartens and follows up with them by providing support during the engagement.

The key activities related to the implementation of the programme in schools and kindergartens can be divided into three stages. The first stage – the pre-sowing stage from January to April – is devoted to preparation and organisation. During this stage, the teachers and volunteers (if already recruited) participate in their first training and receive informational material. They are taught about vegetable growing, biodiversity, soil fertility and preserving seeds.

The second stage – from April to October – is the heart of the programme, during which the schools and kindergartens receive packages from Ackerdemia with seeds and plants. After doing the seeding in the garden, two hours per week are set aside for gardening work, where the children are the responsible gardeners. Teachers and volunteers are present to supervise and support the children, and the teachers and volunteers receive weekly newsletters and personal support from Ackerdemia.

In the third and last stage – from October to December – after November and the last harvest in the garden, the children learn how to preserve the food they have harvested. They can also explore other related themes, such as food waste and biodiversity, supported by GemüseAckerdemie informational material and fun exercises.

RESOURCES NEEDED

Teachers must be willing to devote time to the programme. First, they must allocate some time to learn how to grow vegetables to be able to teach this to the children. During the implementation of the programme over the school year, they must set aside one hour a week with the children in Stages 1 and 3 and two hours each week during Stage 2.

Teachers and volunteers need no former knowledge or experience of growing food. They are provided with all the materials (such as seeds and plants) as well as proper manuals from Ackerdemia with step-by-step instructions.

Money to cover programme costs is also a critical resource. In the general programme, schools and kindergartens, Ackerdemia and the sponsors share the programme costs. In the case of the PLUS programme, the schools and kindergartens pay a smaller fee, and the difference needs to be covered by sponsors. The fees will cover the activities in the programme, seeds and teaching material. In addition, each school and kindergarten must provide the necessary gardening tools and equipment.

It is not necessary to have a school garden, or an area that can be turned into a garden, on the premises of the school or the kindergarten. There are possibilities for allocating garden areas in nearby open green areas.

STRATEGIC FOUNDATION

The GemüseAckerdemie programme operates on a national level, though is not anchored on a political level either nationally or regionally. It is a programme that works well in unilateral relationships with schools and kindergartens. It is anchored amongst the teachers, not at the level of the schools or kindergartens. The programme also largely relies on the close involvement of volunteers and children, ensuring that the activities are suitable for them and to facilitate ownership to the process. This way, the quality of the programme is renewed and improved based on the actors' central role in the programme.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

The flexibility of the school is an important facilitator. In some schools, it was easy for teachers to relate the vegetable gardens to various school subjects and teach pupils in small or large groups. In other schools, there were limited possibilities to accomplish this.

Volunteers represent another facilitating factor. They are important extra resources for the teachers and children, especially in the GemüseAckerdemie PLUS programme, where extra help for children with special needs is necessary. Furthermore, volunteers or teachers are needed for the maintenance of the gardens when the schools and kindergartens are closed.

Schoolchildren benefiting from GemuseAckerdemie activities. © Katharina Kühnel.

An important facilitating factor is the commitment from the teachers and volunteers on a personal level. The programme greatly relies on their willingness to spend extra time to perform these activities on top of their normal schedule. And lastly, regional managers serve as important links between all actors involved, as well as between the local and the national level of Ackerdemia.

Time constraints need to be taken into account for the success of the implementation of the programme. The staff of Ackerdemia dedicate time and effort to the collaboration, especially regarding communication, troubleshooting and solving issues that arose. The teachers can experience more time issues, since the implementation of the GemüseAckerdemie programme comes on top of their regular schedule, and, therefore, they can struggle to allocate time to communicate with the other actors involved, including the volunteers. The volunteers, on the other hand, are normally very motivated; however, as this is purely voluntary work, they need to balance it with other commitments. The volunteers have reported that in order to manage this well, they are dependent on adequate, good communication with the teachers and the Ackerdemia team.

Transferring and scaling up

The GemüseAckerdemie is a well-designed programme that offers comprehensive supporting structures for setting up successful school gardens. The programme's immense growth over the past five years from two to 400 gardens reveals its capability for upscaling. Its structure, content and philosophy can be used to understand how an upscaling of practices can be successfully achieved.

However, several challenges for the scaling up of the programme could be solved if the programme were integrated into the standard school curriculum (which is decided at the regional level in Germany). Anchoring the programme at a higher political level, at the Ministry of Education, could solve this issue. This way, the teachers could have implemented the programme as part of the regular schedule, not on top of it, and more time could have been allocated to the collaboration with the other actors involved.

Lessons learned

- Personal commitment from key actors (teachers, volunteers and parents) was crucial.
- Contextual factors in each separate school influenced the implementation.
- A more solid anchoring on a regional and national political level, including a formalisation of gardening activities within the standard school curriculum, could have increased motivation, time and resources.
- Volunteer involvement yielded specific obstacles, which required a variety of strategies and methods for recruitment and maintained participation.

3.5 Gent en Garde: The STOEMP initiative

RESPONSIBLE INHERIT PARTNER:
GEZOND LEVEN

SETTING/CONTEXT:
URBAN AREAS, CITY OF GHENT (259,000 INHABITANTS), BELGIUM

Background

To encourage healthy sustainable diets, it is important to change the choice architecture and make healthy and sustainable products the easiest choice. What is required are policies which integrate the production and distribution of food, the handling of waste, the pricing strategies for food, as well as systems for raising knowledge and awareness of the links between sustainability, health and dietary choices (1).

The Gent en Garde initiative was launched in 2013 in the city of Ghent and is a food policy that includes five strategic goals to pave the way for a sustainable and healthy food system:

1. A shorter, more visible food chain
2. More sustainable food production and consumption
3. The creation of more social added value for food initiatives
4. Reduce food waste
5. Optimum reuse of food waste as raw materials

Several stakeholders, including politicians and the city administration, contributed to the agreement of this policy. As part of the policy, the City of Ghent set up a "food council" with 25 members from various sectors (i.e. agriculture, associations, commerce and knowledge institutions). This food council acts as a sounding board for the city's policy on food. The policy's five goals are used to identify what is needed to create a feasible and concrete sustainable food system for the city of Ghent, and it contains many innovative solutions. The aim is to create a healthier and more sustainable lifestyle amongst the inhabitants of Ghent by focusing on the individual itself and initiatives that improve the current food system in Ghent. The policy has brought significant change to the local food system. Through

participative governance models, including the food policy council, Ghent's food policy has moved from launching small-scale initiatives to bringing structural change to the food system. It is decreasing food waste, making food procurement more sustainable, scaling up short food supply chains and improving access to food.

The STOEMP initiative, as part of the Gent en Garde food policy, is a network that brings good food initiatives together. Good food is defined as food that is healthy, nutritious, local, adequate, tasteful, honest and environmentally friendly. STOEMP also aims to tackle the structural causes of poverty and to join forces to improve the eating conditions of the poorest levels of society. One of the actions is to build better data to improve knowledge about where the challenges are and what can be done in local communities to tackle food poverty.

STOEMP is a collaboration between Gent en Garde, community health centres, and the Welfare and Equal Opportunity City department. Since its launch in 2017, STOEMP has attracted more interest, and more partners have been included in the project group (civil society, research, social welfare, education). STOEMP has three strategic goals:

- Raise awareness amongst policy makers, civil society, local economy and the general public about access to 'good food'
- Inspire and activate policy makers, civil society, local economy and the general public to work individually or together on 'good food'
- Connect and strengthen initiatives to make good, sustainable food available for everyone

STOEMP advocates that good food is a basic right for every citizen of Gent. © Gent en Garde

OBJECTIVES OF THE INHERIT CASE STUDY

STOEMP, as part of Gent en Garde, addresses the INHERIT areas of consuming and living and adheres to the triple-win goals of health, equity and sustainability by improving access to sustainable and healthy diets, reducing food waste, implementing more sustainable food production and aiming to reach all people of the City of Ghent, including socially vulnerable groups.

The objective of the INHERIT case study related to STOEMP has been to gain insight into the factors that determine access to food and the ways that different policy domains (environment, health, social welfare) and sectors (policy, public, private) relate to healthy and sustainable food for everyone (the equity component). The study seeks to produce new evidence about the success factors of STOEMP that can push policy agendas forward and support local, existing initiatives. The evidence can also help extend the food policy to other cities as an example of good practice. A sum of 8,110 Euros from the INHERIT project financed costs related to implementation.

The STOEMP evaluation study was developed and conducted by the Gezond Leven team in close collaboration with the STOEMP project group and other involved stakeholders and under the supervision of research team from RIVM, the Netherlands (qualitative studies). The qualitative evaluation included a focus group with stakeholders on inter-sectoral collaboration and the ways that different policy domains and sectors (environment, public spaces, health) relate to the issue of food accessibility. Focus groups were conducted both for the sake of collaboration and for the evaluation study.

MAKING THE LINK WITH THE INHERIT MODEL

STOEMP aims to bring together food initiatives to coordinate their efforts in improving the food environments and the dietary choices of the citizens of Ghent, with a special focus on the poorer and poorest members of society. Improving access of the citizens of Ghent to healthy, sustainable food may facilitate behaviour change amongst them. STOEMP addresses issues of motivation through user and actor involvement in the implementation process. Moreover, it possibly contributes to skill-building by raising awareness about access to healthy, sustainable, local food amongst policymakers, civil society, local business actors and the general public.

On the proximal pathway, health benefits are communicated to decision makers and civil society. This might contribute to better population health through raised awareness and increased access to healthy and sustainable food. Equity might be enhanced by involving and targeting people facing socioeconomic disadvantages. On the distal pathway the results of this INHERIT case study may improve sustainability through more sustainable food production and distribution and a consequential reduction in greenhouse gas emissions due to a reduction in ‘food kilometres’ travelled and reduced carbon emissions due to a reduction in food waste.

Implementation

ACTORS AND SECTORS

Two sectors collaborate in the planning and implementation of STOEMP: the public sector and private, non-profit organisations. The main actor from the public sector is the local government (City of Ghent), working on two policy domains: health and social welfare, and environment and climate. Other public sector actors include: Public Centre for Social Welfare (PCSW), Ghent Centre for Educational Services and National Health Services. The private, non-profit actors consist of the following: Flemish Institute for Healthy Living, Eva (ethical vegetarian alternative), Vlaamse Logos (local health consultation), community health centres and Rikolto (an international organisation supporting smallholder farmers).

User groups are important to the STOEMP initiatives, and can be divided in two categories: citizens as a target group, and intermediaries whom STOEMP wants to have as participating partners in the network. Some of the intermediaries are represented in the project group, such as Eva, Vlaamse Logos, National Health Services and the community health centres. User groups are involved in the project group and share what they think about the progress of STOEMP and coordinate activities for 'Inspiration Day' (see "Key activities" for description of this activity). In Ghent, there are various networks that belong to different domains: Gent en Garde, Health Council, Poverty Network, Health Promotion Network, etc. It is necessary to have these organisations involved in the planning and outlining of STOEMP since they are part of the support system that is essential for its implementation. Every organisation involved has interesting connections that can facilitate further implementation.

KEY ACTIVITIES

To reach a broad participatory and engaged network, two meetings or events are organised regularly:

- An Inspiration Day once a year to bring stakeholders and local actors together
- Open meetings every few months where work groups give their updates and provide new input for Inspiration Day

A core group organises these two events and organisations and partners are invited using a network approach. In addition, STOEMP has thematic work groups that work on concrete and prioritised actions. Groups and activities in STOEMP are linked to the work groups and policy groups of Gent en Garde.

Gent en Garde kitchen brigade. © Gent en Garde

STOEMP improves access to sustainable, healthy diets, reducing food waste and implementing more sustainable food production. © Gent en Garde

The stakeholders in STOEMP cover different aspects in the implementation of the initiative: (1) project coordinating, meetings and Inspiration Days, (2) creating support by getting relevant stakeholders involved, (3) making the link with Gent en Garde and the broader food policy, (4) coordinating the INHERIT case study from the side of Gezond Leven (providing support and ideas, collecting feedback, conducting focus groups, tracking progress), (5) tracing feedback regarding specific content issues (healthy and sustainable food), and (6) brainstorming for Inspiration Day and working together to reach the strategic goals of STOEMP, all to ensure a possible successful implementation of the STOEMP study.

RESOURCES NEEDED

For the implementation of STOEMP various resources are needed. Time and money must be set aside for project group meetings with persons from various sectors and for the involvement of different target groups. Venues must be rented for these meetings and for the bigger events such as Inspiration Day and open meetings. In addition, some funding is necessary for spreading information about the initiative and its ongoing activities. Funding from the City of Ghent and the INHERIT project covered the costs of implementing STOEMP (e.g. for communication). In addition to this, the skills and knowledge of the stakeholders have helped the initiative move forward.

STRATEGIC FOUNDATION

In addition to being anchored in the Milan Food Policy Act and the United Nations Sustainable Development Goals, the initiative was strategically founded in the Gent en Garde project group after bringing two sides together. On one side, the food council of Gent en Garde wanted to think about the third strategic goal: “creation of more social added value for food initiatives”. On the other, community health centres wanted to work towards the accessibility of healthy food for everyone, including people facing socioeconomic disadvantages. Thus, two policy domains come together in STOEMP: health and social welfare, environment and climate.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

Political support has been an important facilitating factor for STOEMP. Without it, STOEMP could not have been initiated and maintained.

Inter-sectoral collaboration has also been crucial to make the initiative work. From this emerged new collaborations and local organisations (for instance the National Health Services are now using Gent en Garde as a communication platform to broaden their reach). A third important facilitating factor was the Inspiration Day and the meetings between stakeholders. This made the collaboration work more smoothly, and they helped establish a common understanding of the STOEMP initiative and its mission and goals.

Lastly, the work with communication and promotion was a crucial factor for success. The efforts of many actors to communicate the message in their networks has helped to get the message across more strongly.

No substantial barriers emerged during the process. However, it would have been better if the project group had decided earlier on how to spend the budget.

Transferring and scaling up

STOEMP can be of interest to any city wanting to develop and bring together initiatives about honest, healthy and sustainable food. The structure, content and philosophy can be used as inspiration to successfully upscale the initiative.

When transferring this initiative to other contexts, it is important to follow certain recommendations from the Gent en Garde policy programme:

- Create an overview of facts and figures on production, distribution and consumption patterns, including bottlenecks and opportunities.
- Support and facilitate, with a participatory approach, co-creation processes and instructional multi-player experiments starting from key operational goals included in this document, e.g. having a director/process facilitator guide (parts of) the process.
- Develop quick “feedback loops” with the food policy council and the policy itself, encouraging learning, information linking and upscaling.

Via the STOEMP network, Foodsavers Gent redistributes food surpluses to social restaurants and poverty associations. © Gent en Garde

Lessons learned

- Political support, including strategic founding and goalsetting from local policymakers, was important, as well as taking enough time to make the initiative concrete and visible.
- Inter-sectoral collaboration was crucial to make the initiative work and contributed to the expansion of the policy network.
- A sense of ownership, commitment and motivation amongst all the actors involved was crucial.
- A clarification of available resources early in the process would have enabled comprehensive planning from the beginning.

Via the STOEMP network, Foodsavers Gent redistributes food surpluses to social restaurants and poverty associations.

3.6 Lifestyle e-coaching

RESPONSIBLE INHERIT PARTNER:
PROLEPSIS & PHILIPS

SETTING/CONTEXT:
GREECE AND THE NETHERLANDS

Background

Physical inactivity is a common public health problem. Differences can be observed in levels of physical activity, transport mode use and related health impacts across the socioeconomic gradient. Low-income adults have the highest rates of physical inactivity; people at the top of the socioeconomic scale appear to perform more leisure-time activity than those at the bottom of the scale. In addition, physical activity levels differ between age groups and gender (17). Worrying low levels of physical activity in disadvantaged population and limited methods to promote healthy lifestyles in these populations contribute to local pressures linked to health, equity and sustainability.

Lifestyle e-coaching applications are known to have a potential for changing people's lifestyles (18). However, they mostly target (motivated) participants in the general public. Therefore, the current INHERIT case study investigates whether lifestyle e-coaching application can be effective in changing lifestyles in lower SES groups.

To get an impression of the importance of the local context, the study took place in two countries: The Netherlands and Greece. The purpose was to motivate people facing socioeconomic disadvantages to engage in healthier and more active lifestyles with the help of a lifestyle change application with an activity tracker (i.e. Samsung Gear Fit2 Pro), connected to a mobile application (i.e. Samsung Health). By recording and analysing daily activities, users were encouraged to increase their daily active minutes and become more physically active. The app and tracker can record pulse levels, food and drink intake, kilometres cycled/walked, energy use and sleep.

The tracking was combined with e-coaching. E-coaching is any form of coaching that takes place using electronic devices. E-coaching services are often combined with wearables (e.g. smartphone, smartwatch) or smart homes. E-coaching applications aim to change or sustain behaviour that promotes health, such as being physically active, sleeping better or eating healthier. The method of an effective e-coaching service is based on scientific behaviour change literature. Using smartphones for e-coaching can be very effective, since people always have their smartphones with them. This enables unobtrusive and continuous tracking of behaviours, and users are constantly susceptible to the coaching, which can produce awareness about the importance of healthier lifestyles.

The wrist-band and e-coaching app give participants the opportunity to have their heart rate and activity tracked, a possible motivation for improving health and well-being. © Alora Griffiths

OBJECTIVES OF THE INHERIT CASE STUDY

The Lifestyle e-coaching case study addresses the INHERIT area of moving. It was chosen for inclusion in the project due to its potential to change lifestyles and behaviours and achieve improved health equity. Whilst many people can be open to a lifestyle change to improve their health and/or the environment, it is not always easy to actually achieve the intended lifestyle changes. Lifestyle e-coaching is a tool that supports and motivates people in a personal way using only a smartphone or an email address. As such, it can potentially influence large groups of people by use of simple means. The participants are encouraged to cycle to work instead of using their car, which, as well as promoting healthy behaviour, has the potential to decrease human impact on the environment.

The objective of the INHERIT case study has been to evaluate whether e-coaching applications can be effective in increasing physical activity levels amongst people facing socioeconomic disadvantages, and whether this change in behaviour is sustainable. The study also aimed to gain insights into whether improvement in activity level (if present at all) and well-being depends on socioeconomic status, and the specific contexts in which the activities were performed. A sum of 53,000 Euros from the INHERIT project financed costs related to implementation and evaluation.

The Lifestyle e-coaching evaluation study was developed and conducted by the Philips research team (Dutch implementation) and by the Prolepsis research team (Greek implementation). The experiments were done in collaboration with external agencies in both contexts (CGSelecties recruitment agency in the Netherlands and MRB Hellas market research company in Greece) and under the supervision of research teams at UCL, England (quantitative studies), RIVM, the Netherlands (qualitative studies) and NTNU, Norway (implementation studies). The mixed methods evaluation included focus group interviews with stakeholders, a survey and data extracted from the Lifestyle e-coaching database.

MAKING THE LINK WITH THE INHERIT MODEL

Lifestyle e-coaching targets the behaviour of individuals participating in the intervention. Participating individuals are coached through the Lifestyle e-coaching application, to improve their activity level, which is known to have positive impacts on personal health and well-being. Through the wrist-band and the e-coaching app participants are given the opportunity to have their heart rate and motion tracked, combined with an estimate of activity levels. Motivation is addressed through the prospect of learning how to use lifestyle applications to systematically track personal activity level and of improving personal health and well-being.

On the proximal pathway, health and well-being are potentially enhanced through increased physical activity. This might be a consequence of the partial substitution of motorised transport by walking and cycling. Equity can potentially be improved by involving and targeting low-income groups. On the distal pathway, the reduced use of cars might contribute to reduced CO2 emission, noise, and sedentary behaviour.

Implementation

ACTORS AND SECTORS

The intervention is a collaboration between research institutes in businesses/industries (Philips) and non-profit research institutes in public health (Prolepsis) situated in two different countries – the Netherlands and Greece. The actors involved in the implementation process were protocol designers (Philips and Prolepsis), recruitment agencies, investigation leaders and participants.

The protocol designers were part of the INHERIT consortium. They also functioned as investigation leaders and engaged the recruitment agencies. The recruitment agencies recruited the participants in both the Dutch and the Greek intervention. In Greece one of the recruitment agencies also functioned as an investigation leader.

The study evaluates whether e-coaching applications can be effective in increasing physical activity amongst the socioeconomically disadvantaged. © Izf

Representatives from the target groups were not involved in the planning of the implementation, only in the implementation as research participants. No other sectors were considered necessary for the implementation of the intervention.

KEY ACTIVITIES

The intervention was executed in the Eindhoven region in the Netherlands (NL) and in the Athens region in Greece (GR). Setting up the intervention included writing a research protocol and applying for ethical approval to conduct the intervention, recruiting participants and implementing the intervention in both countries. External recruitment agencies were hired to help with the recruitment of the participants and the conducting of the intervention. Participants for the Dutch experiment were recruited through the CGSelecties recruitment agency. Participants for the Greek intervention were recruited through the MRB Hellas market research company.

Both regions employed one experimental group and one control group, of which only the experimental group got access to the lifestyle e-coaching device and app. In NL, 90 participants were recruited for the intervention. The allocation ratio was 1:1, i.e. 45 in the control group and 45 in the experimental group. In GR, 105 participants were recruited for the intervention (≈15 % over recruitment); 50 were allocated in the experimental group and 55 in the control group. In NL, participants were included in batches of 7-20 (experimental) participants. Equal numbers of experimental and control participants started in the same week, which ensured that both groups of participants matched with regard to the time of the year. In the case of GR, due to time-related limitations, all participants started in the same week.

The participants were recruited based on the following criteria:

- a level of physical activity of less than recommended (210 min/week)
- an ISEI (socioeconomic status) score lower than 145
- between the ages of 18 and 65
- in possession of a smartphone IOS 9.0 smartphone or higher or an Android 5.0 (Lollipop) smartphone or higher
- willingness to download and install the Samsung Health app to their personal mobile phone and allow pop-up notifications for at least six weeks
- willingness to wear the Samsung Gear Fit2 Pro wristband for six weeks and consider the suggested activity recommendations
- willing and able to provide informed consent

Equal percentages of male and female participants were desirable, but this was not a strict inclusion criterion. Participants were excluded if they were pregnant, had a medical condition that required them to abstain from moderate physical activity, or if they were already logging activity levels (with Fitbit, Google Fit, Step Counter, etc.).

In the recruitment process and in the informational letter handed out to the Dutch participants, the study was described as consisting of an experimental and a control group, in which only the participants of the experimental group were asked to wear a Samsung Gear Fit2 Pro wristband and use the

E-coaching is best combined with information regarding potential benefits of lifestyle changes. © Tomasz Wozniak

Samsung Health app for a period of six weeks. After the six weeks, the experimental participants were allowed to use the Samsung Gear Fit2 Pro wristband and the health app for three more months, but this was voluntary. Then, the experimental participants could choose if they wanted to receive the reimbursement or keep the wristband. It was emphasised that both control and experimental participants would be asked to fill out a series of online questionnaires at intake, a second one after six weeks, and a third follow-up questionnaire after three more months. The informational letter also explained that participants would be randomly assigned to the experimental or the control group after they had answered the initial questionnaire online. Thus, participants could not choose the group in which they would participate. If the participants indicated to the recruitment agencies that they were fine with this procedure, they received a participant number and were provided a link to fill out the questionnaires. After they had filled out the questionnaires, the experiment leader randomly assigned the participants to either the control or the experimental group.

RESOURCES NEEDED

There were small differences in the costs of implementing the intervention in the two countries. The differences were only related to differences in participant reimbursement. Other costs went to:

- the staff necessary to set up, conduct, analyse and report on the experiment
- the recruitment of participants and the incentives paid to the participants
- the wristbands needed in the intervention

In addition, the interventions required time (for planning, implementation and evaluation), human resources (number of people involved in planning and conducting the intervention) and skills and knowledge specific to this intervention.

STRATEGIC FOUNDATION

The intervention was designed as a scientific experiment, and no strategic foundation was considered necessary. Knowledge from the intervention can subsequently be used to convince insurance companies or local or national governments to make such lifestyle e-coaching applications available to certain groups. Although such parties have not been involved in this intervention, they could be approached if the results of the experiment turn out to be positive.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

External recruitment agencies were hired to help with the recruitment of the participants and the execution of the experiment. This ensured a large pool of participants, which was important for the intervention.

In the Netherlands, it proved difficult to recruit participants living in poor socioeconomic circumstances and having low levels of physical activity, mainly due to the occupations associated with lower ISEI scores, which involve more physical activity (e.g. waitressing, construction work). Thus, the inclusion criterion regarding the number of active minutes had to be changed from less than 150 to less than 210.

Transferring and scaling up

If the outcome of the evaluation of the intervention is positive, scaling up will be relatively easy: one only need to purchase devices and distribute them amongst people facing socioeconomic disadvantages. Funding for this would need to be made available by local/national authorities or insurance companies. They may wish to add certain criteria to hand out the devices to users, i.e. that the users actually wear them and are motivated to change their behaviours/lifestyles, or that doctors prescribe the device and the routine that is required. However, this would demand administration, coordination and monitoring.

Lessons learned

- Providing lifestyle e-coaching apps/devices to people facing socioeconomic disadvantages requires funding from local or national authorities or private companies.
- E-coaching is best combined with information regarding potential benefits of lifestyle changes.
- Hiring a recruitment agency can be useful to successfully recruit a large number of participants.

3.7 Malvik Path

RESPONSIBLE INHERIT PARTNER:
NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU)

SETTING/CONTEXT:
SUBURBAN AREAS, MUNICIPALITY OF MALVIK (13,498 INHABITANTS), NORWAY.

Background

Lack of local green areas for social interaction and physical activity that are designed to be accessed and used by all people regardless of their age, size or abilities contributes to local pressures linked to health, equity and sustainability (19). Ensuring that public green spaces are accessible for all population groups can promote social interaction, more active behaviour (walking, running and cycling) and, therefore, help improve both health and well-being. Increase in urban green space can also contribute to reduce air pollution and noise levels (20)

The Malvik Path is a green space area with a three-kilometre-long path along the coast of the Municipality of Malvik, just outside the city of Trondheim, Norway. Originally, the area was a disused railway line, hindering access to the coast. In 2012 a population survey in the municipality showed that citizens wanted more green areas for outdoor activities and better access to the coast. After this, the Municipality of Malvik started the process of adapting the unused railway-line into a cycling and walking path. Today much of the area surrounding the path is being developed and turned into a green space for play, social interaction and recreation for all groups and all ages.

The Malvik Path was officially opened to the public in June 2016. Nowadays, it has become a destination and a public space valued by both local inhabitants and visitors. Benches have been placed along the path, inviting people to rest and admire the scenery. Artefacts and information boards on historical events and wildlife areas are being displayed to provide a sense of the place in a greater context. Moreover, the path has been designed in accordance with the principles for universal design (defined by the Disability Act of 2005), meaning that the design and composition can be accessed and used by all people, regardless of their age, size or abilities. The surface material was carefully chosen to make the path accessible to wheelchair users. Along the trail are also designated places for fishing, swimming and barbequing. People who like a more adventurous walk can choose an alternative route that departs from the path and into the surrounding forest and hillside areas. Toilet facilities have recently been built at the far end of the path, and the municipal administration, together with developers, have started the construction of a park for children and families just where the path starts.

Opening of Malvik path. © NTNU.

OBJECTIVES OF THE INHERIT CASE STUDY

The Malvik Path was chosen as an INHERIT case study because of its potential to promote health and well-being, environmental sustainability, social inclusion and health equity. It supports active lifestyles, encouraging people to choose biking or walking instead of using their car, and is universally designed, thus providing all groups with access and possibilities to use it.

The objective of the INHERIT case study has been to investigate what type of activities the path promotes. The study also evaluates environmental benefits resulting from people using more active transport. Finally, it investigates health and well-being benefits from outdoor physical activity, with a focus on people facing socioeconomic disadvantages. A sum of 5,000 Euros from the INHERIT project financed costs related to evaluation.

Since the Malvik Path had already been built when the INHERIT project started, the activities during the INHERIT project were related to evaluation of the use of the path and the potential positive effects on health, well-being and environment from this use. The Malvik Path evaluation pilot was developed and conducted by the NTNU team, Norway, in close collaboration with the Municipality of Malvik (implementers) and with research teams at UCL, England (quantitative studies) and BC3, Spain (cost-benefit studies). The mixed methods evaluation includes interviews with users of the path, a population survey amongst inhabitants in the Municipality of Malvik, a digital counter that registers the number of people visiting the path each day, and iSOPARC, an observational tool used to obtain direct information on people's use of open spaces.

MAKING THE LINK WITH THE INHERIT MODEL

The Malvik Path aims to change the outdoor environment for local inhabitants by constructing a universally designed path and green space area. This way, inhabitants' exposure to activity-friendly, pleasant green spaces is increased, and they are offered improved possibilities for social interaction, physical activity, contact with nature and reduce stress levels. Motivation has been addressed through extensive techniques for involving users throughout the planning and implementation of the path.

People of all abilities visit the path regularly. © NTNU.

On the proximal pathway, health and well-being might be enhanced by increased possibilities for physical outdoor activity and social participation. Equity may be improved by having involved all groups, including vulnerable groups, in the process of planning and implementing the path. Finally, the path might contribute to sustainability through reduced air and noise pollution in the local environment. On the distal pathway, sustainability may be enhanced through reduced air and carbon emissions.

Implementation

ACTORS AND SECTORS

The idea of the path was originally launched by the Outdoor Council not long after the railway line ceased being used. The idea was further concretised during a 2012 research conference in which several stakeholders from the area participated. This included inhabitants, politicians, local and regional public administration/authorities, voluntary sector/NGOs, corporate sector and research organisations. The municipal administration (the implementer) established both an inter-sectoral project group and a steering group that were assigned the task of facilitating a participatory process in the planning and implementation of the path. Actors involved in the initiative were: several sectors from the municipal administration (health, planning, school, environment, culture), representatives from various user organisations (i.e. the youth organisation, the senior council, organisations for physical and mental disabilities), the Norwegian Railway Agency (who owned the abandoned railway trail) and the chief municipal executive. A local entrepreneur was contracted to build the path, while the Municipality of Malvik has been and still is responsible for maintaining it, though part of the maintenance has been assigned to a local group of volunteers.

KEY ACTIVITIES

According to the Public Health Act in Norway, municipalities are obliged to gather systematic data on their inhabitants' health and well-being. The Municipality of Malvik had collected and analysed data from various sources to keep track of this information: They had initiated their own population survey, used data from Statistics Norway and the County Council and collected experiences from professionals, experts, policy makers, inhabitants, businesses and NGOs. The results from the data analyses showed a need for low threshold arenas that could facilitate physical activity and social interaction for all population groups. Based on this knowledge, as well as the public health challenges identified based on this knowledge, the municipality arranged a search conference, which is a participative planning method. Local stakeholders, such as inhabitants, politicians, administrative staff, and non-governmental organisations (NGOs) were invited to the search conference. Whilst various ideas to positively influence the

inhabitants' health and well-being were discussed during the conference, the decision to establish a low-threshold walking path was considered to be the top initiative worthy of carrying out to fruition. As the latest population survey had clearly communicated that the inhabitants wanted to have access to the coast, it was decided to solicit the Norwegian Railway Agency to establish a walking and cycling path on the old, abandoned railway trail along the coast of Malvik. This would create a green space area right next to the city centre and along the seaside, which would make it easily accessible to many people in the area.

The inter-sectoral project group was responsible for planning and implementing the Malvik Path, and did so over a period of four years. The initiative was anchored amongst property owners in the nearby residential area, local politicians, local businesses and inhabitants. Early on, the project group established a communication plan, where the messages, target groups, communication channels and the timing of various communication events were specified. During the entire process, no concerted efforts to end the initiative were made. The association of local history enthusiasts was engaged to design informative boards along the path, and other groups made boards about the local flora and fauna. The children at the local school were asked to make a quiz along the path, and the local group of senior men volunteered to contribute to the deforestation along the path. In June 2016, the Malvik Path was officially opened to the public.

RESOURCES NEEDED

The implementation of the Malvik Path required various resources. Next to time, knowledge and expertise, the majority of the resources went into the construction work and to cleaning the soil in the area (which was infested with creosote). In addition, the surface layer of the path was costly. Due to the former railway trail, the surface was flat and stable, but since it had to fulfil the requirements for universal design, the surface had to be very even to allow wheelchair users, visually impaired persons and seniors with wheeled walkers to use it. Some expenses went into building new fences (crushed stone and gravel were laid on top of the railway trail, elevating it and making former fences too low). Other financial

Malvik path provides an optimal area for spending time outdoors and encourages active mobility. © NTNU.

expenses were directed towards installing solid wooden benches along the path, toilet facilities and the decoration and information boards. The municipal administration also spent some money upgrading the project management skills in the project group.

The construction of the path was funded by the Municipality of Malvik, the Norwegian Environment Agency, the National Railway Agency, the County Council of Trøndelag and the Ministry of Local Government and Modernisation. Local volunteers significantly contributed to bush clearing along the path.

STRATEGIC FOUNDATION

The Malvik Path was firmly anchored in the Norwegian Public Health Act, which demands long-term planning, proactivity and close interaction across different sectors, levels of management and fields of expertise. Within the Municipality of Malvik it became crucial to anchor the initiative in the long-term governance plan, as this ensured support politically, administratively and across sectors (health, education, environment planning and culture), despite political shifts.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

Developing extensive knowledge on the status of health and well-being in the municipality and combining this with inhabitants' feedback on what needed improvement in the municipality turned out to be an important facilitating factor. It ensured the initiative was anchored in evidence and in inhabitants' wishes, something that led to strong commitment from all stakeholders involved.

Another small, but significant, facilitating factor was the skills upgrade provided to the project group. All employees working on community planning in the Municipality of Malvik participated in a project management course, in which they obtained skills on how to work more systematically and across sectors and professional fields. This component,

(Top) Malvik path is a 3 kilometre scenic path along the coast, connecting two local residential areas. © NTNU.

(Bottom) Walkers enjoying the quiet, green space of the Malvik path. © NTNU.

combined with the broad involvement of various stakeholders and the open and transparent process, created a sense of ownership and a positive feeling towards the initiative.

Barriers to the implementation were weather-conditions (a storm tore down parts of the path and delayed the building process) and some delays in drafting the terms in the property takeover agreement at the beginning.

Transferring and scaling up

Recognition of the initiative's policy levels and support from policymakers, local authorities and the local community are crucial factors to scale up and transfer the initiative.

Lessons learned

- Developing extensive knowledge about health indicators and the residents' wishes and needs were important facilitating factors in this process.
- Support and recognition from policymakers, local authorities and the local community were crucial for the implementation of the path.
- Strong user involvement throughout planning and implementation was beneficial for the implementation.

3.8 Place Standard

RESPONSIBLE INHERIT PARTNER:
RIGA CITY COUNCIL / INSTITUTE OF PUBLIC HEALTH OF REPUBLIC OF MACEDONIA (IJZRM)

SETTING:
GRĪZINKALNS, RIGA / SKOPJE

Background

The quality of places strongly influences individuals' and communities' possibilities to live in healthy and sustainable ways. The design of places also affects social integration and residents' social and cultural lives. Place-based knowledge can best be generated through the use of inclusive, participatory processes aiming to facilitate community development (21). Engaging citizens in identifying and prioritising issues for revitalisation has the potential of creating greater outcomes in policies power relations, improved health and social justice (22).

The Place Standard tool[1] brings public health and place making theory into an easy-to-use tool that can assist professionals and communities in identifying what works well and what needs improving in a local community. It seeks to maximise the potential of the physical and social environment in supporting health, well-being and quality of life. The tool was launched in Scotland in 2015 but has also been applied in the Netherlands and Denmark. The WHO Healthy Cities European Region plans to use it.

Place Standard is a simple framework that helps structure conversations about the quality of places by listing a number of physical aspects (e.g. buildings, spaces, and transport links) and social aspects (e.g. whether people feel safe in the community or believe that they have a say in decision making). Answers are given on a 7-point scale and translated into a spider diagram that visualises place assets and weak points based on the respondents' ratings. The tool can be used by communities to support discussions about their qualities, or it can be used to plan and prioritise initiatives for place improvement. It addresses interrelated topics and, therefore, requires collective and integrated actions with regard to place improvement. The value of Place Standard lies in supporting the designing and delivering of good places that meet inhabitants' needs. It can also support consistent assessments of a place to see if improvements have been made.

1 www.placestandard.scot

OBJECTIVES OF THE INHERIT CASE STUDY

The Place Standard tool was included in the INHERIT project due to its potential in fulfilling the triple-win goals of health, equity and sustainability by providing an easy-to-use framework for the planning and assessment of good places to live.

The INHERIT case study involved applying the Place Standard tool to the context of Riga, Latvia, and Skopje, Republic of North Macedonia. The objective of the study in both places was to understand how the tool could be implemented and improve local policy planning. In Riga and Skopje, Place Standard was used to structure discussions between policymakers, inhabitants and other stakeholders and identify priorities for action. Additionally, the aim was to evaluate the processes of inter-sectoral cooperation involved in the implementation and use of Place Standard. These topics were explored in their own right and in regard to how they contribute to the improvement of the Place Standard tool.

In the case of Riga, an additional objective was to raise awareness of the tool's benefits in the Latvian context and explore how it could help facilitate a Health in All Policies (HiAP) approach (23).

In Skopje, the specific objective was to use the Place Standard tool to raise awareness about the main health parameters in the place where it was being used. Moreover, the aim was to use it to establish improved feedback loops between the municipality, stakeholders and the local community and empower all segments of the local community.

Activities during the INHERIT project were mainly related to the implementation of the Place Standard tool and the evaluation of the inter-sectoral work in both Riga and Skopje. A sum of 20,000 Euros from the INHERIT project financed costs related to implementation and evaluation. The Place Standard evaluation study was developed and conducted by Riga City Council and IJZRM in Macedonia. The responsible INHERIT partners in Riga City Council and in IJZRM in Macedonia also collaborated in the planning and implementation of Place Standard. A representative from Place Standard, Scotland (responsible for developing the tool) visited and provided advice during the process. The study was also conducted under the supervision of research teams at NTNU (implementation studies) and RIVM, the Netherlands (qualitative evaluation studies). The evaluation included focus group interviews with stakeholders and questionnaires.

MAKING THE LINK WITH THE INHERIT MODEL

'Place' is a term which captures the physical, social, cultural, economic, and historical, aspects of a location which, together, can undermine (or promote) health, wellbeing and equity generation to generation and, ultimately, sustainability. The Place Standard is an approach which supports the co-creation of better places. It is unique among the case studies reviewed in INHERIT, insofar as it might, more accurately, be described as the application of 'tool', as opposed to being an intervention or policy of itself. The 'Place Standard Tool' gives communities the capacity to have structured conversations about the places where they live and, working with others, the capacity to change them. Importantly, the tool offers communities an unprecedented opportunity to build the shared vision which can inform their pursuit of a better place going forward. In that sense, it is a stepping stone toward meaningful change.

Of direct relevance to INHERIT, many of the characteristics of place which may be changed through application of the Place Standard tool influence (or are influenced by) resident behaviour. The Place Standard therefore speaks to the principles of behaviour change, firstly, by offering individuals the opportunity and capacity to directly participate in designing and creating the attractive, functioning outdoor spaces which they desire. If, and when, their aspirations lead to change there is then the

opportunity and capacity for greater social engagement and physical activity. Motivation for residents is provided by sharing in a collaborative process, perhaps for the first time, which can be a route to tangible improvements in the context of their lives. Policymakers too may be motivated by the existence of a, hitherto unavailable, vehicle for community engagement and barometer of community opinion. The opportunity and motivation which the place standard gives to policy makers to embrace Health in All Policies is self-evident.

In addition to the wellbeing benefits likely to accrue from individual empowerment, community engagement and social interaction, on the proximal pathway, health, well-being and equity may be enhanced by positive changes to the physical environment. It should be noted, however, that triple-win outcomes are only likely to be completely delivered where, after using the tool, there are actual physical changes to place and the behaviours of policymakers and those who live there. Equity is addressed by the care taken to involve and consider the perspectives of members of disadvantaged groups when applying the Place Standard. The Place Standard approach is also consistent with the Health in all Policies approach and the principles of community development, which have long been seen as central to the promotion of improved health and equity. On the distal pathway, active travel and sustainable housing will reduce the emission of greenhouse gas with a consequent reduction of pressure on global ecosystems and the services they provide.

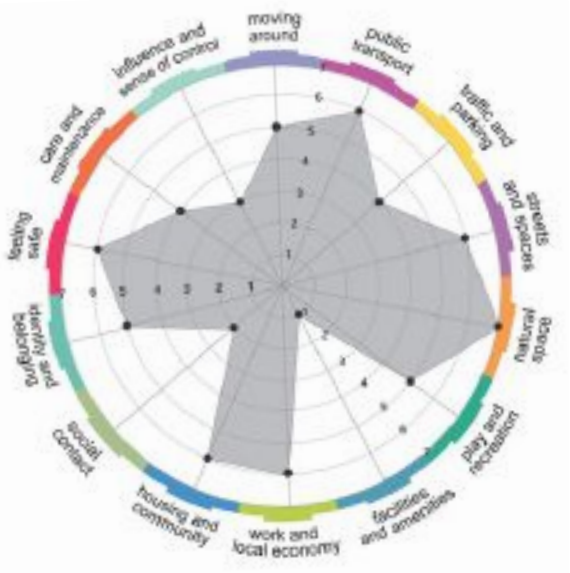
Implementation

ACTORS AND SECTORS

The implementation of the Place Standard tool involved collaboration across the public, private, and volunteer sectors. Key actors in both Riga and Skopje included members from local authorities (municipal administration) and citizens that volunteered to participate in the place assessment workshops and survey.

In Riga, a company was subcontracted to implement the intervention, and researchers from the social research marketing company Latvijas fakti were engaged to do an evaluation study of the implementation. In Riga, the target group of the study included adults in the Grīziņkalns neighbourhood (locality in the city of Riga). To secure demographic variation in those involved, participants representing different groups in society with regard to gender, age, employment, nationalities and level of physical functioning were recruited.

In Skopje, an operational project team was established. The team consisted of researchers from the Institute of Public Health (IJZRM) and various sectors in the Karposh municipal administration (social affairs, development, public relations,



Place Standard Tool, created by Scottish Government, NHS Health Scotland and Architecture & Design Scotland.

education, environment protection and business). Researchers at IJZRM were the main implementers. Experts in conducting focus group interviews from the Institute of Sociological, Political and Juridical Research recruited and selected the participants. The public relations division in the Karposh municipality oversaw a website communication campaign to inform citizens and recruit participants. The public relations division also provided important demographic and socioeconomic data from the municipality and served as a central link between the operation project team and the councillors, since they were the ones presenting the Place Standard tool to the councillors in special meetings.

KEY ACTIVITIES

The Place Standard tool is designed to be a catalyst for engagement and improved dialogue and to involve people who have not traditionally been consulted about place development. It can be used by a range of different groups, both community and professional. The assessment can involve the use of a variety of methods, and one type of method can be used alongside another: workshops, drop-ins, consultation sessions, online submissions. However, the common factor should always be the place assessed.

The main activities in this intervention involve the preparing and planning of sessions and methods to be used to engage and involve people in place assessment. In cases where workshops are arranged, venues for these should be booked and participants recruited. Each workshop can involve up to ten

The Place Standard supports the co-creation of better places. © Nerea Martí Sesarino

participants. Participants should know the place or area that is being assessed, and it is important to ensure demographic variations amongst them. A facilitator leads the workshop. Participants are informed about the purpose of the workshop. The purpose can, for instance, be about finding out the main needs or assets in the community, prioritising action in an area, setting long-term ambitions or assessing and amending a proposal for an area.

During workshops, a standard template aids discussions. There is also a guide describing the preparation needed for a typical workshop, the role of a site visit (if this is to be conducted) and instructions to facilitate the workshop. A site visit need not be conducted if the people participating in the workshop are familiar with the area being assessed.

For the meeting, the group needs to sit around a table in a venue that is large enough to adequately host it. Question sheets should be handed out to the participants. In addition, the group needs a blank compass diagram, the "priorities for action" sheet, the "how to use" introduction to the tool, a clear map of the place and the surrounding area, and a pen to mark it up. Each session takes about 30 to 120 minutes, depending on the scale of the study area, the depth of discussion and the number of participants. Each question in the questionnaire should then be discussed one-by-one as a group; here, it is necessary to note the reasons for each rating. Then, the group's ratings are transferred to the compass diagram (either on a paper diagram or to the online version). Next, the diagram is discussed as well as the "priorities for action". Any opportunities or potential for improvement in the proposals should be recorded on the "priorities for action" sheet.

Next, the assessment outputs are analysed. The completed compass diagram and notes are valuable evidence of the assessment and can be shared. This should be regarded as the start of the process to be used to initiate community action, service planning, policy making or investment decisions. Outputs from the different workshops can be compared and collated to form larger datasets capable of informing wider strategic decision making, e.g. tenant groups, housing associations, local authorities or public service providers.

The third key activity is the reporting and presentation of the output: presenting the output clearly and intelligibly for a wide audience and utilising the compass diagram to obtain a clear graphic image. Here, it is important to retain the authenticity of individual and group ratings and comment on any reporting of the survey outputs. Following this is the formulation of an action plan with timescales to address the priorities identified.

In Skopje, the Place Standard initiative was officially started after the mayor signed the Memorandum of Understanding (MoU). After this followed a period with repeated consultations and discussions with John Howie, the Place Standard tool coordinator in Scotland. Joint agreements were made for using the tool in both Riga and Macedonia. Next, the Place Standard questionnaire had to be translated and adapted to the contexts of Macedonia and Latvia. Collaboration agreements were also made between the Riga municipality in Latvia and the Karposh municipality in Skopje, Macedonia. In Riga, the city development department and stakeholders were involved in the process of picking a suitable locality in Riga where the Place Standard tool could be implemented. In Skopje, researchers at IJZRM closely collaborated with members of the public administration and the hired experts in the planning of the implementation of the Place Standard tool. Citizens were not involved in the initial planning phase in Riga or Skopje.

In both countries, setting up the Place Standard intervention included writing a research protocol, applying for ethical approval, recruiting participants, conducting the Place Standard survey (questionnaire) and conducting focus groups and interviews. In Skopje, a communication campaign was organised on the IJZRM website. In addition, the public relations department of the Karposh municipality organised its website communication campaign, in which the aims were to: i) inform citizens about the main

objectives of the Place Standard project, ii) ask citizens to answer the Place Standard Questionnaire and iii) inquire about possibilities for further involvement of citizens in policymaking processes in the municipality. In Skopje the engagement of local citizens involved an online survey (N=69), meetings with parents of school-children (N=11), pensioners (N=5) and municipality council members (N=11), and workshops with focus groups with citizens (N=16).

In Riga, the questionnaire was planned differently from that in Skopje. As Riga has many localities, it was considered unsuitable to use an anonymous internet survey, since it would be difficult to control whether the respondents were actually living in the targeted area. Therefore, it was decided to instead invite a selection of citizens to focus groups and interviews. Four two-hour long focus groups sessions were arranged where altogether 33 people participated. Fifteen interviews were conducted with citizens. Focus group sessions were also conducted for the qualitative evaluations of inter-sectoral cooperation. However, the focus group interviews that the Riga City Council conducted with citizens involved using the Place Standard questionnaire, ensuring that those responding were actual residents in the selected area.

John Howie, the Place Standard coordinator in Scotland, visited both locations during the data-collection/early analysis phase. The purpose of the visit was to present Mr. Howie with the initial results of the Place Standard tool project, discuss critical success factors with him and share experiences on the possibilities for establishing the Place Standard tool infrastructure at the local and national levels in Latvia and Macedonia. The visit from Mr. Howie also served to further promote the opportunities that the Place Standard tool brings concerning the planning of healthy places to live and the ways that close cooperation between stakeholders from different sectors can be promoted. In Riga, representatives from adjacent municipalities were invited to a workshop with Mr. Howie to discuss the Place Standard tool. During Mr. Howie's visit to Skopje, the mayor and members of the municipal administration, together with other stakeholders (representatives from other municipalities, the business sector, academia, NGOs, journalists, etc.) were invited to a workshop where the aim was to exchange experiences related to the implementation of the Place Standard tool in different countries.

Finally, a last workshop was held in both Riga and Skopje to present the results of the evaluation studies to stakeholders and politicians. In Riga, this workshop was attended by policymakers, politicians and specialists from different departments (welfare, finance, property, education and sports, city development, traffic, housing and environment). In addition, representatives from the Riga municipality police, the Riga municipality executive board, 'Riga City Forests' and the Latvian Centre for Disease Prevention and Control were present. In Skopje, the workshop was attended by members of the public administration, policymakers, business sector, academia, NGOs working in the field of environment and citizens' rights, and journalists.

RESOURCES NEEDED

Central resources needed for the implementation of the Place Standard tool were time, money, staff, materials, equipment, knowledge and skills. For both locations, 2-3 months were needed to plan the experiment, make adaptations to the Place Standard tool (translate the information and the questionnaire, formulate the procurement procedure and prepare agreements). In Skopje, installing the infrastructure and setting the scene in the municipality took another two months, and selecting respondents and performing the Place Standard activities described above took around three months.

In both Riga and Skopje, money had to be spent on engaging experts to conduct parts of the implementation. In Riga, money was spent on translation and employing a research company. The project also depended on human resources from different sectors, such as administrative staff at the municipality and researchers. In Skopje, volunteers, school children and representatives from the business sector

were also involved. All these groups were required to take some time off from their ordinary tasks to participate in the project.

In Skopje, funding was also needed to translate, print and distribute the questionnaire and for the material related to training and information about the project. In addition, money was spent on technical equipment, such as PC and internet access, meeting venues and sound devices (for recording and transcription). In Riga, all these research related activities were executed by a research company.

Finally, specific knowledge and skills about implementing the tool were required, in addition to organisational skills, skills in strategic planning, management and leadership.

STRATEGIC FOUNDATION

In Riga, the project was well-anchored amongst decision makers on a higher political level. The initiative was also positively received when presented to the Riga City development department and the Latvian Centre for Disease Prevention and Control (CDPC), which coordinates the National Healthy Cities network.

In Skopje, the Place Standard initiative was received similarly well in the Karposh municipality administration and especially by the mayor. The initiative was anchored in the highest political and administrative levels in Skopje (the mayor), and representatives from several municipal sectors were participants in the operational project team (social affairs, environment protection, business, PR, education and development). All actors were highly pleased to be included in the process.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

Facilitators that contributed to a smooth implementation process in both locations were good communication and collaboration between partners from the research team and the municipal administration. In Riga, it was pointed out that the municipality provided easy access to other stakeholders and representatives from various municipal departments, institutions and policymaking. This subsequently led to stronger engagement and more participants in workshops. Moreover, the collaboration with the research partner Latvijas fakti was critical for conducting the evaluation and the Place Standard questionnaire. To encourage citizens to participate, a system of incentives was created in Riga. The Place Standard questionnaire is quite long, and it was important to involve people from different socioeconomic groups. Therefore, the research company gave gift cards to the participants.

In Skopje, the mayor's willingness and support was pointed out as a key facilitator for the implementation of the Place Standard tool. Moreover, good preparation and planning were important, as well as taking the time to translate the Place Standard tool well and adapt it to the local cultural context. Transparency throughout the process proved to be equally important; the project team included representatives from several municipal sectors and NGOs from the beginning, and citizens were properly informed about the initiative through social media. Being clear about the purpose of the initiative was critical for all actors involved, because the citizens' (participants') knowledge and motivation to actively participate in a process is key to the tool and the whole process. Finally, on a legal level, the stricter regulation in Macedonia to instruct municipalities to actively involve the citizens and other stakeholders in debating and developing local policies should also be considered a key facilitator to the implementation of this tool. On both locations, it was of great value to have Mr. Howie from Place Standard, Scotland, visit and provide his expertise, experiences and advice.

Inactive NGOs in Riga turned out to be a barrier. Representatives from NGOs could have contributed with valuable knowledge about the community in focus group interviews.

In Skopje, the fact that the project period included the summer holidays seemed to influence (and decrease) the number of responses to the questionnaire and the participation in meetings. If more time and money were available, it would have been advantageous to involve more interviewers and respondents to obtain more significant results.

Transferring and scaling up

In Riga, knowledge gained from the implementation of the Place Standard tool was communicated to the governmental institution, the Latvian Centre for Disease Prevention and Control (CDPC) and other municipalities. The intent was to introduce and encourage to use of the Place Standard tool in other Latvian cities. The fact that the representatives from the Riga City development department positively evaluated the Place Standard tool, and its process, may also contribute to a wider application of the tool.

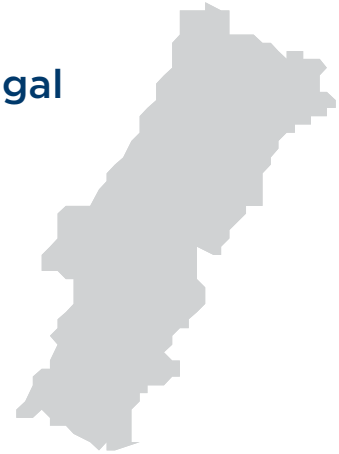
Based on the experiences made in Riga and Skopje, future implementation of the tool in new settings can be adjusted. It is important to prepare and translate the questionnaire and the information material, as well as properly adapt the tool and process to local cultural circumstances. It is also important to actively communicate the purpose of the process from the beginning and regularly communicate with all stakeholders to engage and interest them in the results. Finally, involvement from numerous varied groups of citizens in the implementation process should be an aim.

Lessons learned

- The tool brings many possibilities for capturing differently situated perspectives on what contributes to (and hinders) healthy living in a locality.
- The tool contributes to secure user involvement in policymaking processes.
- The initiative should be anchored in local authorities throughout all stages of the process. However, to obtain a whole-of-society approach, high levels of involvement should be sought from citizens and NGOs.
- Transparency throughout the process contributes to engagement and cooperation.
- Clarity about purpose is crucial to recruit participants and cooperating partners.

3.9 PROVE

Portugal



RESPONSIBLE INHERIT PARTNER:
LISBON UNIVERSITY INSTITUTE (ISCTE-IUL)

COUNTRY/SETTING:
PORTUGAL/SMALL-SCALE FARMING PRODUCTION

Background

Small scale farmers in deprived areas face difficulties in the disposal of products mainly due to lack of planning, organisation, and poor supply diversity. Strengthening the competitiveness of small scale rural farmers allows extensive food choice, including a variety of fruits and vegetables, and shorter food supply chains when the produce is consumed by local populations. This highlights the need to develop good support systems and build capacities amongst small-scale rural farmers.

PROVE is a project that responds to issues and challenges of small-scale agricultural producers in several regions in Portugal. PROVE aims to create close links between consumers and producers of agricultural products, improve farmers' business management and facilitate the access of small producers to the market with the use of information and communication technologies (ICT). It promotes short supply chains of fruits and vegetables and ensures training, technical support and access to ICT tools that allow direct sales between farmers and consumers organised in local groups. In PROVE, local groups or networks of farmers are established to integrate delivery centres or delivery strategies (home deliveries).

Building on producers' concerns and local entities' know-how about the territory and the trade, the project aims to promote short marketing chains and avoid intermediaries. PROVE provides a methodology to involve local entities, producers and consumer by generating specific responses to distinct situations. Central assets include improving the management of local agricultural businesses, promoting more collaboration between producers, supporting agricultural production by technicians, providing computer tools to directly contact consumers and improving accounting and the promotion of local businesses. All these assets are tied to the general aim of generating a sense of ownership amongst the various partners involved and to expanding and strengthening the local food sector.

The innovation component of this practice is related to the introduction of a powerful online platform that connects promoters, producers and consumers in a very traditional sector (small-scale farming). Furthermore, the initiative aims to shape the commercial relationships of small producers that are vulnerable to the unfair pricing practices of typical distribution channels (such as big supermarket chains).

OBJECTIVE OF THE INHERIT CASE STUDY

PROVE has been chosen as an INHERIT case study because of its role in promoting more sustainable forms of food production and consumption. The initiative aims to create new, more balanced and sustainable forms of production, along with improving the capacity of producers to manage their businesses. The agricultural products marketed through PROVE are local and fresh and, thus, invite healthier food practices. PROVE also contributes to consumers gaining greater knowledge of the rural world, which may further promote change in their consumption habits. In addition, it supports social levelling through increasing the income of small producers, typically in social disadvantaged situations (low level of schooling, low income, unemployment, retirement).

The objective of the INHERIT case study is to understand the PROVE process and account for the perspectives of consumers, farmers and promoters. It investigates the promotion of more sustainable farming and commercial practices and the social empowering of farmers. The processes of inter-sectoral cooperation and whether PROVE leads to healthy sustainable diets have also been evaluated. A sum of 10,000 Euros from the INHERIT project financed costs related to implementation and evaluation.

Since PROVE had already been running for ten years at the time the INHERIT project started, the activities during the INHERIT project were mainly related to an evaluation of this ongoing initiative. The PROVE evaluation pilot was developed and conducted by the ISCTE-IUL team in close collaboration with ADREPES (implementers) and under the supervision of research teams at UCL, England (quantitative studies), RIVM, the Netherlands (qualitative studies). The mixed methods evaluation included: a consumer survey, interviews with agricultural producers and local promotors, a focus group with stakeholders and interviews with local implementers.

MAKING THE LINK WITH THE INHERIT MODEL

PROVE targets the behaviour of farmers and consumers. It seeks to create closer links between local producers of agricultural products and consumers through the use of information and communication technologies (ICT). This way, exposure to sustainable forms of food production and healthier food products at a fairer price is increased.

PROVE seeks to change the behaviour of farmers by improving farmers' business management skills and offering them better access to local consumers. Matters of motivation are addressed by making the economic benefits for farmers and consumers visible and raising awareness of the benefits of sustainable food production. The behaviour of consumers is sought to be changed by providing them with improved access to fresh, local and seasonal agricultural products.

On the proximal pathway, health and well-being are addressed by providing better access to healthy food. Connecting small-scale farmers to local consumers, thereby limiting cost increases due to intermediaries and allowing healthy food to be offered at fairer prices, might reduce social inequality. Equity may also be enhanced through the empowerment of small-scale farmers. On the distal pathway, PROVE has the potential to contribute to environmental sustainability by supporting more sustainable forms of food production, such as decreasing food packaging (baskets reduce the use of plastic bags), decreasing kilometres from production source to consumers (PROVE is a zero-kilometre initiative) and reducing the number of intermediates between producers and consumers.

Implementation

ACTORS AND SECTORS

PROVE actions support inter-sectoral partnerships amongst farmers, local entities and regional governmental units. The main sectors involved are agricultural, commercial, non-profit (ADREPES), technological (e-platform) and governmental (rural development funds/programmes). The academic sector was also involved in the consolidation of the methodology (ISA-UL, UTAD), being relevant again in the PROVE evaluation pilot (ISCTE-IUL).

According to the latest report from ADREPES, PROVE engaged 141 farming units and approximately 7,000 consumers. There are 19 district promotors, most of which are local action groups (non-profits that manage the implementation of EU funds for local development), plus a city council and a local association. These units have a technician following the process in the multiple local groups attached to them. Local groups aggregate local agricultural producers that ensure 152 delivery points. The collection of data amongst farmers partially allowed the ability to update ADREPES figures. A total of 120 active PROVE farmers and 110 local groups were listed.

KEY ACTIVITIES

Typically, the implementation of a new PROVE group starts with the training of local promotors. With the intention to provide good support and follow-up to agricultural producers regarding improving their production, local promotors are trained in a particular methodology ('the PROVE methodology'), which makes them equipped to facilitate user-oriented activities that aim to implement PROVE producer groups. These mediators subsequently run workshops where local experts and producers tailor the methodology to local specificities, which includes, amongst other topics, addressing sustainable farming

Spread over 19 districts, PROVE involves hundreds of local farmers and consumers. © PROVE

PROVE provides healthy, seasonal products from local farmers. © PROVE

practices, defining what and when to plant to ensure the diversity and quantity needed to compose seasonal baskets all year round, and setting out the delivery system (most commonly a weekly delivery site where consumers go to retrieve their baskets). Farmers are trained in the on-line platform, G-PROVE, which connects producers and consumers through an on-line ordering system. The process also allows the establishment of a local marketing network, pooling skills and sharing resources and knowledge that may contribute to minimising the costs associated with marketing local produce. During the early years of PROVE, producers were followed up with via home visits by technicians to support the implementation of the programme.

RESOURCES NEEDED

The coordination and implementation of the PROVE initiative required various resources. In a very simplified manner, it relied on a network of local governance and development entities, financial and material resources (including informative material and IT tools), local expertise to trigger a new process, skills to apprehend the methodology, time to implement the process and the ability to mobilise producers and consumers. Additionally, skills in coordination and administration were needed, as well as technological skills and knowledge.

STRATEGIC FOUNDATION

PROVE is anchored in a network of farmers, consumers, local promotors and regional development agencies that work in close association with municipalities and local authorities. National and regional authorities supported the implementation of PROVE, approving communitarian funds to the development (EQUAL Community Initiative, 2007-2013) and the consolidation (PRODER, Rural Development Programme 2007-2013) of the initiative.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

The concept of a local identity was essential when drawing up local strategies. This also ensured participation and initiative among local stakeholders. Moreover, the success depended very much on how the interests and relationships between local stakeholders were structured, and that these could be aligned. When implementing PROVE, it was also important to be both clear and dynamic and to allocate responsibilities and authority in order to encourage the trading of local products and services. Furthermore, the potential of local farming and closeness to urban settings were important facilitators.

And lastly, the PROVE methodology includes multiple strategies for implementation, and this created great potential for local adjustments.

Lack of funding has been a barrier. The initiative involves several high cost activities such as the G-PROVE tool and the branding of the initiative on a national level. The multiple ways of implementing PROVE was not just a facilitator in the process, but also a barrier because it can impede the transfer of knowledge and experience from one implementation to another. Other barriers have been, and still are: desertification of the rural population, climate change, the ageing of society, lower prices of processed and unhealthy food, persistent unhealthy eating habits from very young ages and scarce knowledge on health and environmental sustainability, especially among people facing socioeconomic disadvantages.

Transferring and scaling up

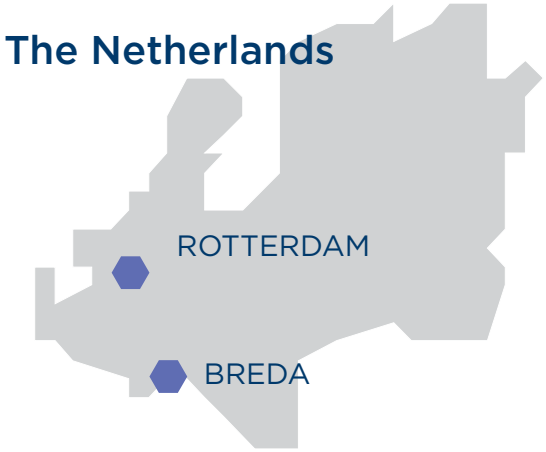
The practice has proven transferable and scalable. PROVE was created under the EQUAL Community Initiative by ADREPES – Association for Rural Development of the Peninsula of Setúbal. In the first phase, the project partnership worked with a group of small producers in the area to improve the flow of their productions. Nowadays, 19 more districts have PROVE local groups, involving hundreds of farmers and consumers. It can be conceived as a tool kit, a methodology that can be adapted to local specificities; for example, a local group can be prompted by a group of farmers or local development promotors (e.g. municipalities).

Lessons learned

- Close and active collaboration amongst local promotors, farmers and consumers supported alternative, fairer and more sustainable systems of food production.
- The success or failure of a strategy depended on how the interests and relationships between local stakeholders were structured.
- Close and active collaboration between implementers and researchers ensured good conditions to gather reliable and pertinent information for evaluating the project.

PROVE creates close links between consumers and local producers of agricultural products. © PROVE

3.10 Restructuring Green Space



RESPONSIBLE INHERIT PARTNER: NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENT (RIVM)

SETTING: TWO GREEN SPACE AREAS IN THE MUNICIPALITIES OF BREDA AND ROTTERDAM, THE NETHERLANDS

Background

Green spaces can offer innovative ways to promote sustainable lifestyles by providing infrastructure for physical activity, social interaction, relaxation and community cohesiveness. The creation and maintenance of green spaces is linked to the use of such spaces and emphasises the need to create and maintain green spaces that resonate with communities and are suitable for the activities that people want to engage in.

Restructuring Green Space concerns two green space initiatives in Dutch low-income urban neighbourhoods in the cities of Rotterdam and Breda. In both neighbourhoods, a green space area was restructured to improve the quality of the neighbourhood and increase the use of the green space. In both Rotterdam and Breda, it was important to involve the residents and provide them with opportunities to influence the design of the green space and its facilities.

Both of the selected neighbourhoods are culturally diverse and have a large proportion of residents with a low socioeconomic status, many of whom are also unemployed. Despite current health and social programmes, many of the inhabitants struggle with health problems, such as weight issues and chronic disease. In addition, many feel alone and lack social networks and support.

In both Rotterdam and Breda, the restructuring of the green space is complete (in 2011 and 2017, respectively). Although satisfaction with the neighbourhood and the targeted green space increased, residents in Rotterdam were not fully satisfied with the restructuring. According to the housing association (which owns the green space), the initiative was considered a failure, because the residents did not maintain the green space in the way the housing association wanted. Consequently, the green space was partially reverted back to its original state. In Breda, the restructuring was completed in 2017, and thus far the project seems promising. Furthermore, the process around the redesign and interaction between the professionals and residents was satisfactory and some activities have already taken place in the green space.

OBJECTIVES OF THE INHERIT CASE STUDY

Restructuring Green Space was chosen for the INHERIT project due to its potential to deliver on the triple-win goals of health, environment and equity through developing and offering more adapt green-spaces for urban residents. The initiative has the potential to improve both physical and mental health by supporting active lifestyles and social interactions. The initiative targets disadvantaged groups and involves them in the design and implementation of activities, which potentially creates a sense of ownership to the park or green space and promotes social cohesion in the neighbourhood. Moreover, the initiative is inter-sectoral; actors from several sectors work together for more sustainable urban environments.

The activities during the INHERIT project are related to the evaluation. The INHERIT case study evaluates the restructuring of green space in Breda. It also includes a similar, completed initiative in Rotterdam and compares data across these two initiatives. The objective is to gain insight into the impact of restructuring green spaces and how this affects the use of green space, activity levels and benefits in health and well-being amongst those who use it. Processes of community involvement and inter-sectoral collaboration have also been analysed. A sum of 14,300 Euros from the INHERIT project financed costs related to evaluation.

Geeren-Zuid in Breda, 2018. © Ton Gjeltema

The Restructuring Green Space evaluation study was developed and conducted by RIVM in the Netherlands. In the case of Breda, RIVM cooperated with a research team at Wageningen University and Research (Alterra) in the baseline measurement that was conducted before the INHERIT project. RIVM and the research team from Wageningen University and Research (Alterra) were present during the planning meetings and the opening event.

In the case of Rotterdam, RIVM conducted the evaluation research together with the municipal health service before the INHERIT project. RIVM was present at the meetings during the design process and at the opening event when the green space was officially opened. The study was also conducted in cooperation with research teams at UCL, England (quantitative studies). A mixed methods approach was used to evaluate the two initiatives, including: focus group interviews with stakeholders, qualitative observations, interviews and questionnaires. In Breda, baseline data were collected before implementation of the intervention, as a part of another Dutch project. As part of INHERIT, a focus group and iSOPARC observations were conducted to evaluate the intervention. In Rotterdam, data were collected before the INHERIT project and used to compare the programme to similar initiatives with different outcomes.

MAKING THE LINK WITH THE INHERIT MODEL

Restructuring Green Space aims to change the outdoor environment of two neighbourhoods in accordance with the needs and desires of the local residents and to involve them in the planning and implementation of the initiative. In this way, residents' exposure to activity-friendly green spaces that welcome social interaction is increased, which can subsequently create experiences of social inclusion and a sense of belonging. Opportunities for relaxation and recreation are also increased. Thereby, Restructuring Green Space seeks to change behaviour by offering opportunities for more active and sustainable lifestyles and increased socialisation with other residents. Motivation is addressed through the facilitation of community involvement.

On the proximal pathway, health and wellbeing are potentially enhanced by increased physical activity, social interaction and relaxation. Local environmental improvements linked to restructuring green spaces have the potential to increase urban biodiversity and enhance pro-environmental behaviour. Equity is possibly enhanced through improved access by low socioeconomic groups to green space areas and inclusive processes. On the distal pathway, when scaled up, this type of action might contribute to sustainability on a global level by reducing CO2 emissions and improving biodiversity.

Implementation

ACTORS AND SECTORS

Actors involved in planning and designing the initiatives in Rotterdam and Breda were housing corporation, residents, residents' organisation, the municipal health services and professionals from the municipality (landscape architect and project leader). Other actors involved in Breda included neighbourhood professionals (social and physical district administrator), a school, youth professionals, sport coaches and an external process manager.

The municipalities of Rotterdam and Breda carried out the implementation in each respective case.

Geeren-Zuid in Breda, 2018. © Ton Gjeltema

KEY ACTIVITIES

Key activities included a design process with involvement from several stakeholders, including the residents. In 2010, in Rotterdam, the municipality organised two evening events for residents for which the aim was to collect ideas from residents concerning the restructuring of the area and discuss an initial design. About 15-20 residents, the municipality and the housing corporation were present. In 2011, the municipality finalised the design and started the restructuring of the green spaces. At the opening, about 10 children from the neighbourhood helped planting the greenery. They also made decorative totem poles, which unfortunately were never placed in the park. The children were also involved, together with neighbourhood professionals, in creating willow cabins, but sadly, these were destroyed shortly after they were built. In spring 2012, the restructured green spaces in Rotterdam were officially opened, and during the following autumn, a 'maintenance day' was organised in the green space.

In Breda, the municipality, in collaboration with an external process manager, organised three sessions with residents and several professionals (sport coaches, the municipal health services, and the aforementioned professionals from the neighbourhood and municipality in the local community centre). At the first two evening events, mainly native Dutch residents were present, whilst later in the process, residents from other cultural and ethnic backgrounds joined. At the first evening event (in October 2014), around 30-35 people were present, and they were informed about the restructuring plans. At the second event (in November 2014), approximately 50 residents were invited to specify their wishes regarding the park in a design session. The process manager also organised a design session at the local primary school. Children made drawings of their wishes. The landscape architect used the input of these sessions for the first design. This design was presented to, and discussed with, the residents and professionals during a meeting held in November 2014. During this meeting participants discussed the maintenance of the park and potential activities that could take place. Most residents indicated that they wanted the municipality to take responsibility for the maintenance of the area. Reactions on the draft plan was integrated in a finalised plan and was presented to the residents in December 2014. The municipality had put out signs in the green space indicating where specific elements would be situated. More than 50 residents were present. In spring 2015, the implementation of the restructuring was prepared, and in 2016 the restructuring took place, led by the municipality. In April 2017, the restructured greenspace was officially opened.

In Breda, residents were invited to be involved in the organisation and implementation of activities in the park, but only a few activities have taken place so far. The use of the greenspace has increased, but ownership seems to have decreased a bit, with vandalism taking place in the park.

The main difference between Breda and Rotterdam was that, in Breda, extensive interaction was already taking place between professionals and residents, with the community centre as a central base. This was not the case in Rotterdam. Furthermore, the external process manager played an important role in the design process in Breda.

RESOURCES NEEDED

To implement Restructuring Green Space, several resources were needed. First, the implementation of the project involved residents, representatives from the municipality, landscape architects, project managers (in the case of Breda) and various professionals that contributed specific expertise and skills concerning activities and design elements.

Moreover, the implementation relied heavily on funding from the municipalities involved. In both Rotterdam and Breda, the funding was not enough to implement the original plan (some elements had

to be left out). In Rotterdam, there was limited funding to maintain the green space; the municipality and the housing corporation relied on the residents. This did not work out, as the area decayed after a while. Budgets should, therefore, include funding for planning, implementation and maintenance costs. Both projects also included an opening event where all involved stakeholders were invited.

Restructuring Green Space is a complex initiative, involving several sectors and actors. Thus, it needs to progress in a fashion that allows for involvement from all these components. Good collaboration and building trust between the stakeholders are important to make it work, and this takes time. Time is, therefore, a crucial resource. In Rotterdam and Breda, the duration of the process was two to three years, from the participatory planning and the design to the completion of the implementation. However, in Breda, the collaboration had already started years prior.

STRATEGIC FOUNDATION

Both restructuring projects could be linked to (but was not part of) a broader national integrated, Health in all Policies approach for disadvantaged neighbourhoods.

The Rotterdam project fit into the municipal Environmental Action plan and the National Approach on Environment and Health 2008-2012. The project group, consisting of representatives from the municipality, municipal health services and housing corporation, knew each other well from former projects.

In Breda, the project group was well-integrated, since they had been working together in the neighbourhood for some time, with the community centre as their central meeting place. The initiative was anchored in a wider neighbourhood strategy that aimed to empower the local community, improve the quality and attractiveness of the neighbourhood and create social cohesion. Local decision makers (aldermen) were involved in the process. The initiative also fit into the wider approach of the municipality of Breda to involve residents in community planning. It also had a link to the national JOGG programme, encouraging young people to engage in more physical exercise, as well as several health and social programmes in the neighbourhood.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

In Breda, an important facilitating factor was the good relationship between the residents and neighbourhood professionals. They met, and still meet, regularly and organise activities together. In addition, the community centre played an important role and functioned as a base for several of the activities and served to promote social inclusion.

In addition, the design process was well organised, and an external process manager played an important facilitating role. The strategies applied by the municipal authorities for community involvement and co-creation with residents were also important for the success of the initiative in Breda. On the policy level, municipal authorities provided budgets for residents' initiatives and the activities in the park. The fact that the project in Breda was so well-embedded in a larger set of activities in the neighbourhood contributed to the success of the project.

Motivation for participating in the project, both amongst the residents and the implementers, was a crucial facilitator for the implementation in Breda. Residents had high expectations from the start, and local decision makers (aldermen) joined the presentation of the design and the opening of the park, contributing to the sustained motivation throughout the process.

Geeren-Zuid in Breda, 2018. © Ton Gjeltema

A limited budget constituted a barrier in both locations. This resulted in some elements not being implemented. In Breda, the municipality covered the maintenance. In Rotterdam, there existed a very limited budget for maintenance of the green space. Although this was communicated by the municipality at the start, residents did not receive any help or information about organising the maintenance after the implementation. In addition, the local project partners were dissatisfied with the communication and concluded that they had not sufficiently used existing information about the neighbourhood. Furthermore, they had not sufficiently analysed problems and possibilities in the target area sufficiently beforehand.

In Rotterdam, one important barrier was that only a few residents were involved and motivated to contribute. Despite efforts made by the Rotterdam municipality to recruit participants, only a few did so. Some influential residents may have kept other residents from participating. After implementing the restructuring, some residents were happy with it, however there were complaints about the noise in a playground in front of their homes. Some residents expressed that they felt that the restructuring was only a cosmetic measure to hide bigger social problems in the neighbourhood. Residents were also hesitant towards the project based on past negative experiences, and many were impatient to see things finalised quickly. In the end, the restructured area in Rotterdam was changed back to the original situation; this is partly because the residents did not maintain it well, according to the housing corporation, who did not trust that the residents would do it from the beginning. Communication with the residents on the expectations for the maintenance of the area had also not been made clear. Moreover, other barriers played an important role in residents' perceptions and attitudes towards the restructuring. One of these was the perceived bad quality of housing in the neighbourhood. No investments were planned for improving the houses, since they were to be replaced within 10 years' time. In addition, littering, social problems (negative social interactions, drug abuse), personal problems (unemployment/low income) and mutual distrust between the residents and employees at the housing corporation could also be regarded as barriers in Rotterdam.

Transferring and scaling up

These interventions showed that, first, it is important to consider whether restructuring green space is the right thing to do to improve the situation of residents in neighbourhoods. There may be other, larger problems that need to be solved first. Asking the residents what they consider as the most important problems and solutions is therefore important. Second, close collaboration between residents

and neighbourhood professionals from different domains and involving residents in the design process are imperative. Good communication and trust are important conditions to make collaboration work. If this is lacking, efforts should be made to develop this.

Third, clarity about expectations, interests and possibilities is another important element that needs explicit attention in the restructuring process. It is recommended to involve an external process manager throughout the whole process to bring it to fruition.

Fourth, having enough money available for the design, implementation and maintenance of the green-space is vital. Linking up with other initiatives in the municipality may also work in that respect.

Fifth, it is crucial to keep residents interested in the green space after implementation. Organising activities with residents and monitoring the use are important in that regard. Creating social cohesion, as well as creating and maintaining a sense of responsibility, thus requires more than restructuring of green space, as appropriate strategies are also essential for developing a positive social climate. It takes time before the effects of the initiative on health and well-being of the residents can be seen. It is important to give it a chance, take time, be patient and keep interacting if it develops in a wrong direction (e.g. vandalism). It is essential to inform other involved parties (e.g. health professionals) on the available greenspace and the potential to use it for their activities and involve them in the design.

Lessons learned

In summary, some important lessons are:

- Organise good inter-sectoral collaboration and build trustful relationships with the residents.
- Organise good communication amongst all stakeholders.
- Analyse (together with the residents) the level of motivation and support amongst the stakeholders or whether there are other more burning issues that need to be tackled first.
- Invent and manage expectations in all stakeholder groups.
- Employ an external process manager.
- Involve the residents in the design and, if they are interested, in the implementation and maintenance of the greenspace; involve them in the organisation of activities and support their efforts with personnel/knowledge/money.
- Monitor the use and perception of the green space and keep it attractive. Organise activities to keep it alive.
- It takes time before the effects of the initiative can be seen – be patient and take the time to interact if it develops in a wrong direction (e.g. vandalism).
- Inform other parties (e.g. health professionals) on the available greenspace and the potential to use it for their activities; involve them in the design.

3.11 Restructuring Residential Outdoor Areas

RESPONSIBLE INHERIT PARTNER: PUBLIC HEALTH AGENCY OF SWEDEN (FOHM)

SETTING: A RESIDENTIAL AREA IN A SOCIOECONOMICALLY DISADVANTAGED SUBURB IN STOCKHOLM, SWEDEN

Background

The environment and the place where people live are key determinants of health and well-being alongside inherited characteristics and socioeconomic variables (24). Studies have demonstrated that exposure to natural settings can have a positive effect on mental health and social interactions (16), and that well-designed green spaces that inspire active use and social interaction facilitate attachment and emotional bonds to a location (25). However, people living in deprived neighbourhoods often have less access to community green spaces (26). For these reasons, it is important to develop strategies that address the design and use of green spaces in deprived neighbourhoods.

The Restructuring Residential Outdoor Areas initiative involves the restructuring and upgrading of one of the most underprivileged residential areas in Stockholm, Sweden. Inhabitants of the neighbourhood face socioeconomic disadvantages and have high levels of social problems and mental illness. Voter turnout is low, and unemployment is high; thus, income and purchasing power are lower than the average in Stockholm. Amongst the residents, more than 80 percent originated from Asia and Africa. Through a participatory approach, the initiative aims to involve residents in developing a more attractive, safe and green outdoor environmental area with different physical activities for less-sedentary behaviours, thus stimulating greater social interaction and well-being for all residents.

The overall outdoor residential area is surrounded by four properties, each of which includes around 100 residences. The design of the outdoor residential area, including playgrounds, vegetation and lighting, is outdated and in need of refurbishment. Property owners, of which there have been several, have not prioritised renovations of tenants' interior and exterior living environments. The new owner (D. Carnegie & Co/Hembla) conducted a significant modernisation of facades, balconies, stairwells, elevators and attics in spring and summer 2017. Working with the social aspects of urban planning, the owner wanted to create an attractive and functional environment in which all tenants feel safe. This included the renewal of meeting places (e.g. improved lighting and gardening initiatives) and activity areas to encourage social interaction, blocking illegal traffic, and increasing safety and trust between the tenants and the property owner.

Since 2016, the Swedish government has allocated SEK 1 billion (Euro 100 million) to support upgrades of outdoor areas in socially deprived areas. The National Board of Housing, Building and Planning (NBHBP) is administering this financial support. The aim is to contribute to outdoor environments that stimulate activity and social interaction and to maintain or develop a residential area design in areas of socioeconomic challenges. The intervention is designed to make a long-lasting contribution to an attractive, functional, equitable and safe outdoor environment. Property owners in residential areas with socioeconomic challenges (defined as an area where more than 50 percent of households have low purchasing power) can apply for this support.

One of the criteria for receiving financial support is that residents must be engaged and involved in the planning process. The financial support also favours those applications where the initiative includes interaction between multiple stakeholders, such as property owners, industries, civil society and local authorities. These people have valuable knowledge regarding how the neighbourhood works and what needs to be improved. This knowledge and experience can contribute to a better basis for decision making. The financial support has facilitated faster refurbishment in these areas, linked urban-planning expertise to property owners, and increased dialogue with residents.

OBJECTIVES OF THE INHERIT CASE STUDY

The Restructuring Residential Outdoor Areas initiative addresses INHERIT's triple-wins and aims to improve health, health equity and the environment through behavioural change. This initiative may advance more-sustainable health behaviours by designing attractive areas for physical activities and social interaction, thus improving the accessibility and use of the area by residents from different ethnic backgrounds and residents of different gender and age categories (health equity). The reconstruction might contribute to the sustainable development goals (SDGs) and can inspire the reconstruction of other underprivileged neighbourhoods within and outside Sweden. The reconstruction is conducted using environmentally friendly and sustainable materials in line with the property owner's overall policy.

This INHERIT case study investigates the processes of inter-sectoral cooperation and how restructuring the area stimulates different activities amongst residents and potentially results in more outdoor activities, less sedentary behaviour, increased social interaction and improved well-being. The activities in this INHERIT case study are related to an evaluation study. A sum of 10,000 Euros from the INHERIT project financed costs related to implementation and evaluation.

The evaluation study was developed and conducted by the FoHM team in close collaboration with 'Urban Utveckling' (*Urban Development* in English) (UU) and the property owner, Hembla (the implementers), and under the supervision of the research teams at UCL, England (quantitative studies), and RIVM, the Netherlands (qualitative studies). The mixed methods evaluation included the following: iSOPARC data collection, where activity types and levels were registered; questionnaires for the residents, including questions about physical activity and well-being; interviews with residents and the property owner; and focus groups with stakeholders.

MAKING THE LINK WITH THE INHERIT MODEL

The Restructuring Residential Outdoor Areas aims to change the physical environment and improve the outdoor green space area of residents in a disadvantaged neighbourhood by incorporating social aspects of urban planning to create an attractive, functional and equitable environment. This can improve

residents' level of exposure to safe, natural environments, and thereby improve opportunities for social and outdoor activities, which can all in turn reduce stress.

The Restructuring Residential Outdoor Areas initiative aims to change behaviours by offering opportunities to participate in redesigning an outdoor residential area and making it more attractive and suitable for different (physical) activities. It also offers opportunities to increase social involvement and to develop social networks, which can be empowering.

On the proximal pathway, this might result in improved health and well-being through increased physical outdoor activity, improved social networks and increased safety in the area. Equity might be enhanced by improving the outdoor environment in a disadvantaged area and also stimulating community engagement and enhancing access to and use by residents with different ethnic backgrounds, gender and ages. On the distal pathway, sustainability might be improved through the choice of environmentally friendly materials and by improving the quality and quantity of green space, which can help mitigate levels of CO_2.

The new courtyard in progress at Nordkapsgatan in Husby, Sweden. © Urban Utveckling (2018)

Implementation

ACTORS AND SECTORS

The implementation of this intervention included several actors: a property owner, urban planning experts, an architect, a project manager and the residents. The property owner financed the project with financial support (50%) from the National Board of Housing, Building and Planning and subcontracted urban-planning expertise (handling the dialogues and part of the evaluation), architectural duties and project management to execute the initiative. The property owner and urban-planning expert exchanged ideas with the property owner association in the district (Fastighetsägare i Järva) and the district administration of the municipality of Stockholm. In this perspective, the initiative involves collaboration and cooperation between the public and private sector and between urban planning and property management.

KEY ACTIVITIES

A participatory approach was used to engage potential stakeholders. The residents in the area as well as urban-planning experts were invited to participate in an outdoor event arranged by the property owner. The purpose of the event was to engage in a dialogue with the residents about how the outdoor area was currently being used and ideas about how they, as the residents, would like to use the area in the future. A total of 40 residents (23 women/girls and 17 men/boys) ages 5–90 years participated. They studied maps and identified pleasant and important places, as well as places they wanted to develop.

Prior to the event, the knowledge had emerged that residents felt unsafe in the residential outdoor area and that illegal drug activity was ongoing. These unsafe sites were also identified by the residents during the event. This was valuable knowledge for the property owners and urban/community planners. During this phase, observations were also made by UU at various locations in the area to gather information about use. It was important to register how different age groups – young children, youth, adults and seniors – used the area similarly or differently.

In addition to this, in the planning to restructure the residential outdoor areas, the property owner and the architect discussed architectural drawings with representatives of the residents. The residential board collected opinions and aspects of the design of the outdoor environment from all residents and handed the information to the property owner. A review of what emerged at the outdoor dialogue event and the residential board's dialogue with the residents showed that proposals from both occasions were well aligned with each other.

There followed a planning phase where the architect, project leader, property owner and UU collaborated to plan the implementation of the target group's ideas and preferences. The details of the implementation were discussed. The next phase involved the actual restructuring of the outdoor area, and the last phase involved the evaluation of the project. During the entire process, a dialogue was maintained with the residents to secure involvement, transparency, information and the management of expectations. However, the user groups (the residents) were involved only in the planning of the initiative – not in the implementation process.

RESOURCES NEEDED

To implement the Restructuring Residential Outdoor Areas initiative, several resources were needed. First, the implementation of the project involved residents, representatives of urban-planning experts, landscape architects and the project manager. The professionals contributed specific expertise concerning landscaping, design elements and project management. Moreover, the implementation relied heavily on funding from the property owner and the National Board of Housing, Building and Planning.

This initiative required extensive participation from the residents. Therefore, time to develop relationships of trust with the residents constituted an important resource.

STRATEGIC FOUNDATION

On a national level, a general upgrade/renovation is taking place in socioeconomically disadvantaged areas funded by the National Board of Housing, Building and Planning, a government agency. This indicates a strong political will and movement in the area of urban planning, including a social/integration aspect. Cooperation has been established between the district administration of the Stockholm municipality and the property owners regarding prioritised issues, such as illegal traffic and unsafe areas. They also have partnerships with various associations, with a focus on three directions: participation in elections, young people, and parents. The process of actively working with the residents prior to renovation emerged from the NBHBP requirement for resident participation in order to be granted financial support.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

One of the strengths of the initiative stemmed from the fact that restructuring the residential outdoor areas was initiated by a property owner inspired by the government-funded policy for "Restructuring a residential area in a low-socioeconomic suburban area in Stockholm" administered by the National Board of Housing, Building and Planning (NBHBP). Political determination and increasing awareness regarding these issues (integration, social inclusion and equity) facilitated the process. Furthermore, the NBHBP provided financial support, urban-planning expertise, an architect on a regular basis and strong project-leader management, all of which were important facilitators for the development of the project. Moreover, having users involved in the planning process was considered of great value in order to establish ownership of the process. User groups were seen and heard, and their opinions were valued and considered, making them less inclined to vandalise the area.

There were, of course, many different opinions, and it was not possible to satisfy everyone. It is likely, therefore, that some people may have been disappointed with the results and might have influenced others to adopt a negative view. Collaboration and cooperation can be improved, for example, by making contact at an earlier stage with various property owners who are currently renovating. Property owners and the district administration sometimes plan things at the same time. There is potential for improvement. It would have been desirable for the local authorities and the district to have been more involved in the process since they have a good overview of the whole residential area. Vulnerable groups were difficult to reach and to involve in the process due to language barriers and mistrust. This resulted in a lack of regular follow-up/dialogue during the process/implementation. The initiative might possibly have benefitted from an INHERIT partner (evaluators) entering the process earlier. INHERIT partner knowledge and the INHERIT objectives could have been more integrated from an early stage, and more resources could have been provided to better prepare the evaluation.

Transferring and scaling up

To scale up and/or transfer this initiative, more frequent dialogues with residents, engagement of local authorities and more frequent follow-ups during the process are recommended. It is also crucial to include an objective evaluator early in the process of planning and implementing.

Lessons learned

- Outdoor restructuring projects require funding, inter-sectoral collaboration and authentic influence from target groups early in order to avoid costly mistakes.
- A continuing dialogue as well as information and transparency were important for managing residents' expectations.
- Restructuring the residential outdoor areas could have benefitted from the closer involvement of local authorities and district administration.
- Culture and language barriers resulted in difficulties with user involvement and highlight the need for better communication strategies.

3.12 Retrospective Analysis of Energy Efficiency Investments[2]

RESPONSIBLE INHERIT PARTNER:
UNIVERSITY OF EXETER (UNEXE)

SETTING: UK

Background

Certain subpopulations spend more time indoors. These include older people, individuals with pre-existing illness, the unemployed, mothers and young children. Increased duration of exposure to indoor environments, which may be polluted, cold, damp and mouldy, coupled with increased vulnerability make housing conditions a key factor in the health of these groups (27, 28). Older people are especially susceptible to cold housing, resulting in increased winter mortality (29). Differences in vulnerability are aggravated by the fact that the groups that are most at risk occupy older homes with poor insulation and higher energy demands (30), often located close to industry and traffic.

In the UK, households are considered by the government to be in 'fuel poverty' if they have to spend more than 10% of their household income on fuel to keep their homes adequately heated. Across the UK, 11% of households suffer from fuel poverty. There have been a range of interventions to improve energy efficiency in the UK housing, including grants and loans to facilitate the installation of double glazing, insulation and improved heating systems.

INHERIT helped conduct a retrospective evaluation of the costs and benefits of energy efficiency investments. The INHERIT case study builds on a broad, ecological study of the health impacts of different energy efficiency measures and incorporates these effects into a cost-benefit analysis (CBA). Health effects are assessed and compared with other impacts of energy efficiency (energy savings, air pollution reductions). The study quantifies the net health effects of past energy efficiency measures in the UK.

2 This case study deviates from the rest of the INHERIT case studies in the sense that the evaluation is based on secondary data material. Thus, the description of Retrospective Analysis of Energy Efficiency Investments differs in structure.

OBJECTIVE OF THE INHERIT CASE STUDY

This INHERIT case study does not provide an evaluation study based on the implementation of any particular intervention. It rather performs an analysis based on statistics connected to a range of interventions that have been conducted in the past.

The objective of the case study is to assess the net health effects and compare them with other impacts of energy efficiency (e.g. energy savings, air pollution reductions). The study attempts to quantify the net health effects of past energy efficiency measures in the UK. The CBA focuses on these questions:

- Are the net benefits for health of energy efficiency measures to date positive or negative?
- Do the benefits of energy efficiency outweigh the costs?

No budget was allocated from the INHERIT project to the Retrospective analysis of energy efficiency investments. The Energy Efficiency Investment evaluation study was developed and conducted by the UNEXE team (UK). The data material for the cost-benefit analysis is collected from the HEED dataset.

MAKING THE LINK WITH THE INHERIT MODEL

The Retrospective Analysis of Energy Efficiency Investments case study aims to provide a detailed review of a number of interventions initiated by the UK government for improving the physical home environment in respect to energy efficiency. Politicians and policymakers are thus provided with an indication of the impact of these interventions expressed in terms of cost benefit, which may lead them to continue these interventions as currently delivered or in an adjusted or refined way. Thus, the retrospective analysis may indirectly facilitate behaviour change in local authorities by increasing knowledge of the impacts of funding interventions for energy saving. The information provided by the retrospective analysis provides an opportunity to assess the impact of their actions and, potentially, motivation for policymakers through awareness of the efficacy in delivering population health benefits. For the target group, opportunities for energy saving are provided through public funding and loans, which enable them to consume less energy. Motivation is addressed through the prospect of saving energy costs.

On the proximal pathway, the retrospective analysis may lead to environmental change as policymakers understand the impact of energy efficiency measures and exposure change as occupants adjust their behaviour to maximise savings within a home where energy efficiency has been improved. Equity may be enhanced by involving people facing socioeconomic disadvantages, since many energy efficiency programmes have aimed to reduce fuel poverty and improve energy efficiency in the social housing stock. Hence, the appropriate design of such measures to avoid negative health outcomes is important. Finally, the results of this INHERIT case study may also

Through public funding and loans, the target group has the opportunity to save energy. © Virrage Images Inc.

contribute to sustainability through reductions in energy use. On the distal pathway, the initiative has potential to reduce greenhouse gas emissions. As for any initiative which can reduce carbon dioxide emissions, it is notable that the most vulnerable are likely to suffer more from climate change. Thus, energy efficiency and use are equity issues that could further contribute to the triple win.

Implementation

This was a secondary data analysis – no actual measure was implemented as part of INHERIT.

ACTORS AND SECTORS

The analysis was supported by involvement of partners including Cornwall Council, Devon County Council, NHS New Devon Clinical Commissioning Group and representatives of the Energy Saving Trust. Initial funding for the analysis of health impacts was provided by the Energy Action Grants Agency (EAGA).

Energy efficiency and use are equity issues that could further contribute to the triple win. © Halfpoint

3.13 Sustainable Food in Public Schools

RESPONSIBLE INHERIT PARTNER:
UNIVERSITY OF ALCALÁ (UAH)

SETTING: PUBLIC NURSERY SCHOOLS IN MADRID, SPAIN

Background

Unhealthy diets during childhood have become an important health concern since they can lead to overweight and obesity that can persist into adulthood as well as to various negative physiological and psychological outcomes (31). Evidence suggests that pre-schoolers do not consume recommended quantities of whole fruit and vegetables (32). Consequently, there is a need for initiatives that encourage healthy eating in families and childcare settings.

The municipal council of Madrid has shown a high concern for environmental sustainability and growing inequities in health. This has led to a change in municipal priorities and subsequently resulted in a set of new policies and measures. One of these is the Sustainable Food in Public Schools project, which seeks to influence the diets of children and their families by offering sustainable and locally produced food in public schools and to raise awareness about the importance of a healthy diet amongst parents. The project is one of 12 measures the municipal council designed in the context of its adherence to the Milan Food Policy Pact, which has been signed by 182 cities globally, and its implementation has been structured in line with this Pact.

Sustainable Food in Public Schools introduces organic and locally produced food in 56 public municipal schools in Madrid to children aged 0-3. Participating schools are typically situated in socioeconomically and demographically diverse neighbourhoods and the children attending these schools come from families with income lower than municipality average.

OBJECTIVE OF THE INHERIT CASE STUDY

The Sustainable Food in Public Schools project aims to solve the doubts and concerns of parents and school workers (kitchen staff as well as educators and managers) concerning the health and environmental implication of food consumption options. The initiative seeks to raise awareness in families about the

A sample dish of sustainable, healthy food prepared during a kitchen training workshop. © EuroHealthNet

importance of food choices by providing training to families on feeding their children healthier and more sustainable food. Moreover, it aims to reduce health inequalities arising from unhealthy food choices associated with low-income groups by also offering training to school kitchen personnel, providing them with the necessary skills to fully take advantage of the introduction of sustainable, healthy and diverse diets in the schools.

Sustainable Food in Public Schools has been chosen as an INHERIT study based on its potential to promote more sustainable food production, level out social inequity in food consumption and promote a healthy diet from an early age. The objective of this INHERIT case study is to assess the costs and benefits of the intervention. It investigates parental willingness and capability to change to a healthier and more sustainable diet and seeks to understand the health impacts of these dietary changes. A sum of 9,860 Euros from the INHERIT project financed costs related to implementation and evaluation.

The evaluation study was developed and conducted by UAH in cooperation with the involved stakeholders and under the supervision of research teams at BC3, Spain (cost-benefit analysis), UCL, England (quantitative studies), RIVM, the Netherlands (qualitative studies) and NTNU, Norway (implementation studies). The cost-benefit analysis (responsible INHERIT partner: BC3) focused on parents' acceptance of the healthier menus, and their willingness to choose sustainable options despite the possible increase in price. In addition, it assessed changes in eating habits and the impact on health. The qualitative evaluation (responsible INHERIT partner: RIVM) investigated the inter-sectoral cooperation and processes linked to providing sustainable food in public schools.

MAKING THE LINK WITH THE INHERIT MODEL

Sustainable Food in Public Schools aims to change children's institutional environments by changing the school menus to serve healthy, local and sustainably produced food. In parallel, parents and staff are offered workshops to increase their knowledge about healthy diets and improve their skills in preparing healthy food. Thus, the children's exposure to healthy, sustainable food is potentially increased.

Sustainable Food in Public Schools aims to change behaviour by offering opportunities for consuming healthy, sustainable food to children, as well as increasing the capability of teachers, kitchen staff and parents, by inviting them to workshops. Matters of motivation linked to introducing the new diets into the home environment are directly addressed through one of the workshops for parents. Kitchen staff and teachers are motivated by including the acquired knowledge and skills in their daily work and by being offered possibilities for learning and becoming knowledgeable on this topic.

On the proximal pathway, this might result in the increased consumption of healthy, locally produced food. It may also reduce inequity by offering children from disadvantaged families healthy and sustainable meals and providing knowledge about healthy and sustainable diets to staff and parents. On the distal pathway, sustainable and locally produced food has the potential to increase sustainability and reduce pressures on global ecosystems.

Implementation

ACTORS AND SECTORS

The implementation was carried out in collaboration with actors from the public and the private/volunteer sectors and targets school staff and families. The University of Alcalá (UAH) was responsible for carrying out the INHERIT case study implementation, coordinating the efforts related to the initiative itself and evaluating the efforts.

The City council of Madrid is the principal stakeholder in the project, alongside school managers and the associations carrying out the main tasks (mainly Justicia Alimentaria, which carried out most activities performed in schools; and La Garbancita Ecológica, responsible for carrying out other activities in coordination with Justicia Alimentaria). Families and school staff were also stakeholders.

The City council coordinated the activities performed in the context of the implementation of the intervention amongst the various stakeholders (serving as a link between the INHERIT partner, associations and schools) and was involved in the design of the intervention and the specific implementation activities. Justicia Alimentaria and La Garbancita Ecológica designed and implemented the activities. The Association La Garbancita Ecológica entered the project to complement and optimise the work done by Justicia Alimentaria, carrying out the implementation process in some of the schools.

Schools contacted school-community-specific stakeholders to invite them to participate in the activities. Ecocomedores is a platform that gathers different associations together that are aiming to improve school food quality. Users, children and their parents were not directly involved in the planning phase. Parents and school staff were involved in the implementation. Follow-up groups took part in the activities aimed at redesigning school menus. Parents could also express their doubts and concerns in the awareness-raising activities. There were also cooking workshops for kitchen staff specific to this stakeholder group.

Participants are taught guidelines on sustainable food set by the Madrid City Council. © EuroHealthNet

Participants are taught guidelines on sustainable food set by the Madrid City Council. © EuroHealthNet

This combination of stakeholders implied a need for inter-sectoral cooperation between public and private stakeholders. The schools under municipal public ownership in Madrid were the target of the implementation process, which meant public municipal involvement. Schools participating were all privately managed, which implied involved private entities, such as small enterprises, large companies and cooperative societies. Implementing partners were non-for-profit private entities, and the UAH is a public university. Families, school workers and experts consisted a mix of civic and private stakeholders.

KEY ACTIVITIES

The implementation was initiated by uniting all implementing stakeholders: Madrid City Council, Justicia Alimentaria, Ecocomedores. To optimise resources, budgets were designed in coordination with activities already being implemented. An implementation plan was made and later adapted to budget constraints and additional funding sources. Prior to the start of the activities linked to the implementation, a school-community-oriented event was arranged by the City Hall, in which a variety of stakeholders participated. The event was organised to ask stakeholders about their awareness of the changes being implemented in school menus. It was also used as an opportunity to introduce the INHERIT project to the members of the school community.

The activities developed in the context of the implementation were two kitchen training workshops (a third one was later added due to external funding) and four sequential activities aimed at families and stakeholders. These four sequential activities alternated between follow-up-group-oriented activities (1st and 3rd) and school-community-oriented activities (2nd and 4th).

This first activity was designed to target follow-up groups. Follow-up groups were formed by one member of each stakeholder group from the school community, one group per school. This first activity was held in four different workshops, including each of the members of the follow-up groups of 10 schools, thereby covering 40 of the 56 schools (the remaining 16 were already involved in similar procedures). Here, the aim was to discuss the collaborative design of school menus, and it was coordinated by experts in nutrition. The second activity was individually held by each school, which was visited by an expert in nutrition to hold an awareness-raising activity aimed at parents (though open to the whole school community). The third activity involved the expert in nutrition, who assisted the follow-up groups from the different schools in improving their respective schools' menus. Finally, the resulting menus were presented at each school in the fourth activity. This activity was designed as an awareness-raising activity with a focus on solving concerns that could be felt by families in matters such as the reduction of animal protein. The establishment of the follow-up groups aimed to continue with the work done in the pilot after the implementation phase was closed.

RESOURCES NEEDED

The work of non-for-profit workers and volunteers, city council workers and civil servants was of vital importance for the implementation of the project. The collaboration of stakeholders that attended the workshops also greatly contributed to the implementation of this intervention. Participating schools and the city hall contributed locations for meetings and workshops. Improvements could have been made with additional funding, but the case study was scaled to reach the goals within the available budget frames. Most resources were used to arrange the group sessions and training course for the kitchen personnel.

STRATEGIC FOUNDATION

Sustainable Food in Public Schools is supported by the Madrid City Council's concern for sustainability and equity. It is strategically anchored in the Milan Food Policy Pact, which implies that cities commit themselves to work towards developing sustainable food systems that are inclusive, resilient, safe and diverse. As a result of this commitment, the regulations affecting food offered in municipal nursery schools (i.e. public centres of municipal ownership) were changed, both in those directly managed by the City council and those of public ownership and private management. A group of schools benefited from a close-follow-up programme to adapt to the changes. To reach the whole community, a complementary programme was designed as a pilot for the remaining schools. Further projects would also complement this pilot, for example, by extending training for kitchen staff.

FACILITATORS AND BARRIERS

The main facilitator has been the high level of cooperation and involvement amongst key stakeholders in most of the schools. The existence of a series of related projects was also relevant in building a more coherent strategy where the intervention was limited. The implementation process owed its success to the high degree of involvement of the teams participating in the process. Members of these teams helped to design and implement the intervention, eased communication amongst different parts and put considerable amounts of effort into ensuring the correct development of the project even at early stages. Furthermore, the political climate allowed for the development of this intervention due to the election cycle, which allowed for continuity in the team throughout the preparation and development. The growing social concern over the health and environmental impacts of food choices was also relevant. Raising awareness is one of the expected outcomes of this INHERIT case study, but it also depends on a minimum degree of interest shown, in this case, by families, as there is no obligation or need for them to participate.

Kitchen staff learn the the preparation of healthy, sustainable food options during a kitchen training workshop. © EuroHealthNet

Inter-sectoral collaboration was constant and easy. Inter-sectoral collaboration was essential for the development of the initiative, since both public and private entities were involved in the pilot. The main link uniting stakeholders was the municipal administration team in charge of public schools that participated in the development of the initiative. Nevertheless, collaboration with associations was also fluid.

One of the main barriers was the lack of information amongst stakeholders, which is still a source of distrust for many of them, both amongst families and school staff. Another barrier mentioned by experts was mistrust coming from some paediatricians, who saw measures such as the reduction of animal protein as inappropriate. The initiative itself should generate debate and offer general information that would ensure involvement of reluctant families in the long term. Another barrier is that the kitchen staff often had limited resources to improve the food they offered and often needed to rely on external suppliers.

Transferring and scaling up

The intervention and activities were structured in line with the Milan Food Policy Pact, to enable an easier transfer amongst the 182 cities that signed the pact. Comparable initiatives have been carried out by different administrations in the rest of Spain, such as in the Canary Islands. In other cases, individual centres have taken the initiative.

A clear idea of the available resources is recommended, so that planning can be executed and all parts involved can build links based on mutual trust. Changes in administration may lead to changes in the level of the involvement of teams, which can heavily influence the development of any long-term project.

The change in municipal priorities has implied a new set of policies and measures, amongst which the initial practice was counted. Budgetary restrictions have led to limitations in scalability and a lack of policy evaluation. In this context, the possibility of obtaining indicators of the impact of city policies lies within the interests of the municipal corporation.

The initiative aims to change behaviour by offering opportunities for consuming healthy, sustainable food to children and increasing the capability of teachers, kitchen staff and parents, by inviting them to workshops.
© Facundo Ruiz

Lessons learned

- Engaging volunteers was of vital importance for the implementation of the project.
- More defined funding sources would have allowed for better planning.
- Initial uncertainties in the collaboration process amongst different stakeholders implied a loss of efficiency early in the collaboration process.
- Local political support and strategic anchoring in a global network were important for the implementation of this action.

3.14 Thinking Fadura

RESPONSIBLE INHERIT PARTNER:
BASQUE CENTRE FOR CLIMATE CHANGE (BC3)

SETTING/CONTEXT:
GETXO, SPAIN

Background

Urban green spaces are under pressure in many European cities due to urbanization. However, access to well-designed green spaces contributes to health and wellbeing by offering possibilities to exercise, relax and interact with people (11, 16). Green spaces may also reduce air pollution and noise levels and mitigate some of the negative impacts of climate change (11, 16). Several local governments are starting to acknowledge the need to engage citizen in developing and using green infrastructure in their neighbourhoods, so that citizens understand better the benefits of nature and develop a greater sense of responsibility for their local community.

Thinking Fadura is an umbrella programme that includes different initiatives aiming to improve people's health and well-being in Getxo, a municipality with approximately 80,000 inhabitants. The initiatives involve the design of a new public space that opens a formerly restricted green area to the general public, fostering outdoor physical activity and a kitchen school for healthy eating. Another aim for all initiatives has been to ensure that the design process is done in a collaborative way with citizens and other stakeholders.

The initiative chosen for the INHERIT project concerns the opening of a formerly restricted park to the general public. The park has sporting facilities that are linked to, and coexist with, a natural park and a river. The park will incorporate new elements in order to motivate regular practice of physical exercise, achieve environmental improvements, increase employment in the leisure, health and sports sectors, and improve access to controlled spaces. Various stakeholders are involved in planning the improvements of the area, securing empowerment, fostering engagement and avoiding to create new elements that will not be used.

THE OBJECTIVES OF THE INHERIT CASE STUDY

Thinking Fadura was selected as an INHERIT case study because it addresses the INHERIT triple-win goals of health, equity and environmental sustainability by providing possibilities for outdoor physical activities and social interaction in an area that formerly was open only to paying visitors. In addition, having the target groups involved in planning the new elements of the park, especially people facing socioeconomic disadvantages, can positively influence their use of the area and their activity level.

The objectives of the INHERIT case study is to investigate how this green space is used and the impact it may have on health and well-being in low-income groups. Moreover, the study seeks to estimate the value of the park relative to the rate of use (the proportion of the population using the park and frequency of use). A sum of 10,000 Euros from the INHERIT project financed costs related to implementation and evaluation.

The activities in this INHERIT case study are related to implementation and evaluation. In particular, it investigates how the opening of the park to the general public, and the new added elements in the area, stimulate different activities amongst users. A cost-benefit analysis was conducted.

The evaluation study of Thinking Fadura was developed and conducted by BC3, Spain – in close collaboration with the implementers from the municipality of Getxo and the research team at UCL, England (quantitative studies) and NTNU, Norway (implementation studies). The mixed methods evaluation included: iSOPARC data collection, where activity types and levels are registered; a face-to-face survey; interviews; and workshops with various stakeholders about the construction and improvement of the park.

Sports area and surroundings of Fadura, in Getxo. © Emilio P. Doiztúa

Sports area and surroundings of Fadura, in Getxo.

MAKING THE LINK WITH THE INHERIT MODEL

Thinking Fadura aims to change an outdoor environment by constructing a park and recreation area with sporting facilities that are open to the general public. This way, residents' exposure to activity-friendly, pleasant green spaces is increased, and the possibilities of experiencing physical activity, social activity, contact with nature and the reduction of stress levels are enhanced. Thereby, Thinking Fadura aims to change behaviour by offering opportunities for everybody to use the outdoor area and participate in activities in the park and recreational area. Thinking Fadura addresses issues of motivation through pleasant design and user involvement, particularly in disadvantaged groups, in planning and constructing the park and recreational area. The action contributes to capability by broad stakeholder and user involvement, as well as by facilitating collaboration between multiple networks engaged in the co-design of the new park and recreational area.

On the proximal pathway, health and well-being might be enhanced by increased physical outdoor activity and improved social cohesion. Equity might be improved by providing inclusive access to green areas for everybody and by increased knowledge and a sense of belonging to the local area through involvement in the design of the green space. On the distal pathway, ecological restoration and the improvement of green areas along the river may enhance biodiversity and increase active travel, each with potential to reduce pressures on global ecosystems.

Implementation

ACTORS AND SECTORS

The Thinking Fadura initiative involves actors within the public, private and volunteer sectors. The key actors were Getxo Kirolak (a public association that promotes physical activity in Getxo), the municipality of Getxo, staff from Fadura sporting club, the Thinking Fadura main office, the Water Authority in the Basque Country (URA), researchers, volunteers and citizens.

The roles and responsibilities of the staff from the Thinking Fadura main office were to manage the project and ensure that the project was implemented according to the plan. Central roles and responsibilities of the staff were, thus, related to the design of the project as well as the design of the green areas.

Stakeholders (health department, safety department, NGOs, environmentalists, sporting associations, people who work with disadvantaged groups), experts and local citizens were invited to workshops

Sports area and surroundings of Fadura, in Getxo. © Emilio P. Doiztúa

and several activities in the participatory processes. These events were, in most cases, organised by the Thinking Fadura main office, Getxo Kirolak and Fadura sporting club.

The BC3 research teams followed the activities within the Thinking Fadura practice and conducted interviews, arranged a workshop and designed and ran a survey targeting implementers and users.

KEY ACTIVITIES

One of the key activities in this project involved collecting data from users and various other stakeholders (the health department, safety department, NGOs, environmentalists, sporting associations, and people who work with disadvantaged groups) and experts on their thoughts regarding providing free access to the Fadura sporting facilities. Data were collected through workshops with stakeholders and experts from different backgrounds and through face-to-face surveys carried out in the Fadura sporting facilities.

The workshop with the stakeholders was organised by BC3; here, the aim was to explore both positive and negative social, environmental and economic impacts of the opening of Fadura park in Getxo. A total of 20 stakeholders attended the workshop, including representative members of social services, equity, multiculturalism, citizens, development cooperation, environment, urban planning, housing, planning, civil protection, economic promotion, Getxo Kirolak, experts in health public. An objective was also to feed this information into the cost-benefit analysis.

RESOURCES NEEDED

One key resource related to the implementation of Thinking Fadura was time (the duration of the project is of over three years). Financial resources were also important, since there were high costs associated with the construction and maintenance of the area. This included, for example, construction materials for new elements in the park. Human resources were also required, such as the staff from Getxo Kirolak, Getxo municipality, and participation from the citizens in the participatory planning processes.

STRATEGIC FOUNDATION

The practice was anchored in the City council of Getxo, as Fadura sporting club is public and belongs to Getxo. It seemed that both opening the gate to give access to the green areas and the public participatory processes were critical in anchoring the initiative with relevant stakeholders and actors. This initiative was also anchored in a flood protection policy, since the Gobela River passes through Fadura park and occasionally produces some floods in the area.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

The efforts made by the staff at the Thinking Fadura constituted one of the main facilitators in the implementation process. Staff members coordinated and managed the activities. A second important factor in ensuring success was the participatory planning processes. The cooperation with different types of stakeholders and representatives of population groups went very well, and the participants themselves highlighted it as something positive.

The Water Authority in the Basque Country (URA) can also be seen as a critical facilitator during the process. URA manages the area occupied by the Gobela River running through the green areas of Fadura and has extensive knowledge on flood protection policies; this knowledge was critical in the planning and design of the area.

One of the main barriers in the project has been the extensive timeline of the project. It will not be finished within the timeframe of the INHERIT project. Time during the project was also a barrier; all actors involved struggled with time resources. In addition, the participation of URA in the participatory planning process would have improved the planning, as the organisation's knowledge on flood protection policies is valuable. Ultimately, some citizens, mainly those who had been members of the park`s sporting facilities before, opposed towards opening the park to the general public.

Sports area and surroundings of Fadura, in Getxo.
© Emilio P. Doiztúa

Citizens feared that the area would no longer be safe to all, and they were especially concerned about sending children to the park.

Transferring and scaling up

The Thinking Fadura initiative is a well-designed programme that offers comprehensive supporting structures in many different aspects for successfully opening restricted green areas to the general public. Much of its structure, content and philosophy can be used to understand how an upscaling of similar initiatives can be successful. The methods for involving citizens in the planning and implementation of Thinking Fadura may be beneficial for future projects that require public participation.

Lessons learned

- Participatory process during planning and implementation were necessary to anchor the practice with all involved stakeholders.
- To ensure a good fit between population and the implemented initiatives, it was required to involve all affected population groups.

Sports area and surroundings of Fadura, in Getxo. © Emilio P. Doiztúa

3.15 UrbanCyclers

RESPONSIBLE INHERIT PARTNER: CHARLES UNIVERSITY ENVIRONMENT CENTRE (CUNI)

SETTING/CONTEXT: PRAGUE AND OTHER LARGE CITIES IN THE CZECH REPUBLIC.

Background

Growing dependence on private cars and motorised transport damages people's health and wellbeing through air-pollution, noise, accidents, and sedentary behaviour. Motorised transport is also an important source of greenhouse gas emissions, and causes congestion and temperature rise, and puts pressure on green and urban space (33). This calls for interventions that can substitute motorised transport with more environmentally friendly modes of transport, such as cycling or walking. Active transport helps citizens increase physical activity and can subsequently lead to combat obesity, cardiovascular disease and diabetes.

UrbanCyclers is an urban cycling app for Android and iOS developed to promote regular biking. It focuses on supporting and motivating self-regulated behavioural change by providing various planning tools, feedback, rewards and experience sharing. Its key features include a cycling route planner (as of now with full coverage of five countries – Czech Republic, Poland, Germany, Austria and UK – and nine cities – Bratislava, Milan, Brussels, Copenhagen, Singapore, Sao Paulo, Rio de Janeiro, Bogota and Santiago de Chile), turn-by-turn navigation that allows biking to be combined with public transport and route tracking that is linked to a system of badges, challenges and rewards and community experience sharing. The routing engine is based on state-of-the-art artificial intelligence algorithms that allow preferences to be set for several criteria, including safety, comfort and speed. The app is also linked to the country-wide campaign *Bike to Work*, which targets employees and offers several competition categories, such as the number and total length of bike trips.

The UrbanCyclers app can be used for action planning (to plan the journey, find information, etc.), thus promoting the formation of an implementation intention. The UrbanCyclers app provides feedback on how users have successfully changed their behaviour, commends users for their good behaviour and gives a small reward in recognition. In these ways, the app can motivate the user to maintain the new behaviour. The digital mobility platform built around the app can also offer a wide variety of detailed data to city and transport planners, including heat maps and cycling path preferences, as well as capabilities to directly contact app users through push notification messages.

Cyclist in Prague, Czech Republic © Daniel Frank

OBJECTIVES OF THE INHERIT CASE STUDY

UrbanCyclers was chosen for inclusion in the INHERIT project due to its potential health and environment benefits. The intervention is easy to scale up or combine with other cycling practices, and has a clear emphasis on changing behaviour towards a healthier lifestyle.

This INHERIT case study focuses on improving the effectiveness of the UrbanCyclers app by conducting and investigating a randomised experiment with the UrbanCyclers smartphone app. One objective is to consider whether the app contributes to promoting active mobility and reducing the negative effects of sedentary lifestyle (behavioural change). Two types of motivational features, financial and social-psychological, are evaluated as triggers of self-regulated behavioural change based on a rigorous randomised design protocol. The study also draws attention to how and whether the intervention succeeds at including members from disadvantaged groups, and how it motivates the users to commence regular bike commuting. Next to studying the effects/outcomes of the intervention, the study aims to understand the processes of inter-sectoral cooperation involved in UrbanCyclers. A third objective is to understand the intervention within the context of existing policies on cycling, as well as how it works with the infrastructure. A sum of 10,000 Euros from the INHERIT project financed costs related to implementation and evaluation.

The activities during the INHERIT project include the implementation and evaluation of the intervention. The UrbanCyclers case study was developed and conducted by the CUNI team in close collaboration with Umotional (the developers of the UrbanCyclers app) and under the supervision of research teams at UCL, England (quantitative studies), RIVM, the Netherlands (qualitative studies) and NTNU, Norway (implementation studies). The mixed methods evaluation included: focus group interviews with stakeholders (Umotional, representatives from Prague Municipality and Rekola bike sharing) and a randomised experiment, including a survey and data extracted from the UrbanCyclers database.

MAKING THE LINK WITH THE INHERIT MODEL

UrbanCyclers targets individual behavioural change. UrbanCyclers is offering an app that focuses on supporting and motivating self-regulated behaviour change by providing various planning tools, feedback, rewards and opportunities for sharing experiences. This way, users' exposure to active mobility/physical activity and their contact with nature is increased.

Matters of motivation are addressed through pleasant design and by providing feedback on how users have successfully changed their behaviour, commending users for good behaviour, providing opportunities to share experiences and giving a small reward in recognition for their efforts. In addition, push notification messages make direct contact with app users possible. In these ways, the app can motivate

Cyclists in London, UK © Tomek Baginski

the user to maintain the new behaviour. The action contributes to skill and knowledge-building by providing a digital mobility platform built around the app that can offer a wide variety of detailed data to city and transport planners, including heat maps and cycling path preferences.

On the proximal pathway, health and well-being are potentially enhanced by increasing outdoor physical activity and decreasing sedentary behaviour. Equity might be improved by focusing on how the intervention succeeds in changing the behaviour of people facing socioeconomic disadvantages. On the distal pathway, if scaled up, greater sustainability may result from using bikes instead of cars to commute to and from work, which in turn reduces noise, CO2 emissions and pressure on global ecosystems.

Implementation

ACTORS AND SECTORS

UrbanCyclers involves several groups of actors: 1) the Umotional team (the developers of the UrbanCyclers app), 2) CUNI, through devising and analysing the randomised experiment and providing financial incentives to eligible participants, 3) partners donating in-kind rewards to winners of smart gamification competitions and 4) users of the UrbanCyclers app. The sectors involved in the project were, thus, the private sector (developers and donators), the public sector (university) and civil society (the users of the app).

As the UrbanCyclers project was selected as an INHERIT case study, the CUNI team (researchers from the Environmental Centre at Charles University

Cyclist in Madrid, Spain © Murillo de Paula

(CUNI)) initiated work with developing an intervention tied to the UrbanCyclers smartphone app. In collaboration with the Umotional team, researchers at CUNI contributed by developing a modification of the UrbanCyclers smartphone app and setting up a randomised experiment in connection with users' applications of the modified app.

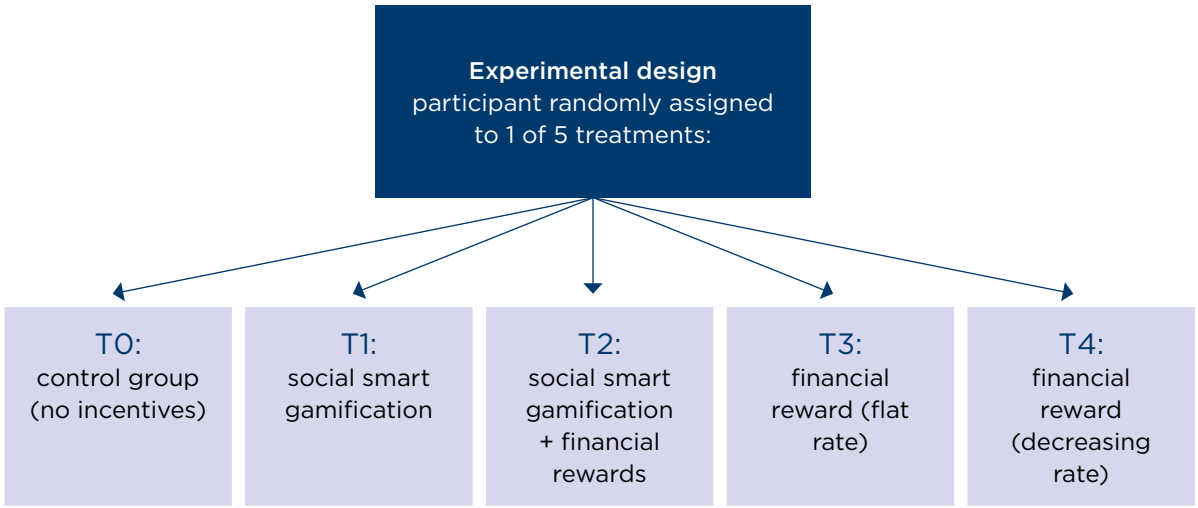
KEY ACTIVITIES

The UrbanCyclers app had already been introduced and implemented in the city of Prague when it was selected as an INHERIT case study. However, the INHERIT case study involved further developments of the UrbanCyclers app; thus, the main central activities involved the planning of new features or adjustments of the app. Several planning meetings were arranged between the Umotional team and the CUNI team; agreements were made with regards to activities, adjustments of the app, project coordination, document sharing, progress tracking and financial arrangement.

When the Umotional and CUNI teams came to an agreement, the next step involved programming the agreed-upon design features into the app's front end (screen features) and back end (database). CUNI also developed an online questionnaire that users of the app were requested to answer when the experiment was over. The Umotional team ran a pre-testing of the modified app and data transfers. The modified app was thereafter launched on the Google Play store.

Participants to the randomised experiment were recruited from amongst those who downloaded the Czech version of UrbanCyclers app from the Google Play store (new users). Initially, no specific promotion of the experiment was planned, but due to the very low observed conversion rate (i.e. enrolment into the experiment), an invitation to download the app and participate in a scientific project was posted to several websites and Facebook groups.

No specific quota was set for participants, but everyone who agreed to participate was randomly assigned to one of five experimental treatments (cf. figure). All the instructions related to the participation in the experiment (along with informed consent) were contained in the app.



Cyclist in Prague, Czech Republic © Daniel Frank

New users would agree to participate in the experiment, and they would contribute by recording their bike rides, competing for prizes, taking on challenges, collecting badges and commenting on the rides of others. App users enrolled within the first 14 days of the experiment were asked to provide feedback on participating in the experiment and their experiences with using the app.

Participants who were subject to earning a financial reward for each kilometre cycled to work or school (effectively in three of the experimental treatments; T2, T3, and T4), were offered either a flat rate of 1 CZK per kilometre, or a step-decreasing rate. The financial rewards were paid by CUNI, subject to the participant completing the final questionnaire and providing his/her contact details (including bank account number).

RESOURCES NEEDED

Time needed for implementation was a key resource for both the Umotional and the CUNI teams. Moreover, unique sets of knowledge and skills had to be constructed: programming, web design, project management and research. Financial resources were needed to remunerate UrbanCyclers developers for adapting the app for the randomised experiment and execution of (a substantial part of) the experiment, totaling 6,900 euros. Furthermore, as financial rewards were offered to the participants assigned to treatment groups (T2, T3, T4) of the experiment with financial incentives, the vast remainder of the budget was allocated for these remunerations.

FACILITATORS AND BARRIERS FOR IMPLEMENTATION

A main facilitator was a common background from the Czech Technical University (Umotional is a spin-off from Czech Technical University's Artificial Intelligence Centre), which provided a shared frame of reference and a shared vision for the project. Discussions were stimulating and efficiently moved the project forward. Communication ran smoothly, and responsibilities, tasks and deadlines were clearly specified.

Financial resources represented another important facilitator, crucial for conducting the experiment. The choice to modify an already existing UrbanCyclers app contributed to a less time-consuming process, thus time and money were saved, and the product could be made easily available to the general public. Without the UrbanCyclers app at hand, it would not have been possible to conduct the experiment with this design (or any design at all). Having a foundation of the UrbanCyclers app also simplified the recruitment process.

Not strictly a barrier, but time requirements were somewhat greater than originally envisaged by both teams, and some rearrangements were necessary (i.e. timeline postponement, streamlining of the experimental design). The planning phase, in particular, took more time than originally expected.

With limited experience with non-contractual payments (such as the participants' remuneration) at CUNI, it took some effort to find a procedure that allowed remunerations to be paid by means of a unilateral contract offer to prospective participants in the experiment.

The project faced a lower conversion rate of new app users to participate in the experiment than originally expected. Therefore, the major part of the experiment took place in spring 2019, one year later than originally planned. Perhaps this problem could have been avoided if more proactive advertisement strategies had been used in the recruitment of the participants. Advertising the opportunity to participate in scientific research could have been done from the beginning of the experiment.

The political climate and enforcements in regard to cycling may be seen to represent both a facilitator and a barrier to the success of the UrbanCyclers intervention. The National Cycling Strategy (2013) has set a goal to reach a 10% share of cycling in the modal split by 2020; in 'flat' cities, the number of cyclists is aimed to approach a 25% share in modal split. An updated concept of the development of the Prague Municipality's policy document "Prague cycling" (2014) has aimed to increase the number of cycling residents, equalise cycling as a regular means of transport and extend the cycling network by 200-500 km by 2020. There is a clear understanding that delineated and uninterrupted cycling infrastructure leads to improved safety and user comfort.

However, the development of cycling infrastructure lacks policy commitments, partly due to other priorities, a complicated regulatory framework with overlapping and clashing competences and less than optimal funding. Some plans have not materialised (e.g. municipal bike-sharing scheme) but are being developed by the private sector as start-ups (e.g. Rekola bike-sharing system, whose bikes are shown in the Prague map in the UrbanCyclers app).

Sports area and surroundings of Breda, The Netherlands. © Coen van den Broek

Cyclist in Copenhagen, Denmark © Justine Camacho

STRATEGIC FOUNDATION

The UrbanCyclers initiative is anchored in the general popular engagement towards healthier lifestyle(s), benefiting, to some extent, from existing policy commitments that prioritise the improvement of cycling infrastructure and initiatives that may increase the number of cycling residents.

The project is also finding its anchorage at a local level. Due to the common interest between Umotional team and stakeholders in promoting sustainable transport in Prague (i.e. Prague Municipality, Bike to Work campaign, Rekola bike-sharing system) and the efforts of developing a comprehensive and effective digital platform for sustainable and healthy mobility, the initiative has a strong anchorage in the local stakeholder group.

The initiative could also be considered well-anchored in the target group. The app has consistently received high ratings on Google Play, where users have often reported feeling engaged.

Transferring and scaling up

The app (and the entire surrounding digital platform) is easily transferable and scalable, and Umotional as a start-up is keen on expanding both functionality and territorial coverage. The basic functionality (maps, navigation and route tracking) can be expanded relatively easily and quickly, but to reap all the benefits of the full-fledged functionality of the platform, a working collaboration with local partners (including additional funding) is highly recommended. Local planners may be attracted by the wealth of data on cycling behaviour and the possibility to interact with users, providing an opportunity to explore additional ways to motivate users to cycle regularly (commuting).

Lessons learned

- Modifying an existing physical activity app was a cost- and time-effective approach to behaviour change.
- Efficient health promotion initiatives depend on political support and adequate physical infrastructures.
- There is a need for research on how technological features ‘work’ and what they produce (effects), since these have a potential to reach users very broadly.

CHAPTER 4
SUMMARY AND CONCLUSIONS

The health of a population depends upon an array of interconnected factors related to the social, natural and physical environments in which people live. Improving population health across the social gradient, therefore, requires actions on different levels of government and across sectors, including the private sector. To examine how sectors can cooperate to implement more "triple-win" solutions—that is, solutions that benefit the environment, health and equity—INHERIT has evaluated 15 case studies, which were selected based on their potential to achieve a "triple-win". The INHERIT Model has been applied to elucidate and assess the triple-win potential investigated in those case studies.

This section provides a summary of the INHERIT case studies, followed by a discussion of methodological considerations concerning the process of implementing the case studies. After presenting the results of an analysis of facilitators and barriers to that process, it closes by offering general conclusions on lessons learned concerning the transfer and scale-up of triple-win initiatives.

4.1 Summary

This report showcases the wide range of innovative interventions that have been subject to INHERIT case studies. For some interventions, innovation has involved applying technology to foster behavioural change in understudied populations – for instance, Lifestyle e-coaching in the Netherlands and Greece, as well as Urban Cyclers in the Czech Republic. These case studies offered mobile apps or personal tracking devices to people facing socioeconomic disadvantages. Innovative interventions in other case studies involved applying strategies to promote citizens' engagement and collective problem-solving skills, especially where such approaches remain relatively new (34). This was the case in Riga (Latvia) and Skopje (Republic of North Macedonia) where the Place Standard tool was used to engage citizens in participatory processes of place assessment. Other interventions positioned voluntary participants both as implementers of the interventions and members of the target group, as in Eco Inclusion and GemüseAckerdemie, both in Germany, and the Food Garden in the Netherlands. While participating in target groups, such volunteers worked to teach refugees, cultivate gardens with schoolchildren, grow crops and distribute produce. Some interventions also entailed combining services in new ways to generate more sustainable business models (e.g. the Food Garden combined welfare services with green initiatives), whereas others (e.g. PROVE in Portugal) supported new systems to lower the costs of food distribution and logistics.

Taken together, the INHERIT case studies highlight the variety of actions that can be taken to benefit the environment, health and equity in their respective populations. Although some interventions targeted individual behaviour directly – for instance, via education in Eco Inclusion and by introducing new technology in Lifestyle e-coaching and Urban Cyclers – most targeted change at broader levels of society. Some of those interventions targeted groups – for example, Sustainable Food in Public Schools in Spain, GemüseAckerdemie in Germany and Gardening with Green Gyms and Meat Free Monday in the United Kingdom. Other initiatives targeted entire communities, as in Thinking Fadura in Spain, the Malvik Path in Norway, the Place Standard tool in Latvia and the Republic of North Macedonia, Restructuring Residential Outdoor Areas in Sweden and Restructuring Green Space and the Food Garden, both in the Netherlands. Lastly, some interventions addressed policymaking, as in PROVE in Portugal, STOEMP in Belgium and Energy Efficiency Investments (analysed retrospectively) in the United Kingdom.

Each of the INHERIT case studies falls into one of seven categories, detailed in Table 2.

Table 2. Types of INHERIT case studies

Type	Description	INHERIT case studies
1.	Promising practices already in place were selected for evaluation. Local implementers executed and financed the intervention and INHERIT funded the evaluation.	• Gent en Garde/ STOEMP • Malvik Path • Restructuring Green Space • Food Garden • Restructuring Residential Outdoor Areas • Thinking Fadura
2.	New components were added to promising, well-established practices and evaluated. The local implementers were responsible for executing and financing the intervention and INHERIT funded the evaluation of the case study.	• GemüseAckerdemie • PROVE
3.	Promising practices already in place were combined to develop a new intervention. INHERIT partly funded the implementation of the intervention and the evaluation in the case study.	• Gardening with Green Gyms and Meat Free Monday
4.	Promising practices were transferred to new settings. INHERIT partly funded the implementation of the intervention and the evaluation in the case study.	• Place Standard
5.	Promising practices already in place were scaled up. INHERIT partly funded the implementation of the intervention and funded the evaluation of the case study.	• Sustainable Food in Public Schools
6.	A research study was designed to test theory with either primary data or secondary data. INHERIT funded the implementation of the intervention and the evaluation in the cases where primary data was collected.	• Lifestyle E-coaching (primary data) • Urban Cyclers (primary data) • Retrospective Analysis of Energy Efficiency Investments (secondary data)
7.	A new intervention was designed and implemented. INHERIT partly funded the implementation of the intervention and funded the evaluation of the case study.	• Eco Inclusion

4.2 Methodological considerations

The findings presented in this report are based upon qualitative data collected from INHERIT partners that provided details about the implementation of the INHERIT case studies. The collection of such data had a dual focus; INHERIT partners tasked with collecting data were asked not only to describe the intervention, its methods and aims but also, in the cases where implementations were taking place as part of the INHERIT project, to closely monitor the activities related to the intervention's implementation. A key source of input was a template designed by the research team at the Norwegian University of Science and Technology (NTNU) to gain insights into the objectives, key actors and sectors, activities, timeframes and resources of the interventions, as well as facilitators and barriers to their implementation. The template was sent to responsible INHERIT partners who filled the templates in cooperation with local implementers.

During data collection, obtaining the same level of detail about the implementation of each intervention across the INHERIT case studies proved to be challenging. Although roles and responsibilities of stakeholders were often clearly defined and joint activities (e.g. workshops and meetings) were thoroughly described, it became clear that capturing experiences from the field sometimes proved difficult. This is undoubtedly due to the diversity of the case studies, although other factors are also likely. For example, some interventions were implemented in tandem with other work obligations, which might have made it difficult to separate the activities related to implementation from other activities. Another possibility is that many responsible INHERIT partners were not directly involved in implementing case studies, which might have limited their capacity to provide detailed information about processes occurring in the field. In addition, since local implementers informed responsible INHERIT partners, who in turn informed members of the research team at NTNU who wrote the report, some information is likely to have been lost during the data collection process. Still other details might have gotten lost when being translated into English.

Even if none of these possible factors apply, contextual information can be difficult to present explicitly, and it is not always apparent which parts of a context should be highlighted and explained when reporting the case study. For example, detailing the policymaking climate or organisational structures related to city planning or cultural trends related to gender roles in a local context can be challenging. Nevertheless, such information is not only crucial to generate meaningful explanations of the output of interventions but also to enable readers to assess the external validity of the interventions, how the respective contexts compare to their situations and whether the interventions are worth adapting (35). In the case studies overall, addressing those challenges required efforts from all sides – responsible INHERIT partners, local implementers and the authors of the implementation report – in order to ensure meaningful descriptions of the implementation processes that took place.

4.3 Facilitators of and barriers to implementing interventions in the INHERIT case studies

Although it is beyond the scope of this report to elaborate on the outcomes of the case study evaluations, responsible INHERIT partners across the different types of interventions in all 15 case studies (i.e. Types 1–7, see Table 2) highlighted key aspects from their specific interventions to allow the identification of lessons learned and factors that could enable the scale-up or transfer of the intervention. Four facilitating factors of the interventions were identified: cultivating collaborative and trusting partnerships among local stakeholders, involving citizens (e.g. target groups and volunteers), securing political support, and being flexible with aspects of the local context.

Several case studies reported that engaging additional stakeholders could broaden awareness about and support for the intervention and strengthen the implementation process. Several other case studies emphasised that recognition and support from policymakers and local authorities could improve opportunities to scale-up and transfer interventions (e.g. Gardening with Green Gyms and Meat Free Monday and GemüseAckerdemie). Linking initiatives to policies was another aspect that implementers and INHERIT partners identified as possibly helpful in facilitating the transfer of interventions to larger contexts (e.g. Sustainable Food in Public Schools). Lastly, some of the INHERIT case studies reported that using information and communication technology would benefit scaling-up the initiative. In the case of Urban Cyclers, for instance, tailoring existing technology to meet the objectives of the initiative saved money and time, all while contributing to the scaling-up process.

Cultivating collaborative and trusting partnerships among local stakeholders

The active involvement and commitment of all stakeholders across sectors throughout the implementation process was highlighted as pivotal to the success of the interventions. For inter-sectoral initiatives to succeed, stakeholders should particularly focus on designing the interventions and their implementation and put a lot of effort into fostering good relations among all key stakeholders. Amongst the actions needed to cultivate a supportive context are frequent meetings, which can help to establish a common understanding amongst stakeholders of the intervention's overall mission and specific objectives. Eco Inclusion (Germany) and Urban Cyclers (Czech Republic), for example, revealed that established formal structures for cooperation and a shared history of previous collaboration are important factors of success, since they foster communication, a common understanding and a sense of ownership among stakeholders.

In the food policy-oriented STOEMP initiative in Belgium, collaboration among stakeholders facilitated additional sources of cooperation as stakeholders introduced their partners to the initiative and, in turn, broadened the initiative's reach. Similarly, in relation to the implementation of the Place Standard tool in Riga, the municipality facilitated connections between stakeholders and representatives from various municipal departments, institutions and policymaking groups, which allowed the project to attract considerable attention from regional and national authorities. Such results suggest that inter-sectoral, collaborative initiatives need to dedicate time to cultivating trust and good relationships among stakeholders. After all, stakeholders can supply knowledge, valuable structures already in place

for implementing interventions and access to wider networks of additional collaborators who can provide stronger institutional support and ensure greater impacts in local, regional and national contexts.

Involving target groups and volunteers

According to implementers of the interventions, including target groups and volunteers in the planning and implementation of initiatives is important. In corroboration, Kickbusch and Gleicher (36) have also argued that engaging citizens is crucial for ensuring that interventions meet the needs and wants of citizens. A review of the INHERIT case studies, however, revealed variation in how citizens were involved and in the length as well as strength of their engagement: from initial consultations with target groups (e.g. in Gardening with Green Gyms and Meat Free Monday, in which children engaged in planning by formulating the initiative's charter), to target groups sustained involvement throughout the planning and implementing process (e.g. in Restructuring Green Space).

In any case, the active involvement of citizens and target groups was a major facilitator of ensuring a good fit among the target population, the intervention and the local environment. In Spain, stakeholders in Thinking Fadura arranged participatory planning workshops with citizens in Getxo to plan the opening of a park and assess how the public would receive the intervention. For the Malvik Path in Norway, open meetings, population surveys and the media were used to gather citizens' input and ideas but also to provide transparency in the development process. In Restructuring Green Space in the Netherlands, target groups assisted prioritising and planning initiatives. This approach underlined the importance of taking their involvement and input seriously, to encourage engagement and motivation in the current and future interventions. Also in the Netherlands, the Food Garden project exemplified how engaging citizens in social projects can mobilise community-based resources from being relatively unorganised and unproductive into being more focused and productive. Participation in collective actions for healthy and sustainable local communities can contribute to empowerment through increased knowledge and skills, increased access to resources and improved opportunities for people to come together and establish social networks and trust. Among participants this can also provide a sense of ownership over the initiative. This form of participation can have considerable positive implications when it comes to the participants' sense of mastery over their lives and their health and well-being.

Securing political support

The INHERIT case studies suggest that securing political support for interventions can improve awareness about the underlying issues being addressed (e.g. health equity), community support and funding. In Restructuring Residential Outdoor Areas in Sweden, the implementers considered the fact that the intervention was part of a government-funded policy as a strength. Similarly, in Sustainable Food in Public Schools in Spain, stakeholders deemed it important to link the intervention to related projects and policies already in place in order to ensure a more coherent strategy for the implementation of the intervention. Strong political support can be especially pivotal if interventions generate debate in the local community by legitimising the interventions (37). According to Kingdon (38), initiatives achieve greater impact when strategic planning and their timing coincide with increased attention from politicians, policymakers and society in general in a so-called "policy window".

In pursuing stronger coordination among stakeholders, political support was also reported to be an advantage. In many case studies – for example, Gardening with Green Gyms and Meat Free Monday in the United Kingdom and GemüseAckerdemie in Germany – resources such as personnel, time and money were limited. Consequently, the implementation of the interventions required commitment from

partners in addition to their regular work commitments and extra time for planning and coordination. In those interventions, political support and political will to include school gardening programmes in the regular curriculum could probably have contributed to more favourable working conditions for teachers. Through their regulatory and funding power, politicians, policy makers and public authorities have the possibility to create favourable contexts for inter-sectoral initiatives.

Being flexible with aspects of the local context

Data provided by responsible INHERIT partners suggest the need to design interventions that are flexible and responsive to specific conditions in local contexts. In the case of PROVE in Portugal, the local structure of collaboration among local stakeholders directly affected how the initiative was implemented in different regions. In other case studies, timing emerged as a contextual factor that heavily influenced the implementation of the intervention. In the case of Sustainable Food in Public Schools in Spain, the timing of the implementation of the case study was ideal, since the newly appointed local government supported promoting healthy, sustainable diets among schoolchildren. The Milan Food Policy Pact was integrated into public policy in Madrid immediately prior to the start of the case study.

As other case studies revealed, the timing of interventions was less ideal. In Skopje, the timing of the implementation of the Place Standard tool went into the summer holiday season, which greatly decelerated the intervention. Similarly, Urban Cyclers in the Czech Republic had to commence in spring, immediately prior to the cycling season, and the case study was thus postponed for a year. To transfer and/or scale-up, attention to the specific context and the intervention's suitability to the context is vital (39, 40).

4.4 Conclusion

In pursuit of reaching the triple-win of health, equity and sustainability, the INHERIT partners have collaborated to implement and/or evaluate inter-sectoral policies or interventions in the areas of living, moving and consuming. From this report, it is evident that cultivating collaborative, trusting partnerships among local stakeholders, involving target groups, securing political support and adjusting the intervention to the local, political, social, economic and environmental context are required. It is especially important to engage and involve people from groups facing socioeconomic disadvantages, since it is often the most deprived, vulnerable and socially excluded groups in society that experience poorest health and greater environmental risks and burdens. Inter-sectoral collaboration should continue to be strengthened to obtain Health in All Policies, encourage sustainable behaviours and lifestyles and create required shifts in political, social and economic systems.

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APPENDIX 1 Abbreviations

Abbreviations

BC3	Basque Research Centre for Climate Change
BZgA	Bundeszentrale für gesundheitliche Aufklärung
CAF	Common Analytical Framework
CFIR	Consolidated Framework for Implementation Research
CSCP	Collaborating Centre on Sustainable Consumption and Production and Human Health
CUNI	Charles University Environment Centre
DPSEEA	Drivers, Pressure, State, Exposure, Effect Actions Model
FOHM	Swedish Public Health Agency
INHERIT	Inter-sectoral Health and Environment Research for Innovations
ISCTE-IUL	Lisbon University Institute
NTNU	Norwegian University of Science and Technology
Prolepsis	Institute of Preventive Medicine Environmental and Occupational Health
RIVM	National Institute for Public Health and the Environment
UAH	University of Alcalá
UCL	University College London, Health Equity Institute
UNEXE	University of Exeter Medical School, European Centre for Environment
WP	Work package

APPENDIX 2 Glossary

DISTAL (PATHWAY)*

The term distal pathway describes the pathway by which macro-level driving forces impact on health and wellbeing in other countries or regions (spatially distal) or later in time, perhaps after decades or even generations (temporally distal). Distal impacts can involve quite dramatic environmental changes in countries and regions beyond their borders, yet little or no perceptible change to the originating environment is experienced. It is hard for the public and policymakers to appreciate the full impact of these events in the countries where they occur, still less how they might matter, for their own residents and their health and wellbeing. Obvious examples of spatially distal pathways arise when distant countries are damaged by extreme weather events leading to flooding and drought, or from more long term environment degradation and conflicts over scarce resources. For INHERIT, the details of the Distal pathway are less important than the realisation that the way we behave when we live, move and consume in developed countries matters for others in lands beyond our borders and for future generations.

DOWNSTREAM MEASURES*

Individual-level intervention designed to change the behaviour of people who already suffer from a given risk factor (e.g., sedentary lifestyle, unhealthful diet). These interventions attempt to solve health and sustainability problems through the decision making of individual consumers. For example, providing training of self-regulation skills to promote healthy diets.

ENVIRONMENTAL AWARENESS*

Knowledge of the impact of human behaviour on the environment.

ENVIRONMENTAL HEALTH*

The state of the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards

EXPOSURE & EXPERIENCE (TO/OF ENVIRONMENT)*

Whether an individual is actually exposed to, or experiences, health-relevant characteristics (e.g. space for relaxation or activities) of the environment where they live is determined by many factors. Whilst some Exposures/Experiences are largely unavoidable for anyone living in a location, others may depend

on an individual's social or economic circumstances, the cultural environment, individual levels of mobility, or an individual's behaviour.

HEALTH*

A state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity. Health is multifaceted (enjoying good health is not simply about being physically healthy) and is a positive state (it is more than 'not being unwell').

HEALTH BEHAVIOUR*

A behavioural pattern that affects health. The effects can be positive (e.g. protecting, promoting, maintaining and restoring health) or negative (e.g. damaging health). While the behaviour of organisations often have major consequences for people's health, research and policy have focused on individual behaviour, and on health-damaging behaviours in particular (e.g. smoking cigarettes and drinking large amounts of alcohol). Many health behaviours – for example, dietary habits, patterns of physical activity and alcohol consumption - may not consciously be seen as health behaviours; they may, instead, be undertaken for other reasons.

HEALTH INEQUALITIES*

Differences in health status or in the distribution of health determinants between different population groups. For example, on average, children from poorer backgrounds will have poorer health across shorter lives than those from more advantaged circumstances, and people in richer countries will enjoy better health than those in resource-poor countries. The key difference between inequalities and inequities relates to the extent to which these inequalities are avoidable: whereas health inequalities may be attributable to biological variations or free choice, others may be attributable to the environment and conditions that are mainly outside of individual control, which may lead to uneven distributions that are unnecessary, avoidable, unjust and unfair. In this way, health inequalities can lead to inequity in health.

HEALTH INEQUITY*

Health inequalities that are considered both unfair and avoidable. Health inequities are differences in health status or in the distribution of health resources between different population groups, arising from the social conditions in which people are born, grow, live, work and age. Health inequalities between richer and poorer groups in society, and between wealthier countries of North American and Europe and the resource poor countries of Africa are examples of health inequities; they are widely regarded as unfair and avoidable.

HEALTH IN ALL POLICIES (HIAP)*

Health in All Policies (HiAP) is an approach to public policies across sectors that systematically takes into account the health and health systems implications of decisions, seeks synergies and avoids harmful health impacts, in order to improve population health and health equity. A HiAP approach is founded on health-related rights and obligations. It emphasizes the consequences of public policies on health determinants, and aims to improve the accountability of policymakers for health impacts at all levels of policymaking.

INTERSECTORAL*

Working with more than one sector of society to take action on an area of shared interest to achieve better results than those obtained working in isolation. Sectors may include government departments such as health, education, environment, justice, etc.; ordinary citizens; non-profit societies or organizations; and business.

INTERVENTIONS*

Human actions, including policies and strategies, to address specific issues, needs, opportunities, or problems. Interventions may be of legal, technical, institutional, economic, and behavioural nature and may operate at various spatial and time scales.

LIFESTYLE*

An identifiable pattern of behaviours woven into our everyday life. The behaviours that make up our lifestyle are often routine and habitual, undertaken without much conscious thought. They include behaviours that influence our health, for example, travel habits (car vs walking), eating habits (take-out pizzas vs homemade meals) etc. Lifestyles also have environmental effects; modern urban lifestyles are much more environmentally damaging than those associated with traditional agrarian communities.

LOCAL IMPLEMENTER(S)*

The actors responsible for the implementation of the initiative subject to an INHERIT case study

PHYSICAL ENVIRONMENT*

All of the abiotic (non-living) and human-created factors that act on a human or non-human organism, population or community, and influence its survival and development. Abiotic factors include sunlight, soil, air, water and climate; human-created factors include buildings, infrastructure such as roads, and pollution.

POPULATION HEALTH*

The overall health of a population or society (e.g. life expectancy of the population) and its social patterning (e.g. life expectancy of men compared to women, of low-income versus high-come groups). The term therefore refers to the health of groups of individuals, including the distribution of health within the group.

PRESSURE*

These are the pressures that are created by Driving Forces, which act directly to modify or sustain the Physical State of the environment in a location. For example, the introduction of CO_2 and particulate matter caused by our high levels of car use.

PROXIMAL (PATHWAY)*

The Proximal Pathway from Macro-Level Driving Forces to human health, wellbeing and equity deals with the relationships traditionally addressed in environmental health where the concern is with the environment, near in time and space and it's health, wellbeing and equity implications for those who live there.

PSYCHOSOCIAL*

Referring to the mind's ability to consciously or unconsciously adjust and relate the body to its physical and social environment.

PUBLIC HEALTH*

The term is used in two ways. Firstly, it is shorthand for the health of the public. Alternative terms, like population health, similarly refer to people as a group. Secondly, public health refers to 'what we, as a society, do collectively to assure the conditions in which people can be healthy'.

RESPONSIBLE INHERIT PARTNER*

Legal partner in the INHERIT project responsible for the local INHERIT case study management

SOCIAL ENVIRONMENT*

The social environment encompasses people's everyday social relationships and the wider cultural environment. It also includes the built environment, at home and in the workplace, as well as transport and communication networks. Looking beyond people's immediate surroundings, the social environment

includes labour markets and the wider social structure (e.g. inequalities related to social class, gender, and ethnicity) together with human services (e.g. education, healthcare, welfare).

SOCIAL DETERMINANTS OF HEALTH*

The circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. The World Health Organisation (WHO) notes that these circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.

SUSTAINABILITY*

A characteristic or state whereby the needs of the present and local population can be met without compromising the ability of future generations or populations in other locations to meet their needs. Sustainability is about both inter-generational equity (captured by 'environmental sustainability') and intra-generational equity (captured by 'social sustainability'). Sustainable development is about balancing both demands and not about sacrificing one entirely for the other.

SUSTAINABLE BEHAVIOUR*

Behaviour that minimises the negative impact of one's actions on the physical, social and economic environment.

SOCIAL GRADIENT*

The poorest of the poor, around the world, have the worst health. Within countries, the evidence shows that in general the lower an individual's socioeconomic position the worse their health. There is a social gradient in health that runs from top to bottom of the socioeconomic spectrum. This is a global phenomenon, seen in low-, middle- and high-income countries. The social gradient in health means that health inequities affect everyone.

UPSTREAM MEASURES*

Upstream policy and environmental interventions that do not treat problems after they occur but rather are designed to prevent undesired outcomes and maintain optimal lifestyles. Example include changes to the environment, such as the development of cycle path infrastructure or attractive public parks which through new environmental cues facilitate the development of new behaviours and habits.

WELLBEING*

A multidimensional concept covering physical, psychological, and social aspects of wellness. It includes the presence of positive emotions and moods (e.g. contentment, happiness), and the absence of negative emotions (e.g. depression, anxiety), satisfaction with life, fulfilment, resilience and positive functioning

WP LEADERS*

WP Leaders are respected international experts in their areas, working in well-established organisations. They will be responsible for:

- Managing the tasks of the WP to schedule, including quality deliverables and milestones.
- Financial management of their WP.
- Regular communication and reporting of progress to the Coordinator.
- Providing information for mid-term review and other periodic reporting.
- Organising and chairing/facilitating WP meetings.
- Ensuring the internal coherence of the WP and be in regular contact with WP partners.
- Making time to participate in notified activities of the External Evaluator.

* Glossaries collected from INHERIT Baseline Report: Staatsen, B., van der Vliet, N., Kruize, H., et al. (2017) INHERIT: Exploring triple-win solutions for living, moving and consuming that encourage behavioural change, protect the environment, promote health and health equity. EuroHealthNet, Brussels.