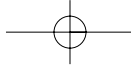




Engaging Communities

An evaluation of a community development model for tackling rural fuel poverty



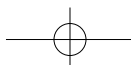


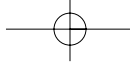
Engaging Communities. An evaluation of a community development model for tackling rural fuel poverty.

Jorun Rugkåsa, Niamh Shortt and Leslie Boydell

Institute of Public Health in Ireland

This evaluation was carried out on behalf of Armagh and
Dungannon Health Action Zone





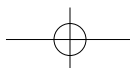
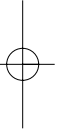
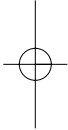
Engaging Communities. An evaluation of a community development approach to talking rural fuel poverty.

Prepared by: Jorun Rugkåsa, Niamh Shortt and Leslie Boydell, Institute of Public Health in Ireland.

Published by the Armagh and Dungannon Health Action Zone.

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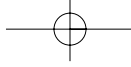


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ACKNOWLEDGEMENT

We would like to acknowledge and thank a number of people and organisations for their help and support in conducting the evaluation and preparing this report.

Joan Lewis of the Armagh and Dungannon Health Action Zone (ADHAZ) assisted in many aspects of the data collection, and her contribution proved invaluable to our understanding of the project.

Aughnacloy Development Association Ltd. and Darkley and District Community Association contributed greatly through their facilitation of the research in the two project areas. Their enthusiasm and energy is very much appreciated.

We would like to thank Willowbank Surgery in Keady and Dr. McCord's surgery in Aughnacloy for their assistance in pulling out data from their records. Thanks also to Donal McDade (SMR Research) and Research and Evaluation Services who carried out the post-intervention survey and to Bill Sheldrick who undertook the temperature monitoring.

We would like to thank Eleanor Gill, Aodhan O'Donnell and Paula Tally (ADHAZ), Majella McCloskey and Andrea Heaney (NEA NI) for their support and advice throughout the research process. Thanks also to Edel Skelton (ADHAZ) who accommodated all our requests for old files and information. At the institute of Public Health we would like to thank Rachel McEvoy, Jane Wilde and Lesley McAskie for their comments on various drafts of this report, and Kevin P Balanda who was part of the team that initiated the research and produced the evaluation framework. Kevin also contributed considerably to the development of the post-intervention questionnaire and to the analysis of survey data.

Our greatest thanks go to all those who agreed to be interviewed as part of this evaluation. To get the views of people engaged at all levels, from those having energy efficiency measures installed in their houses to those who produce governmental policies on fuel poverty, has been hugely instructive for our understanding of the mechanics and outcomes of the project. All the views expressed in this report are, however, the authors'.

EXECUTIVE SUMMARY

FUEL POVERTY

Fuel poverty occurs when a household needs to spend more than 10% of their income to maintain an acceptable level of temperature throughout their home (Boardman, 1991; DSD, 2003). It is a result of the relationship between household income, energy efficiency of the dwelling and fuel prices. Currently 203,000 households in Northern Ireland live in fuel poverty. People experiencing fuel poverty frequently live in cold, damp houses and there is increasing evidence suggesting that living in such conditions can have an adverse impact on health (National Heart Forum, 2003). The consequences of fuel poverty, which include social exclusion, ill health, poor well-being and general feelings of helplessness, extend beyond individual health and impact on a range of issues such as educational achievements, community health and public services, to name a few. Fuel poverty is therefore a social issue.

BACKGROUND TO THE “HOME IS WHERE THE HEAT IS” PROJECT

In 2000, Armagh and Dungannon Health Action Zone (ADHAZ) instigated a pilot programme to establish a model for tackling energy efficiency in a rural context. The project involved the installation of central heating systems and other energy efficiency measures in homes in the ADHAZ area. The project, entitled “Home is where the heat is”, was funded by Northern Ireland Electricity (NIE) and the Department for Social Development (DSD) and was implemented in partnership with 21 organisations, including local community groups. The overall aim of the project was:

“To develop and deliver innovative, sustainable community-wide energy efficiency improvement programmes in partnership with key agencies and the community within the HAZ area. As a result, to increase energy efficiency awareness and increase uptake in grants and schemes available in all housing sectors and to reduce the adverse effects on health and wellbeing caused by cold homes particularly for those most likely to experience fuel poverty such as the old, disabled, infirmed, low income families and children” (ADHAZ, 2000:6-7).

Two communities were selected as project areas: Aughnacloy in County Tyrone and Darkley in County Armagh. The installations of energy efficiency measures were carried out from summer 2000 to autumn 2002. Some 65 households received a “total solution” (i.e. central heating, roof and wall insulation as well as other energy efficiency measures, including selected electric appliances). An additional 224 households received some of these measures (“partial solution” households) and 88 households that participated in the survey were not eligible (“non-intervention” households).

The Institute of Public Health in Ireland (IPH) began an evaluation of the project in 2002, focusing on two main strands:

- Health and economic outcomes for households
- The project mechanisms, including partnership working and community development

HEALTH AND ECONOMIC OUTCOME FOR HOUSEHOLDS

Comparison between pre-intervention and post-intervention data across the three intervention groups identified some changes in relation to house conditions, household economy, perceived health and use of health services:

- There was an overall increase in benefit uptake. The increase was statistically significant for non-intervention and partial solution households. The total income in these households may therefore have increased as a result of the project
- Although some total solution households are still relatively cold after intervention, temperatures are now spread over a narrower range, indicating better control of heat. It may be the case that as people become more familiar with their new system and how it impacts on household economy, they may increase indoor temperature
- Satisfaction with indoor temperature increased significantly for total solution households after the heating systems were installed
- The presence of condensation, mould and damp decreased significantly in the total solution houses after intervention
- The mean number of illnesses reported per head in the total solution households decreased significantly in the after intervention period
- The mean number of reported health service visits for total solution householders fell significantly in the post-intervention period
- Through in-depth interviews, total solution householders reported considerable improvements in comfort and high levels of satisfaction with the programme

PROCESS OUTCOMES

When assessing the process of the project, the issues identified as central to its success were: (i) effective partnership working; (ii) the application of community development approaches; and (iii) the existence of an adequate support structure.

Partnership working

Key factors identified as contributing to the success of the partnership were:

- The constitution of the partnership, which included all relevant stakeholders; this meant that the partnership had the necessary skills, knowledge and expertise to make decisions
- The trust that was built up between the partners; this allowed for flexibility

in making difficult decisions and for individuals to carry out work between meetings

- The strong influence of community representatives on decision making, which ensured that the project was embedded in the local communities

Community participation

The participation of the local communities was an integral part of the project plan and was identified by partners as having been central to its delivery and achievements:

- Community development approaches and the values underpinning community development (i.e. that local needs and solutions must be addressed through a community-led approach) were evident throughout the process
- Community representatives stated that they had been treated as full partners and that the project had been guided by their knowledge of the local area. The participation of the community groups may have been facilitated by the very local nature of the project with tangible benefit for the communities (i.e. improvement to the houses of members of the community)
- The community groups reported that their relationships with the communities and partner organisations from all sectors had strengthened during the project process. This may impact on future work, which in turn may facilitate further building of trust and relationships locally

Support structures

Community development approaches require support. The support structure developed for the project was identified as essential for the project's success. This included:

- A full time Community Energy Advisor dedicated to the project
- Continuous support through the communications between the communities, the community associations and the other partners
- Continuous support for the project recipients throughout the process of change
- Facilitation in the building up of trust between members of the community and the project team

Policy outcomes

Part of the project's overall objectives was to identify and capture learning outcomes and to feed this into policy making. The project partners were of the opinion that the project had been successful in engaging policy makers and impacting on current policy making processes.

RECOMMENDATIONS

Recommendations for fuel poverty programmes

It is recommended for future schemes to tackle fuel poverty or energy inefficiency that:

- Community development approaches, facilitating full participation of local people and community groups, are central to programme planning and implementation
- Effort and emphasis is placed on building good working relationships and the development of trust between all stakeholders
- A flexible “people centred” approach is applied, which takes into account the circumstances of individuals and households
- Adequate support structures are established with personnel dedicated to the implementation of the project on the ground
- An area based approach with a locally focused partnership is adopted
- Structures for evaluation of project processes and outcomes are built into the project and that such evaluation runs in parallel with the project
- Projects should include benefit checks to maximise uptake and increase household income
- Careful consideration is given to eligibility criteria. The use of benefit uptake may not be a suitable indicator. Further work is needed to take into account the outcomes for specific population groups such as lone parents or people on low incomes just above the benefit threshold
- Links with the health sector are developed in order to raise awareness and assist the health sector in identifying people in fuel poverty and providing householders with information

Recommendation for research into fuel poverty and health

In order to contribute to the evidence base on the links between fuel poverty, energy efficiency interventions and health, it is recommended that research should:

- Ensure consistency in the collection of all pre- and post-intervention data. Ideally the same researchers or trained volunteers would be involved at each stage
- Collect income data before and after intervention in order to determine which households have been lifted out of fuel poverty and which have not in order to facilitate analysis of the relative importance of income in the production of fuel poverty
- Give considerable thought to the collection of medical data. To ensure the usefulness and quality of the data collection process, continuous work is needed in co-operation with local health organisations and GP surgeries. Pre- and post-intervention surveying should include standardised health questions collected in a systematic way, which could facilitate comparison

across different intervention areas. Such surveys should also be repeated several years after intervention to assess long term health impacts

- Conduct temperature monitoring before and after interventions, and that the post-intervention monitoring is repeated 12-18 months after intervention in order to assess longer term changes in heating patterns once the householders are accustomed to the new system and the costs involved

Recommendations for fuel poverty policy development

Based on the outcomes of the evaluation it is recommended that future policy developments take account of:

- The importance of the involvement of local people in the planning and implementation of policies that affect them
- The complex relationships constituting fuel poverty, which require co-ordination across the areas of responsibility of government departments
- The level of poverty suffered by large population groups in Northern Ireland, which has a significant impact on levels of fuel poverty. As shown in this report, some households live in fuel poverty even after having received total solution energy improvements to their house. It is essential to link the issue of fuel poverty to anti-poverty strategies
- The need for a high-level body that can draw together the experiences from a range of energy efficiency programmes and inform future policies. This should include support for co-ordinated fuel poverty research across different areas to ensure sample sizes that are large enough to draw conclusions at population level regarding links between energy efficiency interventions and health
- The opportunities represented by initiating a cross-border fuel poverty intervention and research related to rural fuel poverty. In light of the development towards an all-island energy market, this might be an opportune time for such work

INTRODUCTION

THE EFFECTS OF FUEL POVERTY

Fuel poverty occurs when a household needs to spend more than 10% of its income to heat their home to an adequate level of comfort and warmth, and is a result of a combination of behavioural, material and cultural factors (Boardman, 1991, DSD, 2003). These factors include age and condition of the property, type of heating system, level of income, people's knowledge and awareness of energy efficiency and fuel prices. The consequences of fuel poverty are severe and impact on every member of the household. Moreover, such consequences, which include social exclusion, ill health, poor well-being and general feelings of helplessness, extend beyond the individual households and impact on a range of issues such as educational achievements, community health, public services, to name a few (National Heart Forum, 2003). Fuel Poverty is therefore a social issue.

Rural fuel poverty is of particular concern. In rural areas service decline and the lack of affordable housing are exacerbating social exclusion. However, popular concepts of the "rural idyll" can mask the levels of rural poverty and add to the challenges faced by rural communities when trying to identify and eradicate the causes and consequences of poverty.

In Northern Ireland the emerging fuel poverty strategy emphasises the importance of working in partnership across sectors, to target and tackle fuel poverty. Elements identified to reach these targets include many that are discussed in this report, such as maximising income and improving the energy efficiency in the housing stock. The multi-agency partnership approach in conjunction with community development approaches taken in the intervention reported on here, stands as an example of good practice in tackling fuel poverty and the myriad of factors that contribute to it.

THE "HOME IS WHERE THE HEAT IS" PROJECT

Project aims

Through ADHAZ's Housing Programme, the "Home is where the heat is" partners sought to identify and address some of the issues resulting from fuel poverty and affecting health and quality of life. The aim was to tackle fuel poverty through improving energy efficiency of houses and to increase household income by encouraging uptake of benefits. Two communities were selected as project areas: Aughnacloy in County Tyrone and Darkley in County Armagh. The installations of energy efficiency measures were carried out from summer 2000

to autumn 2002. Some 65 households received a “total solution” (i.e. central heating, roof and wall insulation as well as other energy efficiency measures, including selected electric appliances). An additional 224 households received some of these measures (“partial solution” households) and 88 were not eligible (“non-intervention” households). The project was delivered through a partnership approach in close co-operation with local communities. Investigating the link between fuel poverty, energy efficiency and health was also a key focus. The specific aims and objectives for the project are listed in chapter 3.

Project mechanisms

The mechanisms identified to reach the project’s objectives included partnership working and community development. This is consistent with developments within public health across Europe with a shift towards a social model of health that takes into account the wider determinants of health (Katz *et al.*, 2000). Since many of these determinants relate to factors that are the responsibility of more than one agency or organisation, working in partnership has been identified as an important delivery mechanism. Individuals and communities are increasingly being encouraged to take an active part in the maintenance of their health and well-being, and emphasis is placed on taking into account the perspectives of service users and communities. In terms of engaging communities in such planning and provision of services, community development approaches have been identified as crucial (DHSS, 1999; CDHN, 2000).

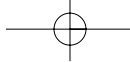
Project evaluation

It was emphasised in the project initiation phase that the learning derived from the project should be captured and used to impact on public policy related to fuel poverty. Evaluating the process and outcomes was therefore part of the project’s objectives. The main aims of the evaluation include:

- Identifying project outcomes, including benefits to households and communities
- Assessing the partnership and community development approaches taken

Structure of the report

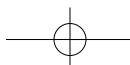
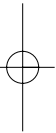
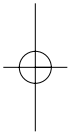
Each chapter of this report focuses on a particular aspect of the evaluation and as such they can all be read separately. The first chapter contains a review of the literature on fuel poverty and health as well as the policy context into which both the project and the research can be placed. Chapter 2 describes the methodology used in the evaluation. The evaluation assesses the overall project model and the key delivery mechanisms: these are all outlined in chapter 3, which also explores how the project evolved. Initial impacts and outcomes for householders are described in chapter 4, which uses information from both pre- and post-intervention surveys carried out with householders. In addition, qualitative data derived from in-depth interviews with householders are used.

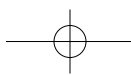
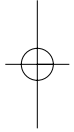
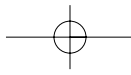


The partnership approach is discussed in chapter 5, which presents and analyses data from interviews with a range of partners. Key factors that contributed to the success of the partnership model are identified, with a particular emphasis on the levels of trust that evolved among partners.

Community participation was pointed out by all stakeholders as paramount to the success of the project. There were some indications of improved community relations which may have a longer term impact on the health of the community members. The community development approaches applied in the project are assessed in chapter 6. Chapter 7 outlines what the partners identified as the key policy outcomes of the project, as well as the main successes, challenges and learning points that can be taken from it.

Finally, in chapter 8 findings from all the different aspects of the evaluation are summarised, and three sets of recommendations are presented focusing on: (i) future fuel poverty projects; (ii) research focusing on fuel poverty and health; and (iii) future fuel poverty policy development.

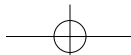
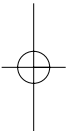
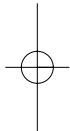






Chapter 1

Fuel Poverty in the Literature and Current Policy Development



Chapter 1

FUEL POVERTY IN THE LITERATURE AND CURRENT POLICY DEVELOPMENT

The “Home is where the heat is” project aimed to improve health and well-being by increasing energy efficiency and household income. It was also anticipated that the learning derived from the project would be used to impact on policy making in this field. This chapter provides some background information, including an outline of the evidence base on the links between fuel poverty and health and the policy environment within which the project was developed and implemented.

1.1 LITERATURE REVIEW

1.1.1 The causes and costs of fuel poverty

Fuel poverty has been defined as the inability to obtain adequate energy services for 10% of household income (Boardman, 1991) and is a consequence of the complex relationship between income, energy efficiency of the home, behavioural factors and fuel prices. The relative significance of these factors are frequently discussed. It has been suggested that energy efficiency is particularly important as *“few people choose to live in cold, damp homes that they cannot afford to heat well enough to protect their health. Yet for millions of British households this is the reality of poor quality housing, inefficient heating systems and inadequate building insulation standards stretching back over generations”* (Olsen, 2001:748).

Although a growing number of studies have been carried out on the relationship between fuel poverty and health (see Chesshire, 2002 for a comprehensive list of the literature), no clear evidence has been established regarding the causal pathways. Due to a lack of controlled intervention studies, it has been difficult to isolate the confounding social, cultural and behavioural factors that may be contributing to health. For example, it is difficult to isolate passive smoking from the effects of a cold, damp home on asthma prevalence.

The cost of cold related illnesses to the NHS has been estimated at £1 billion annually (Brady, 2001), with an estimated cost in Northern Ireland at approximately £21 million per year (NEA, 2004). Research has indicated that the savings to the NHS alone from housing improvement schemes would exceed the annual costs of such improvements (MacKenzie *et al.*, 1999).

The impacts of fuel poverty on health have generally been divided into two categories in the literature: the effect of low indoor temperature (cold homes) and the effect of condensation, damp and mould (CDM).

1.1.2 Cold homes

The associations between cold homes and health include increased risk of respiratory illness, increased blood pressure and risk of stroke, worsening arthritis, more frequent accidents in the home, social isolation, impaired mental health, and adverse effects on children's education and nutrition (National Heart Forum, 2003). In addition, self reported health is often poorer amongst those living in cold homes with illnesses such as circulatory diseases and respiratory illnesses being frequently reported (DTI/DETR, 2001; Moore *et al.*, 2000). To counteract these effects the World Health Organisation has suggested that homes should be heated for 8 hours a day with living rooms being heated at 18°C and all other rooms at 16°C (WHO, 1990). Research by Collins has found that below 16°C the susceptibility for respiratory illnesses increases. It is believed that temperatures below 12°C may have effects on cardiovascular disease and below 5°C there is a significant risk of hypothermia (Collins, 2000).

Excess winter deaths (EWD) are calculated by identifying the difference in numbers of deaths between the winter quarter and the average of the other three quarters of the year. According to the Office of National Statistics, the number of excess winter deaths in the UK in 2002/03 was 24,000. Proportionate to population size, this is far in excess of countries such as those in Scandinavia, who have a much colder climate (Wilkinson *et al.*, 2001). In Northern Ireland the Department of Social Development (DSD) estimates that winter deaths linked to temperature in pensioners' homes stand at approximately 1,360 per year. These deaths, however, are not distinguished between those linked to outdoor and those linked to indoor temperatures (Casson *et al.*, 2002).

The principal causes of EWDs are circulatory and respiratory illnesses. Although there is no direct evidence that cold homes cause such deaths, it has been suggested that *"taken as a whole, the [evidence base] suggest a credible chain of causation which links poor housing and poverty to indoor temperatures and cold related deaths"* (Wilkinson, *et al.*, 2001: 2). To quantify such a relationship, a wealth of information on the housing stock is required, such as thermal efficiency, insulation type and mortality statistics of inhabitants. In a study of the geographical variation of EWDs in the south east of England, Wilkinson *et al.* (1998) found that the proportion of homes without central heating was one of the strongest predictors of the variation in EWDs.

Although it is known that the majority of EWDs are due to circulatory diseases, Collins (2000) argues that deaths from respiratory diseases are more strongly related to indoor temperatures than those from circulatory diseases. From 1976 to 1983, circulatory diseases caused 55% of EWDs and 52% of non-winter deaths in Britain, whereas 33% of EWDs and 16% of non-winter deaths were caused by respiratory diseases (Ibid). Therefore, respiratory illnesses have a greater proportional effect during winter. In addition, while respiratory mortality has declined in parallel with a general improvement in the heating of homes (for example through the introduction of central heating), excess cardiovascular mortality has not fallen accordingly. Moreover, Hyndman (1990) found a close association between “hidden asthma” and low indoor temperatures.

Given the impact of cold stress on EWD, it has been argued that measures to reduce cold stress, including thermal efficiency of homes, offer the greatest opportunity to reduce EWD (Donaldson and Keatinge, 2002) and to gain health benefits (Archer, 2002).

1.1.3 Damp homes

Damp is one of the most common health hazards associated with poor housing and is largely a result of poor insulation and inadequately heated homes. Research has suggested links between dampness and mould growth in dwellings and ill-health among its occupants (International Energy Action, 1991). The house dust mite that thrives in mouldy, damp conditions is considered a causal agent for asthma and other allergic diseases (Ibid.).

In addition to allergic diseases, dampness has been associated with vomiting, headaches, anxiety and depression (Revie, 1998). In Northern Ireland, Blackman *et al.* (1989) found that damp homes increased levels of ill-health amongst householders. Further evidence suggesting a clear relationship between severity of dampness in the home and the level of ill-health among householders is provided by Platt *et al.* (1989).

In a case-control study of links between damp housing and asthma, Williamson *et al.* (1997) confirmed dampness in 64% of dwellings with asthmatic subjects compared to 41% in the control group. The relationship persisted even after controlling for socio-economic and other confounding variables. The researchers also found that the greater the severity of dampness or mould in the home, the greater the severity of asthma.

1.1.4 Child health

Approximately 15-20% of fuel poor households in the UK are families with children (DTI and DEFRA, 2001). This has potentially serious consequences for

the health of the children living in these homes. Revie (1998) found that asthma prevalence amongst children living in cold, damp homes was two and a half times that of those living in damp free homes.

Case control studies have shown associations between damp and mouldy housing and respiratory symptoms in primary school children (Williamson *et al.*, 1997). This relationship, however, is not repeated for those under five (Lindfors *et al.*, 1995), or in children of an unspecified age (Geoghegan *et al.*, 1994). Assessing the effectiveness of the elimination of damp and mould from homes in Glasgow, Hopton and Hunt (1996) concluded that although the health effects were small, they were very positive. It was stated, however, that improvements to the house alone could not improve the health of children living in highly deprived areas or reduce the associated health inequalities (*Ibid.*).

1.1.5 Fuel poverty and the elderly

Standard Assessment Procedure (SAP) ratings measure a range of factors relevant to the energy efficiency of dwellings and give the dwellings a score on a scale where 100 equals the highest and 1 equals the poorest such efficiency. In the 1991 English House Conditions Survey lone pensioners, who were private tenants, were amongst the groups with the least energy efficient dwellings, with an average SAP rating of just 11. In other housing sectors a quarter of those aged over 75 were living in houses with SAP ratings below 20 (Wilkinson, 2001). These findings emphasise the risk of fuel poverty among the elderly. Rudge (2000) showed that respiratory disease in the over 64-year-old age group in Newham correlated with an index of fuel poverty risk. Rudge concluded that the ability to afford heating, the age and size of household and the size of the property were all factors relating to the risk of fuel poverty and its impacts on health.

The prevalence of EWDs is associated with age and those over 65 are most at risk (Goodwin, 2000). Studies have shown that room temperatures for the elderly below 15°C have an influence on cardiovascular health and have recommended that this should be the minimum temperature maintained in the homes of the elderly (Collins, 1986). The British Geriatric Society recommends higher levels of heating for the elderly and proposes that their homes should be heated for 16 hours a day at 20°C in the living room at 18°C in all other rooms (Lowry, 1991).

1.1.6 Mental health and well-being

The link between psychological well-being and poor housing was emphasised in the Black Report (Black *et al.*, 1982). It is known that cold housing is associated with anxiety, headaches and general feelings of emotional distress. In Khanom's study of the Tower Hamlets area of East London it was found that depression

affected two thirds of the sample and that 22% of the children were reported to have tantrums, which were explained by the houses being either too cold or too warm (Khanom, 2000). The mental health consequences of cold, damp homes have been emphasised by Lowry (1991).

In some cases poorly designed homes can force people to live in cold, damp, properties with little or no space for children to play, which may cause emotional distress, depression and anxiety (Arblaster and Hawtin, 1993). In-depth interviews with housing professionals, specialist agencies and front line advice workers found that impacts of fuel poverty on mental health were frequently reported (Houghton and Brown, 2004). One professional commented, for example, on how an elderly man was afraid to open his living room doors through fear of losing valuable heat from the room and that this was having negative effects on the man's experience of well-being and social inclusion.

1.1.7 Fuel poverty in rural areas

The prevalence of fuel poverty is higher in rural areas (ADHAZ, 2002). In Northern Ireland a contributing factor is the lack of access to gas networks and the high proportion of older rural homes without adequate insulation. It has been calculated that lack of access to gas in many rural areas in Britain means that such rural households typically spend 40% more on their total energy use when having to use electricity instead (CSE, 2001). In rural areas there is a lack of affordable, good quality housing and housing has been identified as a key driver of rural social exclusion (Ibid.).

1.1.8 Fuel poverty interventions

Energy efficiency improvements make it easier for people to control their heat, thus generating higher levels of satisfaction amongst occupants. Little research has been carried out into the effects of interventions on health. However, the research that has been conducted has concluded that energy efficiency interventions improve people's health and often lift people out of fuel poverty.

In Sheffield a study was carried out with the aim of exploring the links between living conditions and health status. A self-assessed health status questionnaire (SF 36) was used and the research reported significant differences between reported longstanding illness and disability in dwellings that were improved as a result of intervention compared to unimproved dwellings. On all eight dimensions of the SF-36 measures of health status questionnaire, the improved group had higher mean scores. However, it was impossible to conclude that the difference was due to the improvements made in the dwellings (Green *et al.*, 2000).

In a housing project in Cornwall, 98 homes received some form of intervention: gas central heating was installed in nearly half the dwellings, a third received electric storage heaters and the remaining had solid fuel or oil fired heating installed. As a result of the interventions energy efficiency improved in 62% of houses, and after intervention only 14% of children's bedrooms were unheated and 14% suffered from damp compared to 90% and 60% respectively prior to intervention. Further results from this research showed that school aged children lost significantly less time from school due to asthma after the intervention (MacKenzie *et al.*, 1999). Sommerville *et al.* (2000) calculated that the average annual saving per house in the Cornwall study to the NHS was £499.56. Peters and Stevenson (2000) quantified the additional level of use of health service in England related to housing conditions, and estimated that annual cost savings of £77.24 million could be made to the health services if all homes were made energy efficient.

1.1.9 Summary

Although substantial research has been carried out exploring the causes and consequences of fuel poverty, relatively little research has been conducted that examines the effect of energy efficiency interventions on health and well-being. What research has been carried out in this area concludes that energy efficiency interventions have potential to improve health and well-being even if clear causal pathways have not yet been established. The fact that poor housing is only one factor in a multidimensional definition of deprivation, makes it difficult to isolate possible confounding factors related to both the cultural and physical environments.

1.2 POLICY CONTEXT OF THE “HOME IS WHERE THE HEAT IS” PROJECT

1.2.1 The UK Fuel Poverty Strategy

The link between cold, damp and mouldy housing and ill-health was recognised and placed on the UK government's public health agenda by the Acheson report: *“We recommend policies which aim to improve the quality of housing. Specifically we recommend policies to improve insulation and heating systems in new and existing buildings in order to reduce further the prevalence of fuel poverty”* (Acheson, 1998: 89).

The concern with the effects of fuel poverty was reflected in policies such as the Winter Fuel Payments introduced in 1997. However, given the complex relationships that constitute fuel poverty, a more systematic and strategic approach was needed. An Inter-Ministerial Group on fuel poverty was set up in 1999 to oversee the development of a UK Fuel Poverty Strategy. Following

public consultation, this strategy was launched in November 2001 (DTI and DEFRA, 2001). The strategy acknowledges that the impacts on health are the most direct effects of fuel poverty. Seeking to end fuel poverty among vulnerable households (identified as older people, children, and people with a disability or long term illness) by 2010, the strategy sets out specific interim targets for each of the UK regions. The targets for Northern Ireland include assisting 40,000 fuel poor households by 2006 through the Warm Homes Scheme and various partnership programmes (DTI and DEFRA 2001).

1.2.2 The Domestic Energy Efficiency Grants Regulations (Northern Ireland) 2002

The Domestic Energy Efficiency Grants Regulations (Northern Ireland) 2002 replaced the previous regulations from 1994. The new regulations enable the Department for Social Development (DSD) to provide grants to improve energy efficiency for people on low income and people in receipt of benefits relating to poor health. The regulations set out the conditions, management and eligibility for such grant schemes as Warm Homes and Warm Homes Plus.

1.2.3 The Warm Homes Scheme

The Warm Homes and Warm Homes Plus Schemes were launched in July 2001. They are managed by the Eaga Partnership, a company dedicated to working to improve energy efficiency in low income households. The Warm Homes grant provides a package of energy efficiency measures (worth up to £750) and advice to households. The scheme is aimed at owner occupied households and those renting on the private market. To be eligible, households must be in receipt of certain benefits.

Warm Homes Plus is aimed at those over 60 years of age and offers installation of central heating in addition to the measures available through Warm Homes (up to the value of £2700 in total). In addition to the criteria for Warm Homes, eligibility for Warm Homes Plus includes being in receipt of a wider range of benefits and must include a disability premium. An interim evaluation of the scheme was carried out by NEA (NI) in 2003.

1.2.4 Investing for Health

The current public health strategy for Northern Ireland, Investing for Health (IfH), was launched in 2002 (DHSSPS, 2002). IfH recognises the link between fuel poverty and health, and aims to lift 8,000 vulnerable households out of fuel poverty annually. It expects that:

- 20,000 homes will have benefited from Warm Homes by December 2004
- 40,000 households will have been assisted by 2006 through the Domestic Energy Efficiency Scheme (DEES) and associated partnership programmes

- Information and advice will be available to the public through a “Keep Warm Keep Well” campaign and other local campaigns
- There will be a 34% improvement of the energy efficiency of the NIHE’s housing stock over the decade following the launch of the strategy

IfH considers community development approaches to be essential in reaching its targets. The strategy is implemented through IfH partnerships, which were established in 2002 in each of the four Health and Social Services Board areas, and work in close association with the Health Action Zones.

1.2.5 Towards a fuel poverty strategy for Northern Ireland

In November 2003, DSD published a draft fuel poverty strategy for Northern Ireland for public consultation (DSD, 2003). The document emphasises the importance of working in partnership, across sectors, in order to target and tackle fuel poverty and identifies as a specific target the eradication of fuel poverty by 2016. The elements identified to reach this target include carrying out, in close co-operation with identified organisations, the following activities:

- Raising public awareness of the key issues
- Safeguarding the interests of energy consumers
- Promoting domestic energy efficiency
- Direct advice to the public on energy matters
- Maximising the incomes of vulnerable people or those at risk of fuel poverty
- Improving the quality of energy efficiency on Northern Ireland’s housing stock
- Promoting innovation in domestic energy efficiency (DSD, 2003)

1.2.6 Other organisations involved in fuel poverty initiatives

Home Energy Conservation Authority

In 1996 the Northern Ireland Housing Executive (NIHE) became the Home Energy Conservation Authority for Northern Ireland, with a remit to develop a strategy to reduce energy consumption across the residential sectors. Structural improvements to the housing stock owned by the NIHE are incorporated into regular maintenance of properties. In meeting the targets for privately owned houses, NIHE has, over the last years, been engaged in a range of partnership projects including the “Home is where the heat is” project.

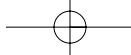
Northern Ireland Electricity Energy Efficiency Levy Fund

Northern Ireland Electricity Ltd. (NIE) introduced an Energy Efficiency Levy fund in 1997. Charging £5 per annum from each of its customers, NIE has allocated more than £8 million towards energy efficiency measures to its most disadvantaged customers. This has resulted in significant carbon and energy savings, contributing to NIE’s organisational targets.

The Northern Ireland Fuel Poverty Group

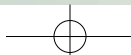
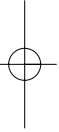
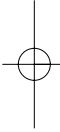
The Northern Ireland Fuel Poverty Group was set up in 2001 to impact on and monitor policy developments related to fuel poverty. A wide range of organisations from all sectors are represented and the group liaise closely with the UK Fuel Poverty Strategy Group.

There is a range of other statutory, voluntary, private and community organisations and agencies that are involved, in different ways, in fuel poverty initiatives across Northern Ireland, including all four Health Action Zones. For a fuller description of these organisations see Casson *et al.* (2002) and DSD (2003). For details of other fuel poverty schemes throughout NI and the UK see NEA (2004).



Chapter 2

Methodology



Chapter 2

METHODOLOGY

The project evaluation was carried out by the Institute of Public Health in Ireland (IPH) and managed by an evaluation steering group with representation from IPH, NEA and ADHAZ. This chapter explains the different sources of data and methods applied in the evaluation.

2.1 METHODOLOGY

2.1.1 Sources of Information

The research is based on several sources of information:

- In-depth interviews and focus groups with stakeholders including householders, community representatives and partnership members
- Review of a number of policy documents, project documents and the academic literature
- Pre- and post-intervention household surveys
- Temperature monitoring conducted in total solution households
- GP records for some total solution households

The research methods were selected to correspond with the two strands of the evaluation. Strand 1 explores the outcomes for householders, while strand 2 focuses on the project's process and delivery mechanisms.

2.1.2 Strand 1: Outcomes for households

Pre- and post-intervention survey

The pre-intervention survey was carried out between July 2000 and August 2002, and combined the assessment of eligibility with questions on energy efficiency of the dwelling and health status of household members. In all, 378 replies were included in analysis. The survey was conducted by the Community Energy Advisor and volunteers from the community associations. All households in the project area were approached, the names and addresses of which were provided by members of the community associations. Posters were displayed at local focal points and leaflets were distributed prior to the interviewers entering the area. The majority of the surveys were completed in the respondent's home and on a very rare occasion they were conducted elsewhere.

The post-intervention survey was conducted by Research and Evaluation Services following a successful tender bid. The questionnaire used in the post-intervention survey was a modification of the pre-intervention survey with the addition of questions such as self-perceived health and income and some social

capital indicators. Where possible, questions were not changed. The survey was carried out between May 2003 and January 2004. Respondents were interviewed either in the same month as their original interview or in the month before or after. A total of 245 interviews were conducted. There was no reply from a further 52, 18 did not want their contact details included after the first survey and a further 12 refused to be interviewed. Other reasons for no response included people being ill or deceased, or having moved from the property. Overall there was a response rate of 75%. The survey was conducted on a face-to-face basis using Computer Assisted Personal Interviewing (CAPI).

The quality of the data varied between the pre- and post-intervention stages, reflecting the different collection methods applied. The pre-intervention survey was coded in a way that made it particularly difficult to retrieve some of the information, and several questions were excluded from analysis as a result. All analysis on the questionnaire was carried out using SPSS. Statistical techniques applied were mostly those that could assess changes between the pre- and post-intervention phases. The main tests used were frequencies, cross tabulations, chi-square tests, *t*-Tests, ANOVA and McNemars.

GP records

Permission was sought from total solution households to access their primary care data held by their GP. Although some agreed, the numbers are modest, which made it difficult to conduct any in-depth analysis of this data.

Temperature data

Between March and mid-June 2002, temperature monitors were placed in 14 total solution households. The 14 dwellings monitored were selected by the project team. Alembic Research was commissioned to install, collect and analyse the temperature data. Gemini temperature data recorders (Tinytag Ultras) were installed in each of the 14 dwellings on February 28. Actual recording commenced at midnight on March 1, allowing the recorders to become acclimatised to the room being monitored. The recorders were collected on June 17.

The data recorders were set to log temperature readings every fifteen minutes. External air temperatures were also recorded every fifteen minutes. Three temperatures were recorded in each dwelling:

- The main living room (i.e. the lounge) of each dwelling, as identified by the household
- The main bedroom, again, as identified by the household
- One other room, usually a second bedroom, but sometimes a sitting room or dining room other than the main living room depending on the use of the dwelling by the occupants

In-depth interviews with householders

As in previous studies, the sample size in the survey is insufficient to draw any population level conclusions or to establish causal pathways between intervention and health status. It was decided to supplement the survey by investigating selected households in depth in order to further explore how the intervention impacted on their lives. As the householders completed the post-intervention surveys, some of those who received the total solution were invited to participate in in-depth face-to-face interviews. Given that all householders had filled in comprehensive surveys on two occasions, the topic list focused on areas that had not been specifically covered in these interviews.

Determining sample sizes when using qualitative methods is in part decided by the data that is being collected (Morse, 2003; Sanelowski and Barroso, 2003). Data collection continues until data saturation is reached, that is, until no new themes, issues or concerns emerge from the continuous data analysis. Data saturation point was reached sooner than anticipated in the interviews with the householders. This may have been partly because the community associations and the Community Energy Advisor, who were in close contact with the householders and enjoyed their trust had been able to provide detailed and comprehensive second hand information about how the householders had experienced taking part in the project. A total of nine households were interviewed before data saturation was reached. A focus group was subsequently conducted to ensure that no further themes emerged. All participants were assured full anonymity.

Where possible the interviews were taped (subject to permission), transcribed and imported into the software programme NVivo version 2.0 to assist analysis. The quotes included in the report are ad verbatim, although some alterations have been made for the sake of brevity, to enhance clarity, or to ensure confidentiality. Alterations are marked by square brackets. Any quotes or information deemed to compromise anonymity have been omitted.

Data was analysed through standard content analysis (Burnard, 1991). This involves identifying common themes and patterns for further analysis through a process of coding and re-coding of data. Data validation followed established academic procedures (Helman, 2001; Sanelowski and Barroso, 2003). Care has been taken to ensure transparency at all stages. Several sources of data were gathered in relation to most topics, ensuring "*within method triangulation*" (Delamont, 1992:160).

2.2.2 Strand 2: partnership and community development

To successfully assess the process of the project, a qualitative framework was

considered best suited to enable in-depth understanding. Participatory interview methods were applied as they facilitate:

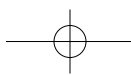
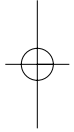
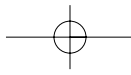
- The active role of individuals in defining, analysing and suggesting solutions to identified problems
- The opportunity to authenticate the analysis of people's social reality
- Awareness among people themselves of their own resources and strengths (Balcazar, 2003)

All members of the steering partnership were invited to take part in focus groups, and 12 partner representatives were interviewed individually. Topic guides were developed prior to the interviews and were based on a review of the project documentation. All interview questions were open-ended, allowing the interviewees to introduce and elaborate on themes that they considered to be important and allowed lengthy discussions of key features of the process, rationale and strategy. Paired and group interviews allowed respondents to react and build upon the responses of others, and such interviews were used to explore people's experiences of taking part in a process of change.

Interviews were carried out with representatives from organisations with remits for health, energy efficiency and community work. Organisations from the statutory, voluntary, private, and community sector as well as elected political representatives were included in the sample. The evaluation steering group guided the selection of most of the interviewees, while others were selected due to issues raised during the research process. A total of 29 representatives from the project steering partnership and the community groups were interviewed through:

- Four focus groups: Two with the steering partnership and two with the community associations (n=27)
- One paired face-to-face interview (n=2)
- Individual face-to-face interviews (n=12)

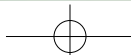
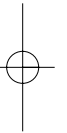
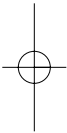
Data validation and analysis followed the same principles and procedures as described in relation to the interviews with householders. The quotes used below are identified with regards to the sector that the participants represent (eg. statutory partner, community partner etc).





Chapter 3

The "Home is Where the Heat is" Project Model



Chapter 3

THE “HOME IS WHERE THE HEAT IS” PROJECT MODEL

This chapter outlines the development of the “Home is where the heat is” project, and the project model, including the key intervention mechanisms, aims and objectives.

3.1 ARMAGH AND DUNGANNON HEALTH ACTION ZONE

Health Action Zones (HAZ) were introduced in England and Wales in 1998 as pilot projects that would explore new ways of improving health and reducing health inequalities through the application of area based partnership approaches (Powell and Moon, 2000). In 1999, the first HAZs were established in Northern Ireland in the Southern and the Eastern Health and Social Services Board areas, the Armagh and Dungannon HAZ and the North and West Belfast HAZ respectively. Health Action Zones were also established in the Northern and the Western Health and Social Services Board areas in 2001.

The overall aim of the Armagh and Dungannon Health Action Zone (ADHAZ) is: “... combining the efforts of all our agencies with the involvement of local people to measurably improve the health and well-being of all in the Armagh and Dungannon areas” (ADHAZ, 2004).

ADHAZ Strategic Alliance decided initially to develop programmes under three broad themes: (i) rurality, (ii) housing, and (iii) young people. This approach was later changed to one of instigating demonstrator projects that seek to further the evidence base and influence policy making across Northern Ireland.

3.2 THE DEVELOPMENT OF AN ENERGY EFFICIENCY PROJECT

3.2.1 The initial phase

The idea to include an energy efficiency project as part of ADHAZ’s housing programme was developed in partnership with other organisations. The HAZ manager explained how the linking of fuel poverty and health came about through discussions with Northern Ireland Housing Executive (NIHE) and Northern Ireland Electricity (NIE): organisations with no direct remit for health but with long traditions of working with householders, often in partnership with others.

The way it came about was not really by design [...]. The Director of Public Health passed to me a letter from the Housing Executive and said to me it would be worth going ayo see this guy [...] So we started to talk to about

setting up some sort of a scheme that would look at the impact on health and wellbeing, and he was very enthused and introduced me to [the manager of the NIE customer levy fund], and we began to develop the idea. [HAZ staff]

The partners agreed that the best way forward would be to develop a pilot project, which would “test out” new ways of working to tackle issues related to rural fuel poverty, energy efficiency and health. It was seen as essential that the project would be relevant to policy developments at the time, specifically the development of the Warm Home Scheme. Funding for the project was provided by NIE that committed £250,000 of its customer levy fund to the pilot project and the Department for Social Development that committed £50,000.

The HAZ manager conducted a thorough review of the literature on fuel poverty and energy efficiency. This desk research informed the project design. Moreover, it indicated the type of organisations and agencies that would be of most value to work with during the implementation of the project.

3.2.2 The Project Initiation Document

Based on the desk research, the HAZ team, in collaboration with NIHE and NIE, developed a Project Initiation Document (PID) (ADHAZ, 2000). The document outlined the mechanisms by which the project was anticipated to work. Key mechanisms included delivery through a steering partnership and the application of community development approaches. Informed by the literature, it was decided that the project would target privately owned properties. The project set out to tackle fuel poverty through a twin process of making properties more energy efficient and increasing household income by encouraging higher uptake of social security benefits.

The project's overall aim was outlined as:

“To develop and deliver innovative, sustainable community-wide energy efficiency improvement programmes in partnership with key agencies and the community within the HAZ area. As a result, to increase energy efficiency awareness and increase uptake in grants and schemes available in all housing sectors, and to reduce the adverse effects on health and well-being caused by cold homes particularly for those most likely to experience fuel poverty such as the old, disabled, infirmed, low income families and children” (ADHAZ, 2000: 6).

Project objectives:

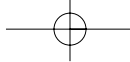
- To engage local communities (including householders, schools, local businesses) in the awareness, identification and implementation of energy efficiency improvement programmes (appliances and insulation measures in the first instance)
- To tackle fuel poverty, energy inefficiency and related affects on health and wellbeing throughout the development of partnerships between the

community and key agencies to ensure a co-ordinated and sustainable approach

- To recruit and train local people as Community Energy Advisors
- To design and conduct locally based community, technical, professional school surveys.
- To recommend and cost measures appropriate to address energy efficiency
- To develop an energy efficiency program with associated costs, methods of funding and delivery mechanisms
- To agree criteria for priority access to the programme, for example where there is a link between low income and inefficiency or weighted for vulnerable groups such as old, disabled etc
- To provide local advice and training before, during and after installation of energy efficiency measures
- To develop and implement energy efficiency awareness and advice training programmes for health and social care professionals, housing associations, local businesses, school children and teachers etc
- To determine economic development potential of energy efficiency improvement programmes (e.g. trainers, contractors etc)
- To identify and secure additional sources of funding e.g. Interreg II, New Opportunities Fund – environmental projects etc
- To utilise existing and emerging networks within the HAZ area as a delivery mechanism for energy efficiency “messages” including the Community House Network, Health Promoting Schools, Youth Council etc
- To conduct research on the correlation between energy efficiency and ill health and well-being
- To examine ongoing support required, for example local energy advisor, to ensure sustainable energy efficiency improvements
- To evaluate the impact of energy efficiency improvement programmes on health and social wellbeing as well as knowledge, attitude and behaviour of communities (ADHAZ, 2000: 6)

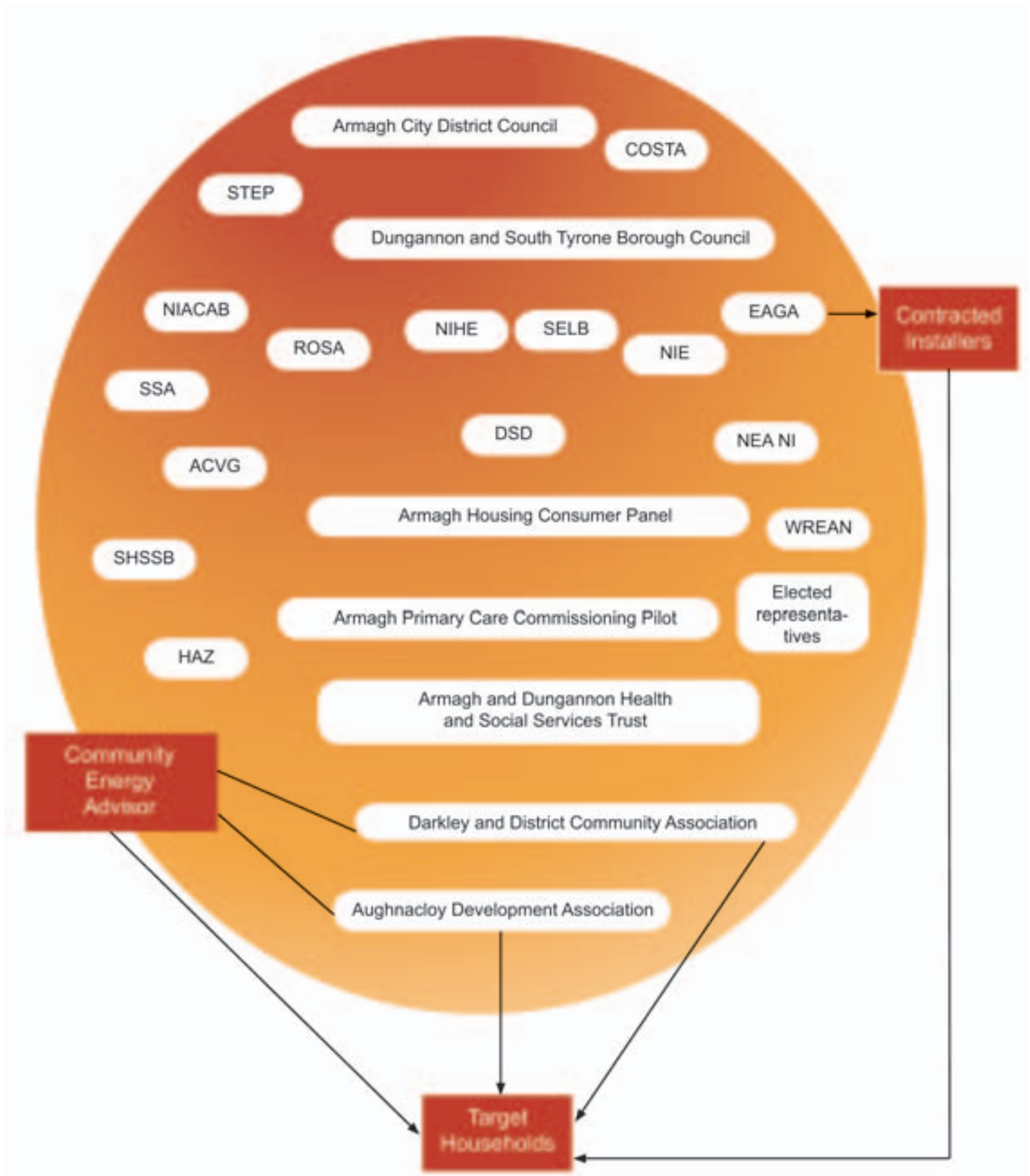
The PID also set out a number of anticipated outcomes of the project:

- Increased comfort
- Improved health and well-being (illnesses, opportunities, accidents, deaths)
- Increased awareness of energy efficiency and its link with environment, health and well-being
- Lower energy bills
- Reduced pollution
- Decrease in levels of deprivation especially for those defined as “fuel poor”
- Increased uptake in grants and schemes available
- Demonstration of community based approach in partnership with key agencies (ADHAZ, 2000: 7)



The project delivery mechanism set out in the PID is summarised in Figure 3.1

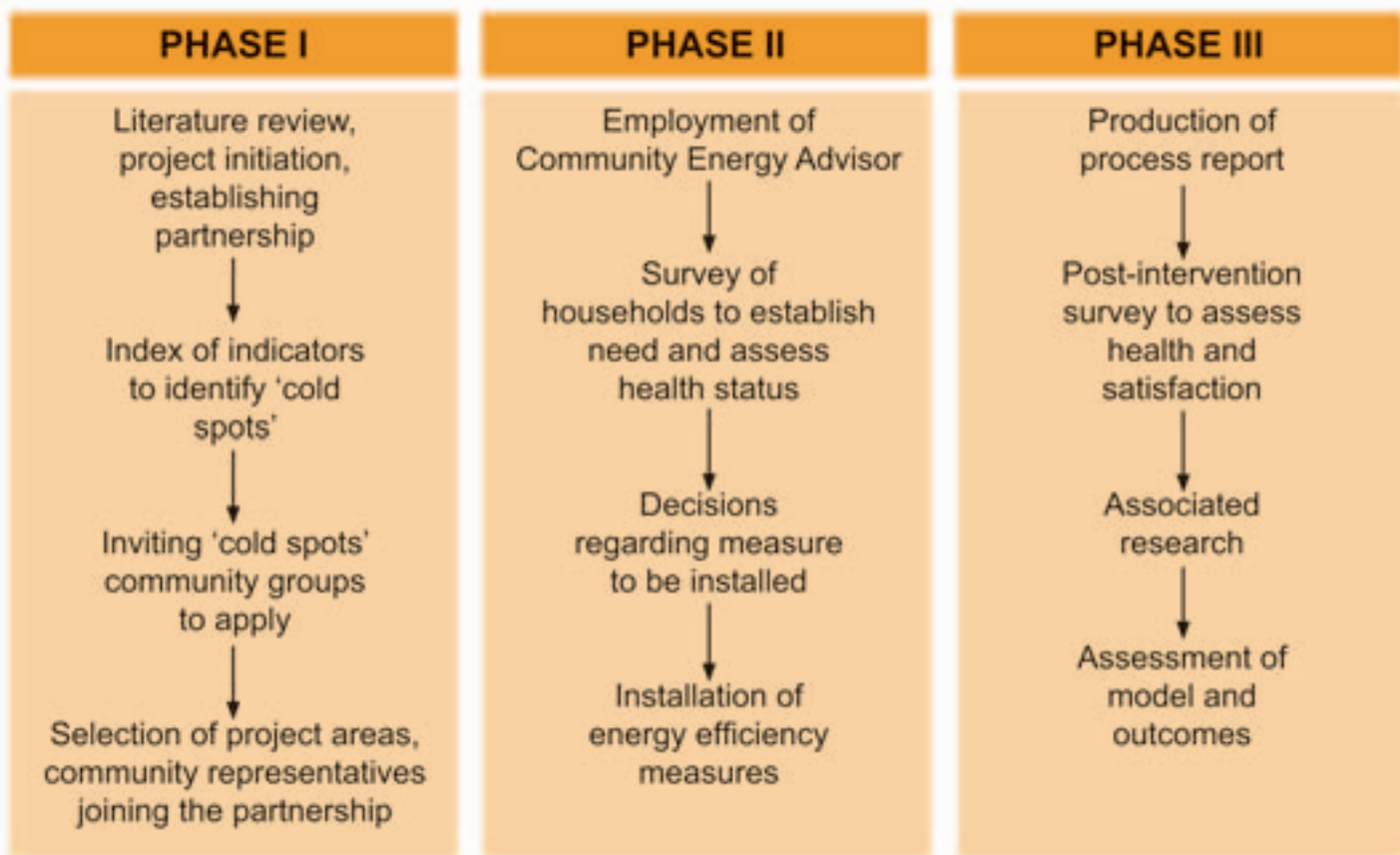
Figure 3.1: Project delivery model mechanism



3.3 THE “HOME IS WHERE THE HEAT IS” PROJECT MODEL

The Project Initiation Document was completed in January 2000 (ADHAZ, 2000). Figure 3.2 illustrates the range of activities and steps that were agreed.

Figure 3.2: “Home is where the heat is” project model



3.3.1 Phase I

Literature review, project initiation and establishment of partnership

ADHAZ staff conducted a thorough review of the literature, on fuel poverty and health, with a specific focus on rural issues and the PID was produced based on this review. The project was to be delivered through a partnership working in close collaboration with the local communities.

With funding and key partners on board and with a clear vision of the direction they wanted set out in the PID, a wide range of partners were keen to get involved. As the project evolved more partners came on board and community representatives, from the two project areas, joined the steering partnership when the areas were selected and agreed in June 2000. A total of 21 groups and organisations were represented on the steering partnership (see Figure 3.3).

Figure 3.3 The project steering partnership

The Partnership

Armagh and Dungannon Health Action Zone (ADHAZ)
 Armagh and Dungannon Health and Social Services Trust (ADHSST)
 Armagh City and District Council
 Armagh Confederation of Voluntary Groups (ACVG)
 Armagh Housing Consumer Panel
 Armagh Primary Care Commissioning Pilot
 Aughnacloy Development Association Ltd.
 Community Organisations of South Tyrone and Area (COSTA)
 Darkley and District Community Association
 Department for Social Development (DSD)
 Dungannon and South Tyrone Borough Council
 Eaga Partnership Ltd.
 National Energy Action, Northern Ireland (NEA NI)
 Northern Ireland Association of Citizens Advice Bureau (NIACAB)
 Northern Ireland Electricity (NIE)
 Northern Ireland Housing Executive (NIHE)
 Regeneration of South Armagh (ROSA)
 Social Security Agency (SSA)
 South Tyrone Empowerment Programme (STEP)
 Southern Education and Library Board (SELB)
 Southern Health and Social Services Board (SHSSB)
 Western Regional Energy Agency Network (WREAN)

Identifying Cold Spots

In order to select target areas the project team decided on a set of indicators, derived from various sources of information, such as deprivation indices, benefit data etc. It was decided that the following indicators should apply:

- Low uptake of grants for domestic energy efficiency improvements
- High proportion of owner occupied/privately rented houses
- Low income levels/high benefit dependency
- High relative multiple deprivation (based on the Robson index)
- High percentages of population over 60 and under 5 years of age
- Low population density

A matrix was produced in which the data relating to these indicators was set out for all electoral wards within the ADHAZ area.

Selection of project areas

Ten wards were identified as potential “cold spots” and representatives from these areas were invited to public meetings. To spark further interest, project team members visited a number of community groups in the identified areas. Following the meetings the area representatives were invited to apply, to become one of the project areas, by completing a simple questionnaire identifying their interest and capacities for running the project on the ground.

The applications were assessed in conjunction with the matrix. On this basis the two project areas, Aughnacloy in County Tyrone and Darkley in County Armagh, were selected. Once the selection process was completed two representatives, from each of the community associations, were nominated to represent the local communities on the project steering partnership.

3.3.2 Phase II

Employment of a Community Energy Advisor

A full-time Community Energy Advisor was employed to support the process and to act as a mediator between the local communities and the partnership. The post was jointly funded by ADHAZ, NIE and NIHE.

Survey of households to establish needs and assess health status

It was decided that all households in the two project areas would be invited to complete surveys in order to assess energy efficiency needs. The surveys would also assess people’s self reported health status, with particular attention to conditions known to be associated with living in cold, damp and mouldy houses. Community representatives helped develop a questionnaire and the survey was carried out by community volunteers together with the Community Energy Advisor.

Decisions regarding measures to be installed

A new heating system may only have limited effect if installed in a house where, for instance, roofs and walls have insufficient insulation. The steering partnership agreed that its general approach would be one of finding “total solutions” for the households, that is, offering a full range of measures to make each eligible house fully energy efficient. This included central heating systems, a range of insulation measures, electric appliances such as jug kettles, fridge-freezers and energy efficient light bulbs. Eligibility criteria were set by the steering partnership (see Figure 3.4), but, as will be explained in chapter 7, considerable flexibility was exercised by the community groups to ensure that real needs were being met.

Figure 3.4 Eligibility criteria for energy efficiency

Measure	Owner occupier or private rented + benefit	Owner occupier or private rented, over 60 no benefits	Owner occupier or private rented, no benefits, under 60	NIHE + benefit or over 60	NIHE no benefit	Housing assoc. + benefits or over 60	Housing assoc. no benefits
2 compact Fluorescent Lightbulbs	√	√	√	√	√	√	√
Fridge Fridge/ freezer	*√	√	X	*√	X	*√	X
Jug kettle	√	√	X	√	X	√	X
Radiator foils	√	√	X	√	X	√	X
Hot water tank jacket	√	√	X	√	X	√	X
Loft insulation	√	√	X	X	X	X	X
Draught proofing	√	√	X	X	X	X	X
Cavity wall insulation	√	√	X	X	X	X	X
Central heating system	√	X	X	X	X	X	X

*√ Existing fridges must be faulty or more than 10 years old

Installation of measures

Referral forms were handed over to Eaga Partnership Ltd. that organised and supervised the installations, which were then carried out by contractors recruited through tendering. The installations were completed in autumn 2002, and Eaga's routine inspections showed high standards across the different measures.

Figure 3.4: Total number of measures

MEASURE	NUMBER OF INSTALLATIONS
Oil central heating systems	65
Cavity wall insulation	45
Cavity wall insulation on extensions	34
Loft insulation top-up	189
Radiator panels	232
Hot water cylinder jacket	68
Oil jacket	170
DEES measures (loft insulation and draft proofing)	164
Compact fluorescent light bulbs	1074
Jug kettles	154
Fridges	94
Fridge freezers	48

Reflecting on the process

In order to maximise the learning outcomes of the project, the HAZ team produced a report outlining the experience of setting up and implementing the project, which contains initial impressions of some of the project outcomes in terms of improvements in well-being and household economy (ADHAZ, 2002). The report took a reflexive approach, exploring each step in the process and identifying key learning points. The report was launched in November 2002 at a celebratory event in Stormont, the offices of the Northern Ireland Local Assembly, which brought together steering group partners, project recipients, government ministers and a range of health and energy efficiency professionals.

3.3.3. Phase III

Post-intervention survey of households

A central part of the evaluation, which commenced in September 2002, was the post-intervention survey conducted to explore changes in terms of energy efficiency, household income and self reported health. The survey facilitated the comparison between those who had received the total solution, those who received partial solution and those who were not eligible.

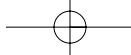
Associated research

Qualitative in-depth interviews and focus groups were conducted, with a number of total solution householders, in order to gain deeper understanding of how they had experienced the process. The total solution households were also asked permission to use GP data in the research.

In order to explore the ways in which the partnership and community development approaches functioned, a series of in-depth interviews and focus groups were conducted with the partners and the two community associations.

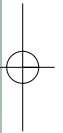
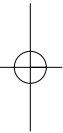
Assessment of the model and the outcomes

The evaluation focused on assessing the project model and the key delivery mechanisms, as well as identifying the initial impacts and outcomes. The findings, which are presented in this report, will be disseminated widely.



Chapter 4

Health and Economic Outcomes for Householders



Chapter 4

HEALTH AND ECONOMIC OUTCOMES FOR HOUSEHOLDERS

Using a range of data sources, this chapter explores changes in conditions relevant to fuel poverty, such as health and income, as reported by householders. Levels of energy efficiency awareness and satisfaction with the project among householders are also commented upon. The various issues will be explored and compared across the three intervention groups; those who received total solution, those who received a partial solution, and those who did not receive energy efficiency measures (non-intervention). A specific focus will be on the anticipated outcome of the project, as identified in the PID (see p36). Firstly, some background information on the two project areas will illustrate some aspects of the socio-economic environment.

4.1 THE PROJECT AREAS

4.1.1 Aughnacloy

Aughnacloy is a small market town within the boundary of Dungannon and South Tyrone Borough Council, and lies about 12 miles from Dungannon and only a couple of miles from the border with the Republic of Ireland. Aughnacloy consists of 706 households, with a total population of 2058 (NISRA, 2004). About half of these households live in the town and the rest live in the countryside outside. Many of the houses in the town were built at the time of the town's establishment in the 18th century (ADHAZ, 2002). In Aughnacloy, 12% of the households live in the social rented sector compared with a Northern Ireland average of 21%. The vast majority of households (78%) own their own homes.

Aughnacloy is ranked as number 264 of the 566 electoral wards in Northern Ireland in terms of multiple deprivation. With regards to employment deprivation it is ranked as number 366 and in relation to educational deprivation number 347 (NISRA, 2004). The main occupations in the town are manufacturing and retail, and today only 9.5% of those in employment are working in the agricultural sector (NISRA, 2004).

4.1.2 Darkley

Darkley is a small village in Armagh City and District Council. It lies about 10 miles south of Armagh and is bordering with County Monaghan. Carrigatuke Electoral Ward, of which Darkley is part, consists of 702 households. The village of Darkley itself has about 120 households, but most of the 2251 strong population live on farms or houses in the countryside, many of which are

inaccessible without a car. Until recently there were no shops in Darkley but now a small grocery store has been established. There is no GP surgery or chemist in the village. There is a bus service from the village to the nearby town of Keady a couple of times each day.

The village of Darkley was established around 150 years ago when housing was built for the workers of the local mill. Since the mill closed in the 1950s, there has been a steady population decline in the area (ADHAZ, 2002). Only 7% of households live in the social rented sector and 84% own their own houses. The Ward of Carrigatuke is ranked number 217 out of 566 on the multiple deprivation scale. It is ranked number 361 in terms of housing deprivation and number 488 in terms of deprivation of the social environment, a measure constructed by the levels of theft, assault, drug abuse and burglaries in the area (NISRA, 2004).

4.2 THE INTERVENTION HOUSEHOLDS

4.2.1. Sample population

A total of 378 households took part in the pre-intervention survey, which served to assess eligibility and establish a baseline in terms of housing conditions and health status. Of the participating households, 91 were in Darkley and 222 in Aughnacloy. Of the households 65 received the total solution, 225 received a partial solution and 88 did not receive any measures. The post-intervention survey yielded a response rate of 75%, which included 46 total solution households, 144 partial solution households and 55 non-intervention households.

Table 4.1: Intervention groups

Intervention groups	% of respondents
Non-Intervention	23% (n=88)
Partial Solution	60% (n=255)
Total Solution	17% (n=65)

4.2.2 Household Type

The mean number of people in each household was 2.8, just slightly higher than the Northern Ireland average of 2.6. The number of people in households ranged from one to eleven.

The most common household type in the study were families (34%), identified as two parents with children, followed by single person households (29). Of these single person households, 59% of residents were aged 65 and over. 27% of single person households received the total solution (over 50% of whom were aged 65 and over). Relatively few families and no lone parents received the total solution, although 74% of lone parent families received a partial solution. (see Table 4.2)

Table 4.2: Household type by intervention group

Household type	Total Solution (%)	Partial Solution (%)	Non Intervention (%)
Single Person	27	64	9
2 Adults	19	68	13
Lone Parent Family	0	74	26
2 Parents and Children	11	47	42
Adults Only (3+)	18	65	17
Other	16	67	17

The age of respondents by intervention type is outlined in Table 4.3. A total of 45% of those who received total solution and 46% of those who received partial solution were aged 65 and over, in comparison to only 1% of non-intervention households.

Table 4.3: Age profile by intervention group

Age Group	Total Solution (%)	Partial Solution (%)	Non Intervention (%)
<45	22	21	55
45-46	34	33	44
65-74	21	25	1
75-84	20	17	0
>85	3	4	0

The project targeted people living in the private rented and owner occupied sectors (ADHAZ, 2000). Owner occupation is high in the study sample, with 80% of respondents and 91% of total solution households either owning their own homes, or in the process of buying it. Many of the homes are old, which increases the risk of low energy efficiency. The majority of houses were built prior to 1950 and as shown in Table 4.4, 78% of houses that received total solution were built prior to 1950.

Table 4.4: Age of house

Age of house	% Total solution	% Partial solution	% Non intervention	% All households
Pre 1900	63	33	42	40
1901 - 1949	15	14	9	13
1950 - 1981	20	38	28	33
Post 1982	2	10	16	10
Don't Know	0	5	5	4

$P = 0.000$

A high number of older people live in old, hard to heat homes. A solid fuel based heating regime requires substantial work for people in these houses and this presents particular challenges to those living on their own. This was clearly conveyed in the in-depth interviews, where most respondents, but particularly the older, explained the substantial amount of work involved with heating their homes (see also 4.4.6 for further details). Some indicated that a solid fuel based heating regime could prevent older people from continuing to live in their own homes.

It's an old house, it is alright when you're young and running up and down the stairs, but when your get on in years it gets exhausting [to carry the coal] (laughs). I'd like to stay here (in my house) as long as I can. I have lived here 55 years and I'd like to stay for the rest of my days. [Householder]

4.3 CHANGES IN INCOME AND FUEL EXPENDITURE

4.3.1. Income

It was originally anticipated that the pre-intervention survey would be carried out by local volunteers and, due to concerns about confidentiality, income data was not included in the questionnaire. As the post-intervention survey was carried out by a research company, however, these concerns did not apply and gross annual income was collected in this phase.

Total annual income was less than £15,000 in almost 60% of the households. This is considerably lower than the Northern Ireland average of £18,564 (NISRA, 2004). Indeed, only 10% of the households surveyed earn more than £20,000 (see Table 4.5). The majority of total solution households earned less than £10,000 a year.

Table 4.5: Gross annual income by intervention group

Income Bands	Total solution %	Partial solution %	Non intervention%
£3,000 - £9,999	63	51	9
£10,000 - £19,999	14	27	32
£20,000 +	4	5	32
Refused	0	2	9
Don't Know	19	15	18

4.3.2. Changes in levels of benefit uptake

One of the project's objectives was to encourage people who were eligible for benefits, but not claiming them, to do so. Uptake of benefits and grants is usually lower in rural areas (Shucksmith, 2000), and factors such as poor access to information and the idea of and pride in the "rural idyll" may all exacerbate this. In addition, rural areas tend to have a higher concentration of older people, which also is associated with lower levels of benefit uptake (Shucksmith & Philip, 2000). The "Home is where the heat is" project aimed to provide the communities with benefit information through the Community Energy Advisor and joint working with the local Citizen's Advice Bureau.

Respondents were asked to identify the total number of benefits received by household members in both the pre- and post-intervention surveys. In the pre-intervention survey only 2% of non-intervention households reported to claim benefits compared to 98% of total solution households. Indeed, over 57% of total solution households claimed two or more benefits prior to intervention.

By comparing the mean number of benefits claimed per individual, before and after intervention, an overall increase in benefit uptake emerged. The number of non-intervention households claiming benefits increased from 2% to 58%, whilst the number of partial solution households claiming 2 or more benefits increased from 33% to 58%. Both increases are statistically significant. Benefit uptake was one of the criteria for eligibility for receiving a total solution. The benefit uptake in this group only increased slightly, from 57% to 61%, perhaps suggesting that this group already had higher levels of uptake.

As well as an overall increase in the number of benefits claimed, the mean number of benefits claimed per household increased significantly from 1.2 to 1.5. Of particular interest is the significant increase in benefit uptake in the non-intervention households, perhaps indicating that even if not eligible for energy efficiency measures, they may have increased household income as a result of the project.

Table 4.6: T-tests of number of benefits received before and after intervention

Intervention group	Mean number of benefits claimed per household		t-test (significance)
	Before intervention	After intervention	
Non-intervention	0.02	0.71	7.727 (0.000)*
Partial solution	1.47	1.76	3.344 (0.001)*
Total solution	1.78	1.87	0.540 (0.592)*
All Houses	1.20	1.54	5.382 (0.000)*

* statistically significant

4.3.3 Spending on Fuel

Fuel poverty is closely associated with income. Respondents were asked how much they spent on fuel on a weekly basis and this was viewed in conjunction with household income, in order to identify what percentage was spent on fuel. This percentage was calculated at three points across the income band within each intervention group – the lowest point in the band, the median point and the highest point (L, M and H).

Table 4.7: Percentage of income spent on fuel by income band

% of Income spent on fuel	Percentage of households in each intervention group								
	% of total solution			% of partial solution			% of non intervention		
	L	M	H	L	M	H	L	M	H
<5%	22	41	51	32	45	54	66	74	76
5 - 9%	51	51	41	36	32	26	24	18	21
10 - 15%	22	8	8	17	13	14	8	8	3
>15%	5	0	0	15	11	6	3	0	0

Because income data was not collected in the pre-intervention survey it was impossible to determine how many households were lifted out of fuel poverty based on the definition of spending more than 10% of income (Boardman, 1991; DSD, 2003). Based on Table 4.7, however, it is clear that even after receiving a total solution of energy efficiency measures, many total solution households in the lowest income group still spend more than 10% of their income on fuel. This indicates that for low income households, the relative impact of income on fuel poverty may be stronger than for those on higher incomes.

Total solution respondents interviewed in-depth, expressed that they found their new heating regime more economical to run compared with their previous method of heating their homes. Some of those interviewed made rough estimates as to how much they saved:

It is very economical to run. I would say in the dead of winter about 10-12 pounds a week. Before? I would say in the region of £18 between the coal and the sticks. And then you needed to work at it as well. [Householder]

I would say it works out cheaper. It has only been in a year, but I'd say its cheaper. The electric bill has gone up, but it hasn't gone up that much. Only about £3 per quarter; a pound a month (laughs). When you're buying odds and ends... coal, fire lighters and then...I'd say it's a good deal cheaper. [Householder]

In a calculation of the effectiveness of the Energy Efficiency Levy fund, NIE calculated that in the period of 2001-2003 the project had a collective customer benefit of £1,054,181 (NIE, 2002; 2003).

4.4 ENERGY EFFICIENCY AND INDOOR TEMPEATURE

4.4.1 Fuel and heating types

Before intervention most of the total solution homes were heated using a combination of coal, peat and wood. As a result of the intervention all these households now use oil as the main fuel to heat their homes. There has also been an increase in the use of oil as main fuel among the other intervention groups.

Table 4.8: Primary fuel type reported before and after intervention

Primary fuel type	Before intervention			After intervention		
	Total solution %	Partial solution %	Non intervention %	Total solution %	Partial solution %	Non intervention %
Oil	0	76	89	100	84	93
Smokless/H'hold	96	19	11	0	12	7
Coal/Peat/Wood						
Bottled Gas	0	1	0	0	1	0
Electricity	0	3	0	0	3	0
Anthracite	2	1	0	0	0	0
Other	2	0	0	0	0	0

In the in-depth interviews, total solution householders explained how their previous heating system had been inadequate. Many reported that their homes had been cold, uncomfortable and difficult to heat.

Yes we had a coal fire. We had radiators surely but it was not to the same extent now as the heating we have now. And you had to keep the fire going all day...It was hard work ...It would have been very cold, especially in the kitchen. It had only the one radiator. I had to put in the superser to keep it warm...The bedrooms were colder too, the radiators just did not put out the same heat. [Householder]

Before intervention almost 60% of total solution households reported that they had only partial or basic (one room) central heating, compared to 9% in each of the other intervention groups. After intervention none of the total solution households, but 8% of partial solution and 2% of non-intervention households, still lack central heating in parts of their homes.

Table 4.9: Extent of central heating before and after intervention

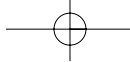
Extent of central heating	Before intervention			After intervention		
	Total solution %	Partial solution %	Non intervention %	Total solution %	Partial solution %	Non intervention %
Fuel Central Heating	42	91	91	100	91	98
Partial Central Heating	36	6	7	0	7	2
Basic (one room)	22	3	2	0	2	0

4.4.2. Changes in indoor temperature

Between March and mid-June 2002, temperature recorders were placed in 14 total solution houses, logging temperature readings every fifteen minutes. Three temperatures were recorded in each dwelling:

- The main living room (i.e. the lounge) of each dwelling as identified by the household
- The main bedroom, again as identified by the household
- One other room, usually a second bedroom but sometimes a sitting room or dining room, other than the main living room, depending on the use of the dwelling by the occupants

In two of the dwellings the monitors were accidentally removed. The 12 dwellings for which monitoring data was available demonstrated a wide variation in heating patterns, both before and after the heating systems were installed. In one household there is no pre-intervention data and in an additional 4 households there was insufficient pre-intervention data to capture change.



These households have been omitted from the analysis.

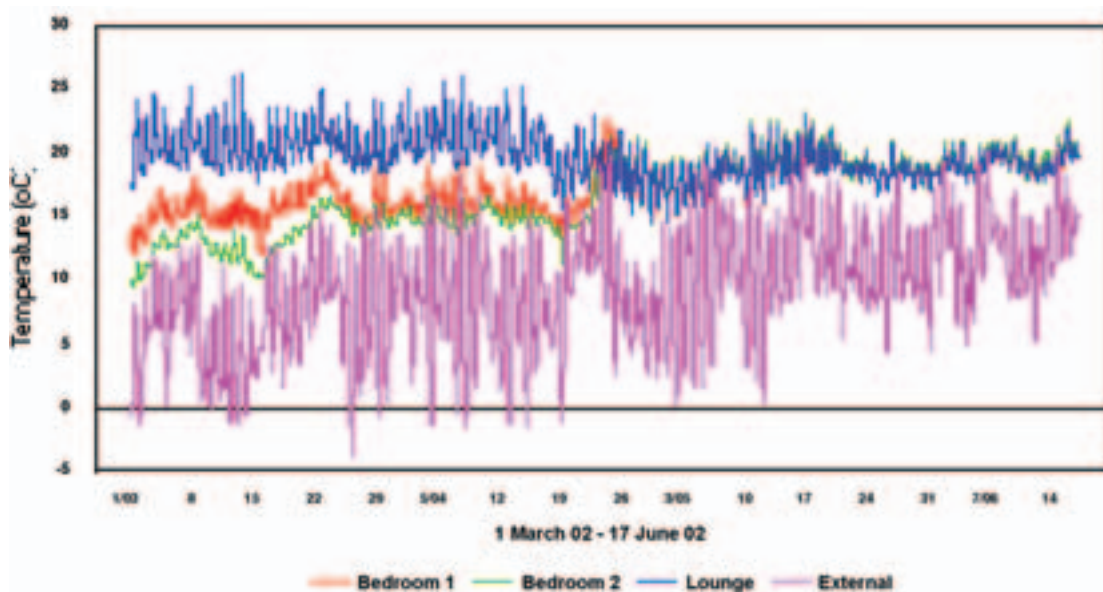
All rooms were classified according to the internal temperature based on a “level of comfort” scale. This 5-point scale, based on the calculated average room temperature for the periods before and after intervention, satisfies the guidelines of both the WHO and the British Geriatric Society for living room temperatures.

Table 4.10: 5-point level of comfort scale

5-point scale	Average temperature range
Hot	More than 23°C
Warm	From 22°C up to and including 23°C
Comfortable	From 18°C up to, but less than 22°C
Cool	From 16°C up to, but less than 18°C
Cold	Less than 16°C

In some of the households there was little change in the average temperatures of rooms. The temperatures are, however, now spread over a narrower range, indicating increased control over the levels of heat. Figure 4.1 below displays this temperature convergence for one of these dwellings.

Figure 4.1: Temperature monitoring in one household



Prior to intervention, a number of living rooms appeared to be heated by an uncontrolled heater, characterised by rapid rises in temperature followed by steep declines, probably when the heater was turned off. In one particular household it appears that an uncontrolled source of heating was used in a child’s bedroom as temperatures reached dangerously high levels of around 40°C. These high temperatures were followed by rapid drops in temperature. It would therefore

appear that the uncontrolled source of heating, most likely a portable heater, was the only source of heating in the room.

Table 4.11 indicates changes in temperature according to the 5 point scale. Although many of the homes are still relatively cold, the average temperatures have risen from cool to cool-comfortable in the lounges, from cold to cool in the main bedrooms and from cold to cold-cool in the second bedroom.

Table 4.11: Measures of comfort scale before and after heating installation

House number	Before installation			After installation		
	Lounge	Bedroom 1	Bedroom 2/ Other room	Lounge	Bedroom 1	Bedroom 2/ Other room
A	Cool	Cold	Cold	Cool	Cool	Cold
B	Comfort	Cool	Cold	Comfort	Comfort	Comfort
C	Cold	Cold	Cold	Cool	Cool	Cold
B	Comfort	Cold	Cold	Comfort	Comfort	Comfort
E	Cold	Cold	Cold	Cool	Cold	Cold/Cool
F	Cold	Cold	Cold	Comfort	Comfort	Cool
G	Cold	Cold	Comfort	Cold	Cold	Cool
H	Cold	Cold	Cold	Comfort	Cool	Cold
I	Warm	Comfort	Cold	Comfort	Comfort	Cold
J	Comfort	Comfort	Comfort	Comfort	Comfort	Comfort
K	Comfort	Cold	Cool	Cool	Cool	Cool
L	Comfort	Cold	Cold	Comfort	Comfort	Cool/Comfort
Average	2.2 Cool	1.4 Cold	1.4 Cold	2.5 Cool - Comfort	2.3 Cool	1.6 Cold - cool

There has been a drop in the temperature of the lounges in a number of dwellings. This may be due to a change from uncontrolled heating, such as an open fire, to a controlled heating system. The new heating system has reduced the previous risks of overheating rooms and improved control of heat levels. However, the rooms in most of these homes are still cold or cool. Six households in this sample have rooms with temperatures less than the UK average indoor temperature of 16.5°C (Milne & Boardman, 2000). As shown earlier, indoor temperatures of less than 16°C are linked to a range of health risks.

The temperature monitors remained in the homes for an average of 4 weeks after the installation of the heating systems. It is possible that during this time householders had not yet adjusted to the new system and may have had concerns about the effects of the new system on the household budget.

The increased control over indoor temperature was commented upon by most respondents in the in-depth interviews. The benefit of being able to wake up in the morning in a heated bedroom, or to return to a warm home, after having been out was appreciated by all interviewees.

Och, it has made a big difference [...] you can leave it and go out and then it's warm when you come back home again. With the solid fuel you don't have that; you had to be there all the time. [Householder]

In addition to better control over indoor temperature, with the new system it was also possible to heat hot water separately, which, to many, represented a significant improvement.

The water is already warm when I come down in the morning! [Householder]

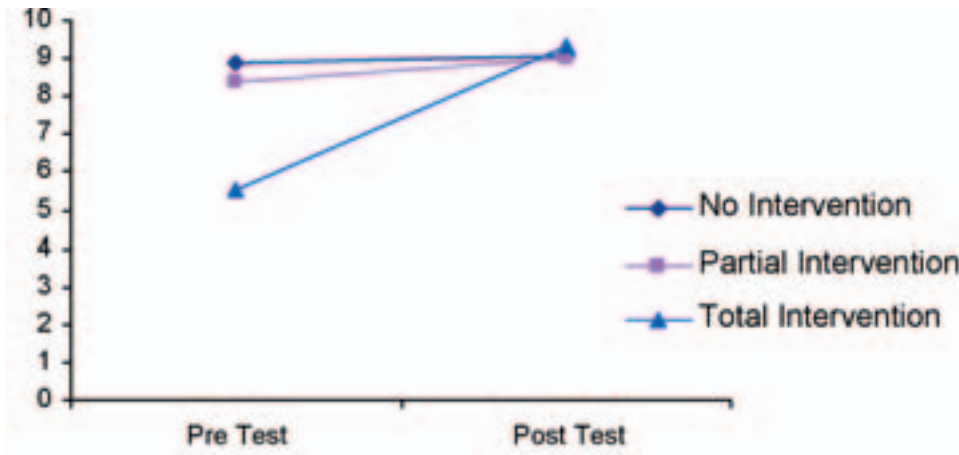
4.4.3. Perceived warmth in the home

The installation of heating systems had a positive effect on the perceived warmth of the dwellings of total solution householders. At the time of the pre-intervention survey 50% of total solution householders found their homes too cold, whilst no one in this group reported this after intervention. This was reflected in the in-depth interviews where all respondents commented on the improvements in indoor temperature.

It has made tremendous changes. I get up in the morning and the house is lovely and warm now. Even in the bathroom, it's excellent! I had radiators in all the rooms before, but it did not heat to the same extent. You can feel the heat from it there. It can nearly be too cosy some times! [Householder]

Survey respondents were asked to indicate, on a scale of 1 to 10 with 10 being highly satisfied and 1 being highly dissatisfied, their level of satisfaction with the temperature of their home during cold periods. The average score rose slightly from 7 before intervention to 9 after intervention. The satisfaction for total solution households, however, rose significantly (related *t*-tests were used to compare the mean satisfaction rates) from 4 to 9 (see Figure 4.2), whilst satisfaction in the other groups rose only slightly.

Figure 4.2: Satisfaction with temperature of the home during cold spells



Respondents were also asked to rate their level of satisfaction with the indoor temperatures during the rest of the year. Table 4.12 compares the mean scores for each group before and after intervention. In the pre-intervention survey levels were significantly lower for the total solution respondents compared to non-intervention and partial solution respondents. In the post-intervention survey, however, this difference no longer exists and total solution households had slightly higher satisfaction levels. Residents in households for which temperature monitoring data was available all indicated increased satisfaction with the temperature of the homes.

Table 4.12: Mean satisfaction scores with temperature of the home

Intervention group	Satisfaction with temperature - mean score (scale of 1-10)			
	Cold spells: before intervention	Cold spells: after intervention	Rest of year: before intervention	Rest of year: after intervention
Total solution	3.57	9.18	5.5	9.30
Partial solution	7.61	8.31	8.39	8.99
Non - intervention	8.19	8.35	8.90	9.09
All households	6.96	8.48	7.95	9.07

4.5 HEALTH

4.5.1 Condensation, mould and damp

The literature identifies a link between health and living in mouldy or damp houses. Changes in the prevalence of mould and damp may therefore impact on the health of householders in the medium to long term.

Respondents were asked, both before and after intervention, whether their homes suffered from condensation, mould or damp (CMD), and if so to identify the rooms that were affected. The presence of CMD was significantly higher in the total solution households: 72% of these households suffered from CMD in the pre-intervention survey compared to 51% of non-intervention and 42% of partial solution households.

Table 4.13: Extent of CMD in the dwellings before intervention

Intervention group	Percent within intervention group	
	Yes %	No %
Total solution	72	28
Partial solution	42	58
Non intervention	51	49
Total cases	50	50

P = 0.0000

The presence of CMD had decreased significantly in the post-intervention survey. Table 4.14 shows that the percentage of respondents reporting CMD fell significantly from 50% to 24%.

Table 4.14: Presence of CMD before and after intervention

CMD Present	Before intervention	After intervention
Yes	50%	24%
No	50%	76%

Table 4.15 shows that of 31 total solution households who reported presence of CMD before intervention, only two did so after intervention.

Table 4.15: Presence of CMD in total solution household (McNemars)

Presence of CMD in total solution households		
Before intervention	After intervention	
	Yes	No
Yes	2	29
No	2	9

P = 0.000

Changes in the mean number of rooms in each household suffering from CDM was also explored, and it was found that, overall, the mean number of rooms suffering from CMD has fallen from 1.3 per household to 0.7. For total solution households the reduction was statistically significantly.

Table 4.16: Number of rooms affected by CMD before and after intervention

Intervention group	Mean number of rooms suffering from CMD		t-test (significance)
	Before intervention	After intervention	
Total solution	2.1	0.7	4.175 (0.000)
Partial solution	1.0	0.5	2.859 (0.005)
Non intervention	1.5	1.1	1.149 (0.256)
All houses	1.3	0.7	4.481 (0.000)

The rooms most frequently reported to suffer from CDM were dining rooms (may be related to infrequent use of this room), followed by kitchens. Table 4.17 shows that while 95% of total solution households reported CMD in their dining room prior to the installation of a new heating system only 4% reported this after installation. The presence of CMD has fallen significantly for all rooms in the total solution households and for both the dining room and the kitchen in the partial solution household.

Table 4.17: Rooms affected by CMD by intervention group before and after intervention

Intervention group	Room	% CMD before intervention	% CMD after intervention	P-value
Partial solution	Living Room	65	35	0.058
	Dining Room	82	18	0.000**
	Bathroom	67	33	0.067
	Kitchen	77	23	0.002**
Total solution	Living Room	75	25	0.011*
	Dining Room	95	4	0.000**
	Bathroom	90	10	0.000**
	Kitchen	84	16	0.000**

4.5.2 Perceived effects of CMD on health

The householders who reported the presence of CDM in their house were asked whether, in their experience, CDM impacted on their health. There was no significant difference before and after intervention in the frequency of reported effects on physical health. In contrast, there was significant decrease in the numbers reporting an effect on their mental health. This corresponds with findings elsewhere (Lowry,1991), indicating that mental health improvements may show earlier while it may take longer for people to experience improvements in physical health. Tables 4.18 and 4.19 show that the proportion of those reporting an effect on their physical health only fell from 29% to 27%, compared to those reporting impacts on mental health which fell from 15% to 7%.

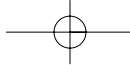


Table 4.18: Reported effects of CMD on physical health before and after intervention

CMD affecting physical health	Before intervention	After intervention
Yes	28.7%	26.5%
No	71.3%	73.5%

P = 0.341

Table 4.19: Reported effects of CMD on mental health before and after intervention

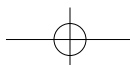
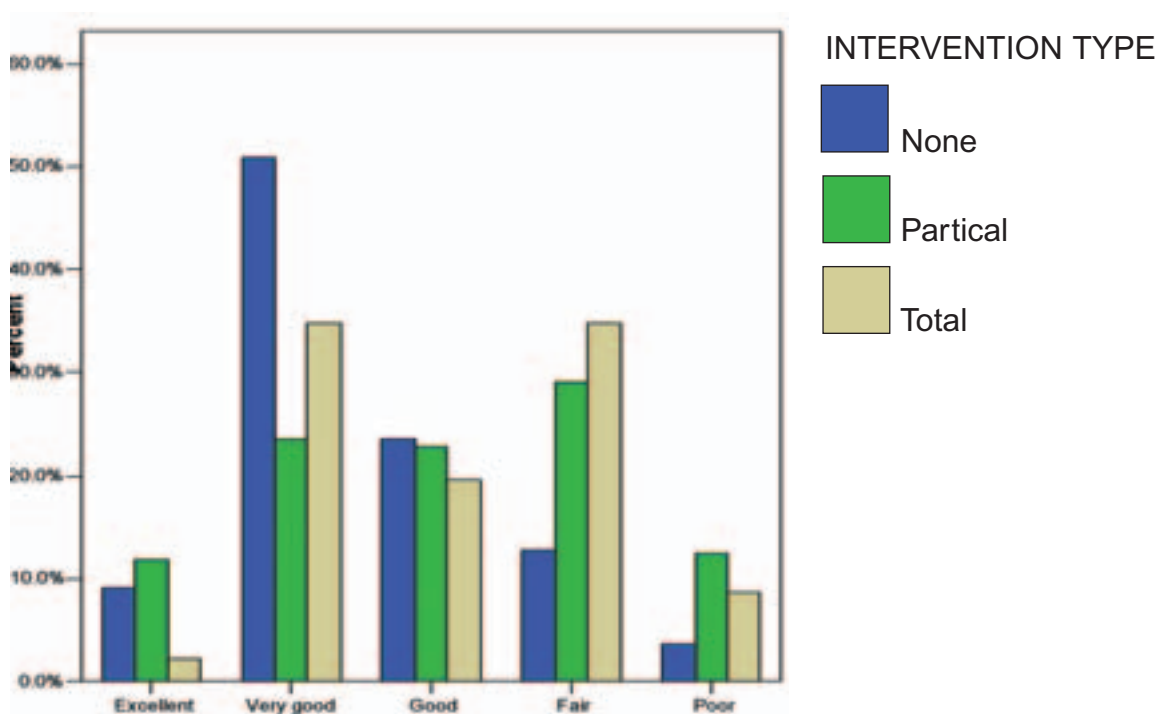
CMD affecting mental health	Before intervention	After intervention
Yes	14.9%	7.1%
No	85.1%	92.9%

P = 0.013

4.5.3 Perceived health status

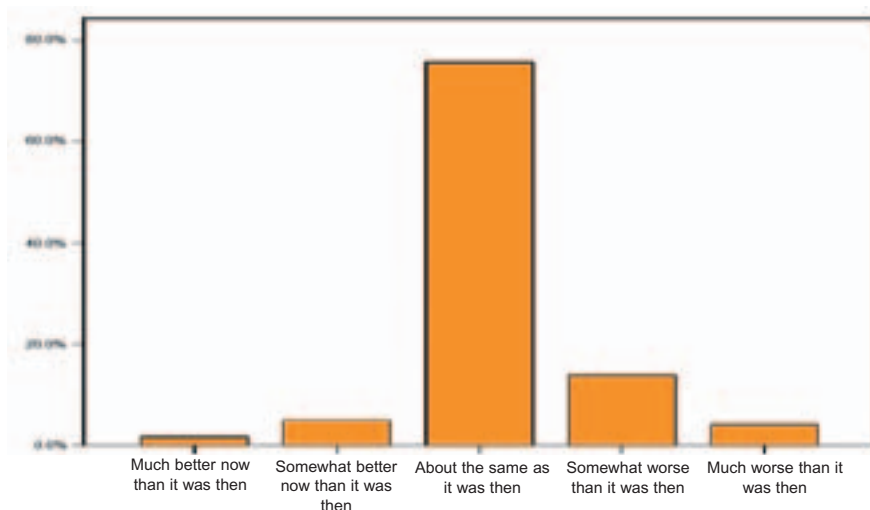
In the post-intervention questionnaire respondents were asked to rate their health as “excellent”, “very good”, “good”, “fair” or “poor”. Figure 4.3 outlines the responses given. Only 37% of total solution respondents claimed to be in “excellent”, or “very good” health compared to 60% of non-intervention households. Total solution households reported having “fair” or “poor” health more frequently than those in the other intervention groups and these differences were statistically significant.

Figure 4.3: Self-perceived health by intervention group



Respondents were also asked to indicate whether their health had changed since the date of the pre-intervention interview. The majority of respondents, 75%, reported no change in their health, whereas 18% reported improvements, and 7% reported deterioration in their health (see Figure 4.4). There were no significant differences based on intervention groups or gender. As a large proportion of the interviewees were over the age of 65 and, as health status usually deteriorates with age, one could perhaps have expected a difference based on age. The fact that no such difference occurred may be an encouraging outcome.

Figure 4.4: Changes in health since pre-intervention interview



Respondents were asked, both before and after intervention, to identify whether anyone in the household suffered from a range of health conditions associated with living in fuel poverty. As most of these conditions are long term or chronic, it was not anticipated that there would be significant reductions in the reported cases. In fact, with the exception of stress/mental illness, all conditions either increased in prevalence or remained the same.

Table 4.20: Numbers of conditions reported before and after intervention

Condition	Before intervention	After intervention
Asthma	44	55
Chest Infections	45	45
Pneumonia/Hypothermia	1	1
Arthritis/Rheumatism	80	102
Angina	31	51
Stress/Mental Illness	34	26

Although the number of reported specific conditions did not decrease overall, the mean number of conditions (listed in Table 4.20) reported per head for total solution householders decreased significantly from 1.0 to 0.7. The mean number of illnesses per head increased slightly in the other intervention groups. This increase was statistically significant in non-intervention households.

4.5.4 Reported health improvements

Possible impacts on health were also discussed in the in-depth interviews. Health concerns were specifically mentioned as reasons why householders had welcomed the project.

My husband was not well, he was waiting for a bypass, a treble one. He is bad of asthma as well. [Householder]

I had depression and arthritis, both of those can be impacted upon by the temperature. [Householder]

Although many had not noticed any particular changes in their health, some householders commented on how they perceived the intervention to have impacted positively on their overall health and well-being.

I don't get so many colds now, or at least I've had none for far, touch wood! [Householder]

I have arthritis and I find the heat does help. [Householder]

Improvements in mental well-being were also commented on. Several interviewees mentioned how not having to get up in a cold room, or worrying about getting the heating started, was a great relief and a big worry off their minds.

It leaves you in better form. You don't wake up in the morning and think that you'll have to light a fire and "how will I manage?" [Householder]

It's a huge relief. [Householder]

4.5.5 Use of Health Services

Total solution households were asked permission to have their primary care data analysed as part of the evaluation and such data was collected for 14 individuals. The data seemed to indicate a slight reduction in consultations in relation to conditions that are associated with the effects of fuel poverty. However, due to small numbers and other methodological constraints, it was impossible to conduct any statistical analysis of this data.

The use of health services was also measured by asking survey respondents to estimate the visits each household member had made to their GP, Accident and Emergency and other hospital services over the last three months. As the number of household members varied between households, the average number of visits per head was calculated.

Possible links were explored between the use of health services, level of central heating and the presence of CDM identified in the pre-intervention survey, but no correlation was found. Comparing the mean number of visits before and after intervention using paired *t*-tests showed that there was a slight overall reduction in the mean use of services. This was not, however, statistically significant. Separate analysis of each intervention group showed that the mean number of visits among total solution households fell significantly from an average of 2.5 per head to 1.3 per head.

In exploring changes in the use of health services, the differences between the intervention groups before and after intervention was analysed. The difference between total solution households and both partial and non-intervention households was statistically significant in the pre-intervention survey. There was also a significant difference between partial and non-intervention households. After intervention, however, the significant difference between total and both partial and non-intervention households no longer exists. It would therefore appear that the use of health services has become more equal among all groups since the intervention. It might be the case that the total solution householders are using the services less as a result of the intervention. Still, as would be expected, the non-intervention households used health services the least both before and after the intervention.

4.5.6 Levels of comfort and well-being

Increased levels of comfort and well-being were among the anticipated outcomes of the project (ADHAZ, 2000). In the in-depth interviews, total solution householders explained the situation in their homes prior to intervention. The most frequent comment was related to the vast amount of work involved in keeping the house heated through solid fuel heating systems. This appeared to affect older people the most, but was a recurrent issue throughout all interviews.

You're getting down, you're cleaning out the ashes, you're lifting in big block of coal... you know it's not easy. [Householder]

Some depended on assistance in order to heat their homes.

I have to get someone to bring the coal for me and come in and light the fire in the morning. I did it until I was 74, that was long enough! (laughs). It was getting a bit too much for me, the stairs, you know. [Householder]

Comments were also made in relation to the poor indoor climate due to dust, smoke and fumes from heating houses with solid fuels.

Oh, it was terrible! It was so smoky before, that's why I have to rent for a while. The fumes from it! It was dreadful. [Householder]

After intervention, many of the factors that had impacted on the levels of comfort had, according to the householders, improved. For example, indoor climate was better and a reduction in dust also impacted on the amount of housework that was required.

With the coal I had to dust the house every two days. With the oil heating it is about every ten days! [Householder]

For some, the intervention had made it worth while to do other work in their homes, which could further increase comfort and well-being. For example, one household had carried out considerable improvements to the house after the new heating system had been installed:

The walls were so damp and old... it was plaster coming off the walls. So [after the heating was installed] I had to get re-plastering done. Plus I installed a bathroom. It is an old, old house and there was no bathroom. [Householder]

All interviewees stated that their home was much more comfortable to live in after the installation of central heating, due to increased heat, less work and improved indoor climate. It was the increased comfort which they valued most as an outcome of the project.

4.6 ENERGY EFFICIENCY AWARENESS AND SATISFACTION WITH THE PROJECT

4.6.1 The use of the new heating systems

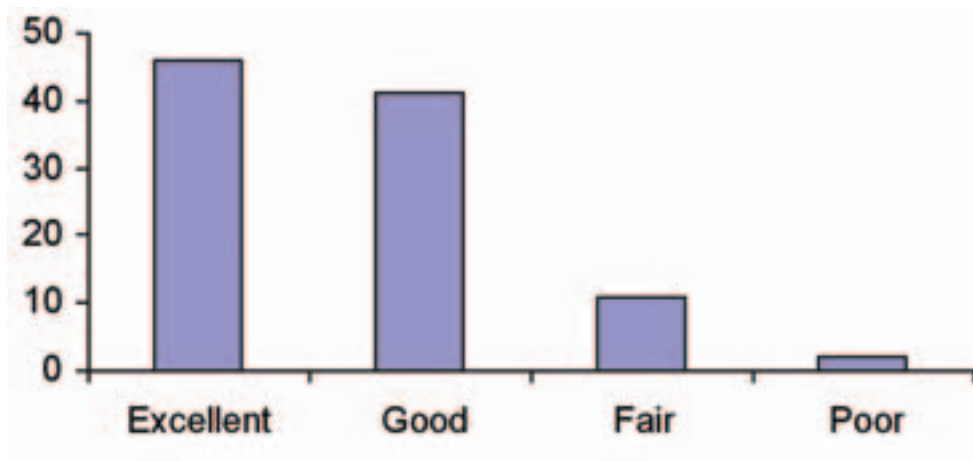
Soon after the installation of heating systems had commenced, a number of problems regarding the use of these systems were detected. Householders, particularly the older among them, found the digital systems difficult to understand and manage. As a result of such difficulties, some households did not optimise the full benefits of having the system installed.

We've had examples of our customers saying that they do like the system, it's just that they have to stay in the house at certain times of the day; this is because they want to be in the house when the heating comes on as opposed to changing the timing to suit their lifestyle. [Statutory partner]

It was decided that training sessions would take place in each of the project areas and a training programme was designed and delivered locally by NEA. The training provided hands-on experience with heating controls and included general energy efficiency advice and information.

In the post-intervention survey, the total solution respondents were asked to rate their level of understanding of the heating system. Figure 4.5 shows that almost 90% expressed that they have an excellent or good understanding.

Figure 4.5: Total solution householders' understanding of new heating system



In the in-depth interviews, however, some respondents, particularly the elderly, revealed that they had not fully mastered the use of their heating controls. Those who felt uncomfortable stated that they could contact the trainer, or installer, should there be a problem, but in practice they usually received help from a relative, neighbour or friend.

I hardly ever touch it. It is set. You can move it. I suppose at this time of year you can turn it down, but I hardly touch it. Och I know [that some people find it difficult]. There is this wee boy down the road who is very technical.

[Householder]

4.6.2 Energy efficiency awareness

Providing energy efficiency advice to householders was part of the project's remit. All householders received energy efficiency information leaflets and the Community Energy Advisor provided information and advice in her communications with the householders. Some of the total solution householders had, in addition, attended the training sessions arranged to help people manage their new heating systems.

The post-intervention surveys included some questions assessing energy efficiency awareness. Respondents were asked to identify measures they thought could help keep their houses warmer and their fuel bills lower. The most frequent reply was the type of windows in the home, followed by proper insulation (see Table 4.21).

Table 4.21: Respondents' views on what affects the warmth of homes and size of fuel bills

What affects the warmth of your home and reduces your fuel bills?	% of respondents
The type of windows you have	70%
Insulation in the roof or loft	50%
Draught proofing (e.g. strips for doors and windows)	50%
Keeping doors and windows shut and curtains closed, when appropriate	48%
Making sure things are properly switched off when not in use (e.g. lights)	42%
The type of walls you have	40%
The type of heating you have	39%
Having the heating on only as long as it is needed	37%
Controls for the heating system (e.g. programmer)	34%
The size of your house	33%
Making sure that rooms and water are only as hot as they need to be	31%
Floor insulation	20%
It is cheaper to use appliances at night	20%
The fuel supplier you are with	20%
The energy rating of appliances	16%
The tariff you are on, (e.g. quarterly, Direct Debit, meter etc.)	11%

The respondents were also asked to identify from where they had received information on energy efficiency. The majority replied that they had received information through the “Home is where the heat is” project, either through the Community Energy Advisor, the community association or the leaflets that were distributed. Leaflets from other organisations were also a common source of information.

Respondents were asked if they had acted on the advice they had been given. A number of people listed various actions including the continued use of low energy light bulbs, draught proofing measures, keeping the doors and windows closed and keeping the heat on for longer, but at a lower level.

4.6.3 Satisfaction with the intervention

Respondents were asked how satisfied they were with different aspects of the project. Satisfaction with the information provided during the project period was high amongst total solution respondents with 54% of this group reporting being “very satisfied” compared to 38% of partial solution and 20% of non-intervention respondents respectively. None of the total solution respondents reported to be dissatisfied with the information they had received. In the in-depth interviews, people expressed that they had been very satisfied with the information and support they had received from the Community Energy Advisor and the volunteers from the community associations.

If they could help you they went out of their way to do it. And if they said they were doing something, they did it. [Householder]

Satisfaction with the overall programme displayed the same pattern, with 97% of total solution respondents being satisfied compared to 85% and 51% of partial and non-intervention households respectively.

Total solution householders interviewed in-depth reported high levels of satisfaction with the installation process and that it had entailed a minimal level of disruption. With the exception of one household who reported some damage to a carpet, all those participating in the in-depth interviews reported that the work had been done efficiently and with no or little mess.

They were very tidy men. They came here on a Thursday morning to install the heating and I had it running at Friday afternoon at three o'clock [...] No mess at all. [Householder]

4.7 CONCLUSIONS

The PID set out a range of anticipated outcomes for householders (see p36). The findings reported in this chapter suggests that the intended effects did in many instances occur.

The project engaged its identified target population and those selected for measures were in real need:

- 80% of respondents owned their own home, or were in the process of purchasing their home from the housing executive and 91% of total solution respondents owned their own home
- The majority of total solution households had a gross annual income (including benefits) of less than £10,000
- The majority of people, who received some form of intervention, were 65 years of age and over and this group is particularly vulnerable to fuel poverty

Fuel poverty is intimately linked with household income. One of the ways in which the project sought to tackle fuel poverty was to increase household income by encouraging higher levels of benefit uptake:

- There has been an overall increase in benefit uptake and this increase was statistically significant for non-intervention and partial solution households. The income in these particular households may have increased as a result of the project
- A number of those receiving the total solution, in particular those on the lowest incomes, were still spending more than 10% of their income on fuel. This highlights the relative importance of income with regard to fuel poverty among those on lowest incomes

The project also aimed at increasing the energy efficiency in homes and raise awareness among householders in relation to energy efficiency:

- All total solution households now have full central heating
- In the pre-intervention survey, 50% of total solution households stated that their homes were too cold, no one reported this in the post-intervention survey. Satisfaction with the temperature of the home increased significantly for total solution households after the heating systems were installed
- Although most of the houses for which temperature data was collected are still relatively cold, temperatures are now spread over a narrower range indicating increased control of heat. It may also be the case that as people gain more experience with their new system and how it impacts on household budget, they may increase the heat
- People express high levels of understanding of their heating systems, possibly increased through the delivery of local training sessions. Yet some, particularly the oldest, still require assistance to set and change their heating controls

The project aimed to have a positive impact on health, and some changes in conditions that are likely to impact on health, such as reduction of CMD, did occur:

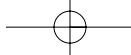
- The presence of CMD decreased significantly in the total solution houses and the significantly higher frequency of CMD in this intervention group compared with the others did not exist after intervention

Based on self-reported health, some differences between the intervention groups were observed:

- Significantly higher numbers of total solution householders reported “fair” or “poor” health compared to those householders in both the partial solution and non-intervention groups
- The mean number of illnesses reported per head in the total solution households decreased significantly in the post-intervention period
- Before intervention there was a significant difference in the use of health service by intervention type with total solution householders using such service more than the other groups. After intervention this significant difference no longer existed
- The mean number of reported health service visits for total solution householders fell significantly in the post-intervention period

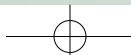
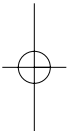
The research also identified high levels of satisfaction with the project:

- A total of 97% of the total solution householders, 85% of the partial intervention householders and 51% of the non-intervention householders were satisfied with the programme.



Chapter 5

The "Home is Where the Heat Is"
Steering Partnership



Chapter 5

THE “HOME IS WHERE THE HEAT IS” STEERING PARTNERSHIP

Complex public health issues cannot be solved by individuals, individual organisations or even one sector of society (Pratt *et al.*, 1998). During the last decade, cross-sectoral partnerships have been set up across the UK and beyond in order to tackle complex issues in a co-ordinated way using the strengths and resources of all sectors. Drawing on existing literature on cross-sectoral partnership working, this chapter explores the ways in which the steering partnership functioned and how it contributed to the overall aims of the project.

5.1 PERSPECTIVES ON PARTNERSHIP WORKING

5.1.1 Collaborative problem solving

In a recent article, Lasker and Weiss (2003) describe features that are important for collaborative problem solving to improve community health. These include the creation of *bridging social ties* between groups or organisations, which bring people together across society’s dividing lines. The creation of *synergy* would ideally be the result of negotiations where consensus is reached without requiring anyone to “give in”, but that all participants jointly create something new. The ability of a partnership to achieve a high level of synergy has been found to relate strongly to the partnership’s non-financial resources such as knowledge, expertise, credibility and connections between people and groups (Weiss *et al.*, 2002). Proper community participation in partnerships is seen as essential to partnership work in order to ensure that real needs are being met and that the decisions reached are acceptable to the local communities (Jones, 2000; Katz *et al.*, 1997). The lack of such community involvement and ownership is frequently pointed out as a key difficulty in strategies to improve health (Pickin *et al.*, 2002; Lasker and Weiss, 2003).

The literature on cross-boundary working refers to the importance of the role of key individuals, often called “boundary spanners” (Williams, 2002; Sullivan and Skelcher, 2002). Boundary spanners are typically entrepreneurial, are able to see how an issue looks from a number of view points and can relate to people in different circumstances with different cultures and value bases. They display skills such as diplomacy, negotiation, brokerage and facilitation, which are often essential to catalyse collaboration or new ways of working (Sullivan and Skelcher, 2002). The boundary spanner enjoys the trust of the partners and this trust can, at times, serve as a way of coping with risk (*Ibid.*).

5.1.2 A framework for partnerships

The IPH has produced a framework for partnerships for health (Boydell, 2001). The framework illustrates the interplay of a range of different elements present in multi-agency working and one of the aims of the framework is to serve as a tool for the evaluation of such partnerships (see Figure 5.1). In the remainder of this chapter, this framework will guide the presentation of data. By exploring how the partners experienced the different aspects of the partnership, the extent to which the collaboration resulted in establishing bridging ties and the creation of synergy will emerge, as well as the importance of the role of key individuals and groups.

Figure 5.1: IPH partnership framework



(Boydell, 2001: 10)

The foundation, process and impact of the partnership will interact and influence each other, making the partnership process a dynamic one. Some outcomes, such as changes in health, may not manifest themselves for several years. Some immediate impacts and outcomes of the partnership process are, however, emerging.

5.2 THE “HOME IS WHERE THE HEAT IS” PARTNERSHIP

5.2.1 Context

A partnership’s context affects the everyday working of the partnership and consists of issues such as the political climate and the history of working together (Boydell, 2001).

Previous experience of working together

Some of the organisations, in particular some of the statutory organisations, had worked together previously on similar projects. The joint working between organisations from the health sectors and from the energy efficiency sector, however, was a relatively new experience for most. For some of the partners, in

particular some of the statutory partners with long experience of working in partnerships, the appeal of taking part in this pilot project was the opportunity it provided to work in new ways. For example, this was the first time the NIE customer levy fund had been used to install heating systems in homes.

The scheme was unique in that it was the first scheme in which heating was included. Before this scheme happened we were not allowed to install heating systems. [Private partner]

Such new ways of working, it was expressed, had the potential to open up novel ways through which to achieve organisational targets. For other groups, and for the community associations in particular, the partnership created links to organisations that they had not worked closely with before.

Policy context

As a pilot project, “Home is where the heat is” was intended to impact on public policy in the area of rural fuel poverty and health. Partners were explicit in their comments about the opportunities, afforded by the project, for such impacts to occur. From the viewpoint of the DSD, participating in the HAZ pilot project provided an opportunity for learning, which would inform the development of “Warm Homes”. From the NIHE’s point of view the “Home is where the heat is” provided a method for addressing energy efficiency in the privately owned housing stock as required by their status as HECA authority for Northern Ireland.

So it became clear that our strategy for the private sector was going to have to be to encourage, facilitate, persuade, with or without the financial incentives, owner occupiers to carry out works on their own stock. [Statutory partner]

Knowledge of the local context

The representatives from the community associations brought with them detailed knowledge of the project areas. This was pointed out by most interviewees as having been critical to the ways in which the partnership functioned. The elected representatives on the partnership also had good local knowledge and expressed how their contribution to the programme could draw on such experience.

It was coincidental that I represent the [area], therefore it was like playing a home match, I had a great feel for the whole area, I understood it and the problems quite clearly. [Elected representative]

The context, which impacted on the partnership’s work ranged from regional policy making to very local issues specific to rural communities. This created the potential to root any policy outcomes in experiences “on the ground”. The success of such an approach depends on the grounding of the partnership and the complementary nature of its composition.

5.2.2 Grounding

The grounding of a partnership consists of the diversity of people, groups and organisations that constitute the partnership, who ideally share a desire to work together (Boydell, 2001).

Complementarities of partners

With 21 partner organisations, the partnership included people and organisations with a wide range of skills and expertise. As a result, the partnership itself contained the skills and experiences it needed to carry out its functions.

Everyone came in from different angles to it... on the technical side there was Eaga and NIE and it meant that there was experience on call and you never had to go outside the group. There was always somebody in the group who knew. [Statutory partner]

Adequate representation on the partnership was seen as essential and, at the early stages, one or two new partners had been invited on board when it was considered necessary.

At the start, one partner we didn't have at the table was the Social Security Agency, but as we identified what the need was they came on. [HAZ staff]

It was recognised that all partners brought specific skills and expertise to the table and examples of such resources are summarised in Figure 5.2.

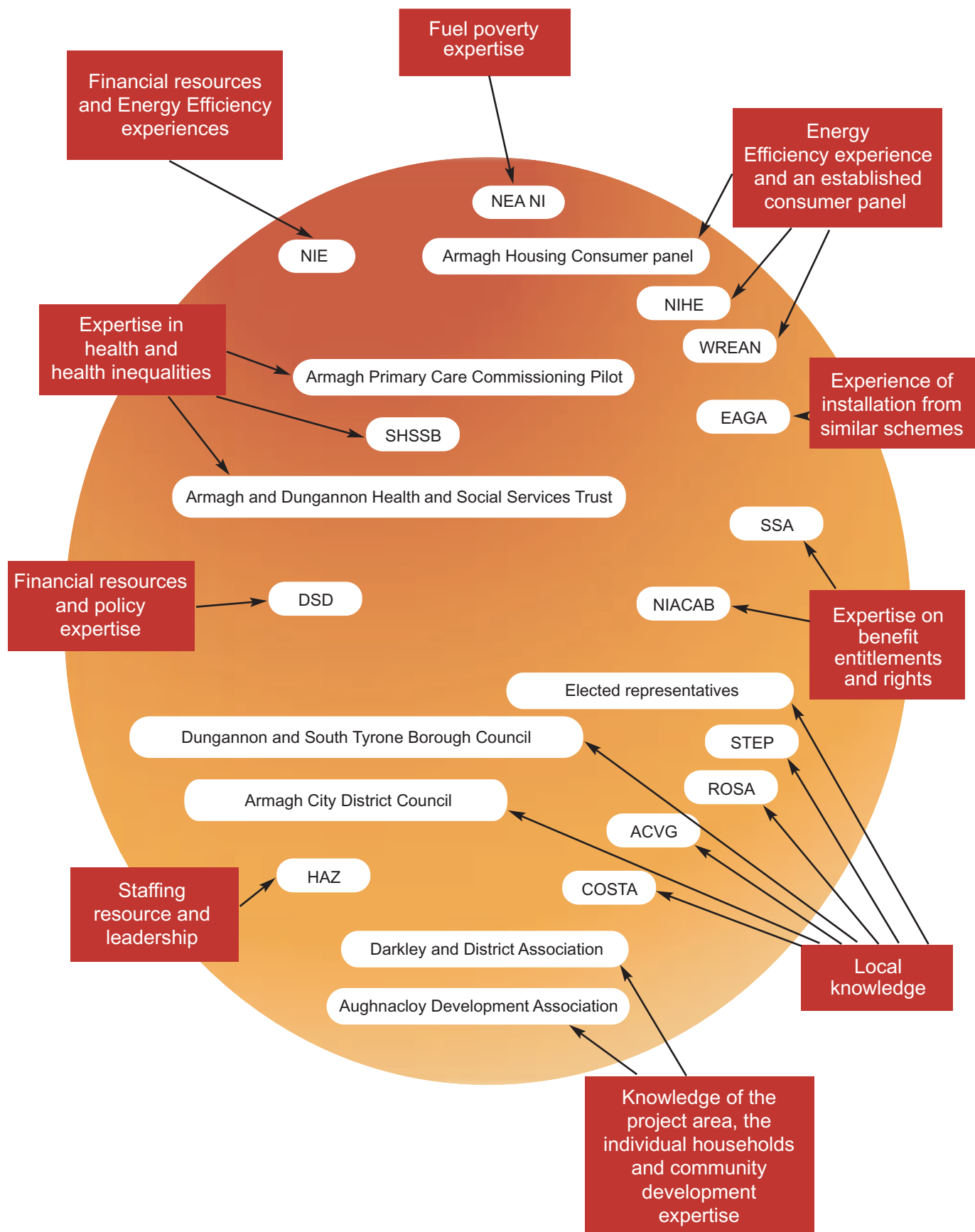
In many cases, representatives from community groups have experienced that although they are invited to engage in partnership work, the resources they bring to the table and the advice they provide may not be fully recognised (Lasker and Weis, 2003). In the "Home is where the heat is" partnership, the contributions of the community representatives were identified by all stakeholders as essential to the successful delivery of the project.

The steering group worked well and the community groups were prominent on it. They were really often telling us what to do. [Private partner]

The considerable effort on behalf of the HAZ team to keep everyone involved further illustrates the way in which, according to partners, everyone's contribution was valued:

There were times when [name] couldn't make a meeting. [HAZ manager] would have rang her, you know, if there was a decision making process and she wasn't part of it. So that's commendable, to keep account of the people who were not there. [Voluntary partner]

Figure 5.2: What the partners brought to the table



Shared ownership

From the very beginning the programme was developed in partnership. This may have helped foster the feeling of ownership that came across in the interviews. Many of the interviewees also commented on a feeling of *shared* ownership; that the programme was not appropriated by any organisation or agency, but was seen as a separate entity in which they all had a stake. Indeed, one of the successes identified by several of the partners was that the partnership had managed to keep everyone working to the same aims and to avoid being “hi-jacked”.

It's not one person taking the praise, it's not one person saying, well, it's our department that has delivered that, it is everybody as a whole interlinking together and saying, right, let's take this forward. [Elected representative]

5.2.3 Foundation

A partnership's foundation includes the establishment of the vision, mission and values of the partnership (Boydell, 2001). Clarity of purpose and a clear, shared vision of what a partnership is trying to achieve has been identified as essential in order for partnerships to achieve their aims (HDA, 2003; HEBS, 2001; Goss, 2001; Boydell, 2001). The vision and aims of the “Home is where the heat is” programme, as explained in chapter 3, were developed through initial discussion among the partners.

Values

The values upon which the partnership was based were implicit in the project initiation document. The emphasis on local participation, meeting real needs, working in partnership and learning through evaluation reflect values such as equality, social justice, and transparency.

“Priority will be given to those most at risk [...] The project will be enhanced by a “whole community” approach [...]. The project brings together key partners from the statutory, private, voluntary and community sector [...] It will be subject to rigorous monitoring and evaluation.” (ADHAZ, 2000: 4-5)

The value placed on community participation was manifest in the application of community development approaches. Moreover, a people-centred approach made it a prime concern for all partners that real needs were met and, throughout the process this was demonstrated by extending, altering or “bending” the project criteria in order to meet needs.

The project had to be flexible, it had to take account of the fact that some people might fall just outside that criteria or not quite come up to the eligibility criteria, but yet clearly there was still a need. So it was very flexible, and some measures were included that weren't included in other schemes, and some

people were admitted to the scheme that maybe under another government scheme wouldn't have been admitted. [Statutory partner]

Vision and focus

Comments were frequently made on the ways that a strong focus on the overall aims of the project helped people stay engaged throughout the process. The community representatives were seen as playing a particularly important role in maintaining momentum and motivating other partners.

If anybody needed to be kept focused the community group would do that. [Statutory partner]

The HAZ team emphasised the importance of recognising the agendas and targets of the various organisations and to build them into the programme design so that it was in everyone's interest to keep focused on the programme's overall aims.

You know, everybody comes to the table with their own agendas [...] and what you have to do is identify for everybody how being there is going to meet their agenda. [HAZ staff]

5.2.4 Process

The leadership, communication and team building required for the partnership to function successfully form part of what has been called the *process* of the partnership (Boydell, 2001).

Team building

The quality of the relationships between partners is crucial when embarking on joint working (Evans and Killoran, 2000). Through the interviews, the partners expressed enthusiasm about being part of the group. The complementarity of expertise and the commitment referred to earlier was seen as central to creating a sense of being part of a team. References to an ethos of team spirit and team work were notable in the descriptions of how the group sought solutions to problems that occurred.

I think this group of people were determined that if we came to a barrier we would move heaven and earth to overcome it. [Statutory partner]

In order to make realistic and deliverable decisions, partners expressed that it was essential that all relevant agencies and organisations took part in the decision making process. The general view was that there had been representation from an adequately wide range of organisations to achieve this. There was consensus that the representation from community groups had been essential in ensuring that decisions were realistic and possible to implement.

This one was definitely bottom-up. I tell you what, if it hadn't been it wouldn't have worked. If someone had come here with a three piece suit they wouldn't even get through the doors. Local knowledge and local people meant it worked.
[Community representative]

The commitment of partners and the ethos of team work was also evident in the considerable amount of work that happened between each meeting of the full partnership. Many of the interviewees explained how problems that occurred were often dealt with immediately and not put on hold until the next meeting. This, it was emphasised, increased the outcome for householders and made the partnership work more efficient. The ongoing discussions, communication and decision making between meetings was possible due to the amount of trust that was built up between the partners. This was recognised by the HAZ team:

There's a lot of taking care of things and ensuring that everything was OK for the project to keep proceeding [...] I would have been given an awful lot of latitude and trust to do what I thought was right, you know, I do know that.
[HAZ staff]

Challenges of working in partnership

Working in partnership requires effort and a number of common challenges were identified. For example, it was pointed out that the statutory organisations that were not used to working with local community groups might initially have found such work challenging.

Some of the big statutory organisations are very bureaucratic, they may feel it is a little dangerous to allow community groups to be in charge.
[Private partner]

Although the general experience of working in partnership had been a positive one, decisions in relation to allocation of energy efficiency measures had at times been challenging.

Let's not get too rosy tinted glasses here; there were times when things were difficult and when we had trouble reaching agreements. We could find someone who lived in an old house that really needed repair, but it may be a NIHE property that was not due to be renewed for another two years. To put in heating in a house that may be demolished in two years would not be the right thing to do. There were decisions that were not easy. [Voluntary partner]

Like all partnerships there were times of frustration and disagreement, and most partners referred to occasions when relations needed to be nurtured after such disagreement. A strong view that came across in most of the interviews, however, was that the steering partnership had sought solutions to most of the

challenges that occurred and that a focus on the common goal fuelled the overall partnership process.

Whilst different people from time to time in any partnership may have disagreements on tactics and approaches, nobody lost sight of the main objective [...] and it wasn't in anybody's interest to allow committee politics, if you like, to get in the way of that, essentially any difficulties or disagreements were talked through and were dealt with either openly or behind the scenes.
[Statutory partner]

Flexibility

The flexible nature of the partnership was pointed out by most interviewees as a key success factor. In particular, such flexibility was seen as essential to ensure that the delivery of the project was in keeping with its values. This flexibility was something that community representatives in particular commented on, as they would be the ones with intimate knowledge of the circumstances of families in their community.

We fought for many people, we didn't just stick to the rules all the time.
[Community partner]

Such flexibility was reflected in other areas of programme delivery and made it possible to address some practical barriers that had not been envisaged, or budgeted for, in the PID.

We also would have been very flexible in working out building control, where HAZ actually paid for building control, we didn't even have the budget for it, we just paid it, because our feeling was, if people don't have five pound, then they don't have a hundred and fifty pound and the reason why they're getting it is the need. [HAZ staff]

Leadership

Leadership and management has been shown to impact on the success of partnerships, in particular in its ability to create synergy (Lasker and Weiss, 2003). Leadership may, however, be provided by a variety of people at different levels and in both formal and informal ways (Ibid.).

ADHAZ was seen as the lead partner in the steering group, and the leadership demonstrated by the HAZ manager was frequently commented upon. The HAZ manager, while recognising the lead role of the HAZ, emphasised that this was only possible due to the trust that had been built up.

Well, I think each of the partners would have had great trust that we were keeping the whole thing together, so there wouldn't have been any problems in

relation to the fact that we were leading, very explicitly leading, and keeping all the factors together. [HAZ staff]

Many of the interviewees described the HAZ manager as demonstrating the characteristics of a boundary spanner.

“[Her] energy; she lobbied hard on issues, she promoted it very much..[She] made the people in high places aware of the scheme. It got very good publicity and that all interlinked ... It worked together for the benefit of everybody. [Elected representative]

The Community Energy Advisor was also described as possessing many of the skills associated with boundary spanners, particularly in her facilitation, communication, negotiation and interaction with the communities and the various organisations involved at a local level.

[She] was exceptional. Oh, she’s an honorary citizen in Aughnacloy now, and she was so helpful. No matter what happened, if there was a problem [she] would write it down, she would phone me that evening or the next day or whatever and she would have talked to Peter or Lisa, “don’t worry about it, we’ll get it sorted”, and she did. [Community partner]

The leadership provided by the community groups was also frequently highlighted. This leadership was seen as part of the crucial role these groups played in the delivery of the project.

We got to a point where we particularly listened to the community representatives and they seemed to have particular clout at the steering group, because we knew that they were responsible for ensuring the delivery. [Voluntary partner]

5.2.5 Impact

The impacts of a partnership refer to the immediate measures that can be directly attributed to it and that may influence conditions for change (Boydell, 2001). Some immediate impacts of this partnership were mentioned in the interviews, and many commented on how their experience with the partnership had impacted on the ways in which they carry out their work, particularly in relation to community participation.

It allowed us to come out of working purely within a professional Trust structure, getting more involved with the local community. [Statutory partner]

There seemed to be a general impression that the trust and “team spirit” that was built up had enabled partners to act in new ways.

There was a greater comfort zone in some of the risk taking, people were together breaking new ground. It is difficult to break new ground but when you are risk taking together it's easier [Statutory partner]

Comments were also made on how the work of this partnership may impact on partnership working in general in the ADHAZ area.

Now, this again I feel is difficult to weigh, measure and quantify, but [...] I think it has been a catalyst or a focus to show other people, organisations and groups, "look what happened there". [Elected representative]

All partners commented on ways in which their organisation had benefited from taking part in the programme, either because of the contribution to organisational targets, or because the learning would improve the ways in which the organisations carry out their business.

We got brownie points for being associated with a good project. You know the Stormont launch, the photo shoots with the Minister... It all helps to enhance our reputation. We still have many of those contacts and there are favours being done both ways. [Private partner]

Those representing the community commented on how being part of the programme had enhanced their credibility, within the community, which would be helpful in their future work and ultimately benefit the communities themselves.

The experience of working in partnership with the communities was pointed out as the key outcome for ADHAZ because it grounded the project and all policy recommendations that derived from it.

For us, we could go home each night, but for Jim, it's real, it's life. So from that point of view, actually connecting with the highest of ministers to right down on the ground, and being able to deal at all those levels and retain respect and influence and friendship and trust was what HAZ learnt from it all. [HAZ staff]

Participation in the "Home is where the heat is" partnership had in different ways contributed to the partner organisations' aims, targets and learning; some of these outcomes are summarised in Figure 5.3

Figure 5.3: What partners gained



EXAMPLE 5.1 FINDING SOLUTIONS: “BACK BOILERS”

One example frequently quoted, of how the partnership had worked in a flexible manner to solve problems arising, was related to the issue of old solid fuel based central heating systems that were in existence in some of the houses. This system heats up the house and hot water through a “back boiler” using the heat generated by a coal fire. During the early days of the project, some safety issues were raised in relation to these back boilers. If a new central heating system was installed without removing the old system, there was a danger that the system could leak gasses and possibly explode. For this reason it had been decided in similar schemes elsewhere that, in order to have a new heating system (run by gas or oil) installed, old systems and fireplaces had to be removed. It was suggested that the same safety measures should be put in place in the “Home is where the heat is” project. This, however, caused considerable concern among householders and community representatives. Their main concern was that in rural areas such as Aughnacloy and Darkley, power failures occur regularly. Without electricity the new heating systems would not function and if fire places were removed people would, in effect, have no means of heating their houses during power failures.

To me that wasn't sensible at all because we have blackouts very often and you are leaving elderly people with absolutely no heat. [Community partner]

Another reason why it could potentially be beneficial for the householders to keep their fireplaces was the access some people had to free fuel.

An awful lot of rural homes have their own wood and turf. That's free fuel. [HAZ staff]

The presence of a fire place also serves social functions and were described as important to the aesthetics of people's homes.

If you took it out you have no focal point in the room....You wouldn't know where to sit! You can't sit around looking at a radiator! (laughter)
[Community representative]

The issue had to be addressed by the partnership before proceeding with the installation of central heating systems. In reporting the discussion, interviewees emphasised the overall concern of getting the best outcome for householders, taking all issues, including their safety, into account. The partnership managed to reach an agreement that satisfied all, which entailed disabling the old back boilers but allowing people to keep the fire places for occasional use.

This feature of the project, allowing householders to keep their open fires, was described as a result of the strong voices of the community representatives on the partnership.

What our scheme has done that no other scheme has done, we were listened to and it was in here round the table that that happened. I think that is powerful [Community partner]

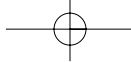
Importantly, letting people keep their fireplaces was described as essential in order to make sure people in need availed of the programme.

If you hadn't left the fires in I think many people wouldn't have took it [the heating]. [Community representative]

5.3 CONCLUSION

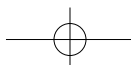
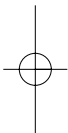
The steering partnership was grounded in a diversity of organisations, each bringing specific skills, expertise and experiences to the table. Throughout the interviews, partners expressed that they respected and valued the input from everyone and that they saw the diversity of the group as crucial to the achievements of their common goals.

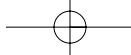
Following Lasker and Weiss (2003), a high degree of synergy between the partners and organisations seemed to have created something they could all identify with and that was supported and owned by everyone involved. This was possible due to the resources brought to the partnership, and these were to a large extent non-financial such as knowledge, expertise and relationships with members of the local community. The importance of all these resources were recognised (c.f. Figure 5.2), and in particular the resources brought to the project by the community representatives. Community representatives expressed that the partnership process was underpinned by community participation. As mentioned previously, the lack of community participation is frequently pointed out as a main barrier to partnerships that seek to improve the situation for communities (Pickin *et al.*, 2002; Lasker and Weiss, 2003). In particular, the openness of statutory bodies to full community participation in strategic planning is seen as necessary for good partnership working (Ibid.). Although not a part of the process from the very outset, the community representatives were described by all involved, including the representatives from statutory organisations, as key partners involved in the strategic planning of the project.



During the partnership process, trust was built up among the partners and between the partnership and the local communities, which facilitated the building of bridging ties between individuals and organisations (Lasker and Weiss, 2003). This was the first time many of the partners worked with people from the other sectors (e.g. the community sector, the health sector or the energy efficiency sector), and many comments were made with regard to how these relationships were valued and would facilitate the effectiveness of future work.

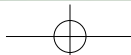
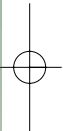
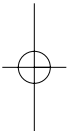
The level of trust developed was instrumental in allowing a flexible approach to be taken as partners could take minor decisions and carry out work between full partnership meetings. This flexibility was commented on by all partners as one of the key features that had contributed to the success of the project and enabled individuals to exercise effective leadership. The HAZ manager and the Community Energy Advisor were both described in terms of boundary spanners (Williams, 2002; Sullivan and Skelcher, 2002), enjoying the trust of the partnership. At different levels they had been able to communicate, negotiate and facilitate, thus ensuring progress and maintaining momentum.





Chapter 6

Community Participation



Chapter 6

COMMUNITY PARTICIPATION

In essence, community development is about the participation and involvement of local people in identifying and addressing local issues. The first part of this chapter will focus on the involvement of local people in the “Home is where the heat is” project. The second part will explore how changes in such involvement, and what has been termed *social capital* may, in the longer term, impact on health.

6.1 COMMUNITY DEVELOPMENT

6.1.1 What is community development?

The term “community” is commonly used to refer to a group of people who share an identity (e.g. belonging to an ethnic group), an interest (e.g. political activism), or a locality (e.g. a village) (Barnes, 2003). As described in the introduction, communities are increasingly given responsibilities for maintaining health and a range of government policies and strategies now include community development as a central delivery mechanism. Community development has been defined in different ways (See Freeman *et al.*, 1997 for an outline of different definitions). Most definitions emphasise the importance of tackling a community’s problems by using the energy and leadership of the people who live there (Thomas, 1995). In the application of community development approaches, local communities should be facilitated to take an active part in defining the problems they face as well as in the planning and implementation of solutions to these problems (CHDN, 2000). The importance of involving community representation in strategic decision making has been pointed out by Picken *et al.* (2002) and is included in key public health policy documents in Northern Ireland (DHSS, 1999; CHDN, 2000).

In evaluating the community development process of the “Home is where the heat is” project, attention will be given to how the local communities became involved in the project, the degree to which they were part of defining the issues; the ways in which they took part in decision making and the implementation of the project.

6.1.2 Equal participation

As mentioned in chapter 5, issues of power relations are common challenges to partnership working, and in some cases those representing communities have experienced being invited to be part of partnerships but that in the day-to-day running of the partnership they may feel marginalised. Community representatives sometimes sense that the expertise they bring to the table is not always

recognised in decision making (Lasker and Weiss, 2003; Holden and Craig, 2002). Several of the community representatives in this project reported having had such experiences previously.

ADHAZ's initial approach to engage community groups by arranging open meetings was soon identified as inappropriate. It had not fostered community participation as well as it could have.

We had open evenings, we did one in Aughnacloy and one in Armagh. The first one in Aughnacloy, I think about seven people turned up, and in Armagh, two people turned up, and that really took us at a gulp. [HAZ staff]

Having learnt from this initial experience, the HAZ team put considerable effort into facilitating community participation, and a range of meetings with community groups in the "cold spot" areas were held. Once the project areas had been selected, community representatives were invited to be part of the steering partnership and introductory meetings were held to establish relationships and build trust, in order to fully engage the community groups.

We went to their community meeting, talked to them about the project, talked to them about what was important from the point of view of relationship building, you know, that there would be openness and respect and then asked them to nominate partnership representatives so that they would go forward into a decision making process. [HAZ staff]

The community representatives reported positive experiences of participating in the steering partnership, acknowledging that they had been full partners, had taken active part in the decision making processes and had been part of setting the agenda. The role of the community representatives in the partnership was described by all partners as vital in order for the project to connect with its target population.

A department or an agency could come up with a wonderful idea, but it takes people in the community to go out there and try to sell that, it takes people in the community to come into the committee and feed back their concerns and their ideas to the Strategic Group and feed on it from there and work on it from there. [Elected representative]

The importance of grounding fuel poverty initiatives in order to secure community support has been recognised (Jones, 2000). The community representatives reflected on how their participation had ensured that the project was grounded.

You can always better everything. But it would be difficult to better this scheme,

it is the best that I have seen as a community project involving partnership in 22 years in this game. It was because it was community led. It was driven by people working in their communities. [Community representative]

6.1.3 Using local knowledge

The community associations agreed to take part in the design and carrying out of the pre-intervention survey and they received specific training to enable them to do so. Their involvement in the questionnaire design, it was explained, had ensured that it had worked well in the field.

The survey sheets were in a language people could understand. And not too long or intrusive. [Community representative]

Productive communication with communities has been pointed out as a key challenge in fuel poverty interventions (Jones, 2000). Face to face communication with individuals is recognised as the best form of communication, but often interventions fall back on traditional methods such as distribution of leaflets etc. (Ibid.). The detailed knowledge that the community representatives had of the project areas was crucial in all communications with the members of the communities. It was recognised by all partners that this feature enabled the project to reach people that otherwise may not have engaged.

The people that were driving it forward at community level knew the community in which they were operating, they were trusted within that community and were able to engage in that sort of two way communication that we can't really do. [Statutory partner]

Throughout the surveying of households and the instalment of energy efficiency measures, local knowledge was vital to practical matters such as actually finding houses in the most remote areas.

There were houses that you wouldn't have found [...] We could help [the Community Energy Advisor] in terms of saying "in this house there will be dogs, so be careful when leaving your car". [Community partner]

Based on previous experience, the partners had been prepared for a considerable number of measures being turned down by householders.

In our experience, people get an offer to have their home improved with £3000 of investment and they turn it down. [Private partner]

In this project, however, all those who were offered energy efficiency measures accepted the offer. The high uptake was seen to be a result of the community

development approaches applied in the project, emphasising local participation and fostering local ownership.

The engineers who were working, said they had tried to do this elsewhere, but they would turn up to install their central heating system and the person would say, "I've changed my mind"[...] There hadn't been that ground work put in with the community. [Statutory partner]

EXAMPLE 7.1 COMMUNITY PARTICIPATION: SETTING AND APPLYING ELEGIBILITY CRITERIA

Criteria for project eligibility was set by the steering partnership. The community groups decided, on the basis of the surveys completed, who would be put forward to receive measures. Some discomfort was expressed in relation to the criteria as it could exclude people who were in need but who were just above the threshold for eligibility.

Some people were in need but did not meet the criteria, they may have war pension or something that leaves them just above the threshold. They may still be needy. [Community representative]

The community representatives and the Community Energy Advisor would, in many cases, have detailed knowledge of family or individual circumstances.

When she collects her pension on a Monday she has fifteen pounds over after paying her rent, - it's not fair.. [Community partner]

It was pointed out, by several community representatives, that perceptions of unfair criteria could create feelings of resentment in the community and impact on their own work and credibility.

You have to watch your criteria. You can have a lotto millionaire getting income support. On paper he is entitled to the heating. As a Community Association you can get questions from people. [Community representative]

Many of those interviewed, particularly those representing the communities, emphasised that projects, such as this, should be flexible enough to apply local knowledge to the local situations and be open for the judgement of local people, to ensure that real need was being met.

There should be discretion so that people can use their judgement, If you know

someone is 10 pence over the limit, but is deserving, we should be able to give it to him. [Community representative]

A key objective for the steering partnership was to meet actual need. A flexible approach was therefore taken to the set criteria, allowing community representatives to take into account individual factors while assessing need and deciding on who would receive energy efficiency measures.

It was good with the flexible approach. It was not the case that some grey suits in Belfast decided who should get what. It was based on individual need. [Private partner]

The criteria were negotiated and extended based on such local knowledge:

Originally it was to be any house over ten years old, new bungalows and every thing we didn't touch. But then we found out there were many people in new bungalows, the white goods, they wouldn't have a proper fridge freezer, they had...brought the old stuff in to do them for now.. [HAZ staff]

Such negotiations required flexibility from all partners:

And I think credit has to be given here to NIE, who was so flexible in saying, yes, we can accommodate. [HAZ staff]

6.1.4 Supporting the process

The role of the Community Energy Advisor was seen as necessary given the scale of the project and the importance of providing appropriate support to the communities.

We knew that in the same way that HAZ needed to be driven, that this project needed to be driven, because ... if nobody is dealing with that all the time then it goes nowhere and you achieve nothing. So she came in and immediately began building relationships with the community. [HAZ staff]

The HAZ team realised, however, that they might have been unrealistic in terms of the amount of work it was feasible for the community associations to take on on a voluntary basis.

We were very silly in our expectation, we really had to review and reconsider what our expectation of the community could be. [HAZ staff]

As a result, the supporting role of the Community Energy Advisor became more important than initially envisaged and she was able to carry out much of the work involved. The community representatives expressed strongly that the role

played by the Community Energy Advisor had been crucial for the success of the project, not least as it enabled them to fulfil their role as mediators between the steering partnership and the communities. As referred to in chapter 5, the Community Energy Advisor's personality, skills and capacities enabled her to communicate with a range of people and bring people on board.

[She] was good, she could talk about prices of cattle, lighting in the outhouse etc. She knew the people and what was relevant. [Community representative]

The support from the Community Energy Advisor facilitated the ongoing contributions from the community representatives, in particular in the communication with members of the community.

"The community [representatives] owned the process, so they cajoled people into actually participating and taking part, they also were very valuable in getting the messages out into the community about what it was about, so they would have known the local police, they would have known the local minister, they would have known the newspapers, they would have known where to put up posters, they knew what time the buses left at in the morning, they could put it in the bus shelter". [HAZ staff]

6.2 SOCIAL CAPITAL

6.2.1 Social capital and health

Community involvement, social networks and trust has been shown to have significant impacts on health and well being (Putnam, 2000; Balanda and Wilde, 2004). Durkheim showed, as early as 1897, how the mental well-being of individuals may be protected because their investments in social relations and networks provide a supportive environment (Durkheim, 1951). There is a growing evidence base suggesting similar links between physical health and investments in social networks, and the concept of *social capital* has increasingly been applied to the analysis of such links. There is currently no agreed or common definition or application of the concept (Hawe and Shiell, 2003), but what the various definitions have in common is that they focus on the importance of trust, norms and networks that can impact on actions which, in turn, may impact on conditions for health.

In the following sections, social capital will be defined as *"the social investments of individuals in society in terms of their memberships of formal and informal groups and institutions"* (Turner, 2003: 7). A possible increase in social interaction and trust in the "Home is where the heat is" project areas may be likely to impact on long term health outcomes locally. In addition to data derived from the in-depth interviews, some items from the post-intervention survey focusing on social capital indicators will also be referred to.

6.2.2 Social cohesion in the project areas

The partners made reference to a somewhat “apathetic” attitude in the project areas and a general lack of engagement. This was in part explained by structural factors related to being a rural community which was seldom the focus for regional or local regeneration.

It's the old argument about rural areas being on the margin of society and being peripheral, and therefore there isn't the same amount of public money going into getting the information out, which is probably true. But all government departments working with limited budgets tend to target the big centres of population first. [Statutory partner]

Some commented on how being a rural community may limit the opportunities for social interaction:

We've a market up here the first and third Wednesday of the month. You might not buy anything at the market, but you met your neighbours, you had the craic and you might not see them again until the next market, or the one afterwards. [Community representative]

6.2.3 Engaging people through the building of trust

In spite the opportunities the project represented for individual households to improve their homes, the local community groups recognised that it would require hard work and imagination to engage local people.

At the beginning we had open days and we had a stall up in the market. The response was not great... We called back and called back with questionnaires and they wouldn't respond. [Community representative]

It was soon realised that relying on self completion of the surveys would yield a very small sample. From then on the volunteers, or the Community Energy Advisor, filled in the surveys together with the respondent. It was recognised that issues of confidentiality and access to the information had to be addressed, and that trust needed to be built up between the community representatives and the householders. The fact that local people were the ones carrying out much of the work was seen as an important factor in engaging people.

People at the door may be sceptical. If people saw it was [local volunteer] at the door they would open to see what the craic was. [Community representative]

As local people learnt about the project, many approached the community representatives, hoping to be included. People's ideas of what the project could deliver did in, some cases, become unrealistic.

They were coming looking for washing machines from Fivemiletown, - Fivemiletown is fifteen miles away! Nobody ever got washing machines. [...] There was a lady down the footpath and she was saying "you're the very one I want, my vacuum cleaner has just given up, can you do anything for me?" I couldn't believe it; I don't know how the rumour went out.
[Community representative]

In spite of being wrongly informed about the remit of the project, such approaches illustrate the momentum that the project built up as well as a belief that the community associations could deliver for the local population.

6.2.4 Strengthening of community relations

When asked about the outcome of the project for the local communities, the community representatives expressed how the communities now had a stronger belief that there were local organisations which could and would work for their benefit. A general strengthening of the groups' relationships since the inception of the project was also pointed out.

It built relations within the community, we delivered something. It certainly cemented those relationships. [Community representative]

Partners also commented on reported increases in confidence and the "feel-good" factor locally:

Another outcome of the project is that it impacted on the confidence among the community. The fact that people in a rural community realise that something can be done even if you're not in an urban area or in Belfast... This is tremendous. [Statutory partner]

The central position of the community associations in the project was pointed out as demonstrating that things can be achieved at local level.

I think it has been a very big advantage to those places... They are great examples to show to people what can be done and what's worth being done.
[Elected representative]

6.2.5 Local perception of the effectiveness of community groups

The community representatives explained how their involvement had raised the status of their group and given them increased credibility in their communities.

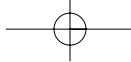
A high proportion of those who received measures would identify the community association as those giving it. It gave us credibility.
[Community representative]

In the post-intervention survey, 73% of respondents agreed with the statement that by working together people in the neighbourhood can influence decision making. Some 11% indicated that, in retrospect, they thought they were more likely to agree to this statement now than at the time of the pre-intervention interview; perhaps suggesting that the strength of community participation in this project has made respondents believe that they can impact on decisions relevant to their community. Interestingly, those who benefited most from the project, the recipients of total solutions, are those most likely to agree that local people can influence decisions.

6.3 CONCLUSION

Proper community participation in project development, decision making and project delivery is frequently pointed out in the literature as crucial for collaborations that aim to make an impact in local communities (Pickin *et al.*, 2002). The participation of the communities through their representatives was pointed out in all interviews as having been crucial to making the project successful, and in particular to ensure exceptionally high levels of up-take. The community participants themselves expressed that they had been treated as full and equal partners, that their advice and expertise had informed the project and that the trust they had been given had enabled them to target households in need in ways that a more rigid process may not have accommodated. Addressing local needs and finding solutions through a community-led approach is central to the principles of community development (CDHN, 2000; Holden and Craig, 2002; Thomas, 1995). These principles seem to have been guiding the project throughout and helped the project progress towards fulfilling its objectives.

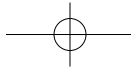
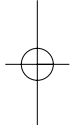
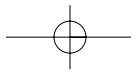
Community development approaches require support (DHSS, 1999; CDNH, 2000). The HAZ team recognised that their initial plans had been unrealistic in terms of the work load anticipated for the community representatives. Sullivan and Skeltcher (2002) identify the potential for burn-out of community representatives as a barrier to full community participation in collaborations. By recognising this problem and diverting most of the work on the ground to the Community Energy Advisor, the project may have prevented such burn-out, and as a result ensured the continued involvement of the community representatives throughout the process. The Community Energy Advisor was able to act as a key contact between the communities, the community associations and the other partners. She ensured that the communities were informed, she addressed issues arising, assisted in the needs assessments, and helped householders through the change process, all in close co-operation with the community groups.

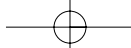


The impressions and experience of the partners and members of the community associations seem to indicate that there has been an increase in levels of trust and improvement in the relationships between the community groups and the communities. There were no measurements of social capital indicators prior to the project. When asked in retrospect, there was no reported change in levels of trust generally or in local engagement¹, but 11% indicated that they would now have a somewhat stronger belief that local people may impact on decision making. This corresponds with the view of partners and community representatives that people now have stronger beliefs in local community groups and local action.

These changes may result in improvements in some of the aspects of social capital, and if this is the case it is likely, following established research (see Balanda and Wilde, 2004 for a brief outline), that health improvements will manifest themselves in the medium to long term. The improved position of the community groups, both in relation to their communities and a wide range of partner organisations from all sectors, may have profound impacts on their future work, which again may facilitate further building of trust and relationships locally.

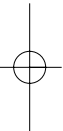
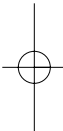
¹ Measuring change retrospectively is difficult through surveys and in particular when there has been an intervention that may have impacted on people's perceptions and responses.





Chapter 7

Process Outcomes and Learning



Chapter 7

PROCESS OUTCOMES AND LEARNING

One of the objectives set out in the project initiation document was identifying and disseminating the learning from the project (ADHAZ, 2000). The process report produced in 2002 sums up some of the main learning points (ADHAZ, 2002). To complement this report, representatives of the steering partnership and the members of the community association were invited, as part of the evaluation, to identify central process outcomes. This chapter will first outline the impacts the project was seen to have on regional policy development before exploring key successes, challenges and learning points, as identified by partners.

7.1 POLICY IMPACTS

7.1.1 ADHAZ and policy impacts

It is within ADHAZ's overall strategy to generate learning from its projects and to use this to impact on public policy. Reflecting on the ways in which the "Home is where the heat is" project had been successful in impacting on policy making, the HAZ manager echoed the views expressed by most of the partner organisations:

Within HAZ we always had this theory that if we were going to make a real difference then we had to change policy, and therefore we would gather the evidence on the ground and feed that back up to the policy makers and then that would become available right across Northern Ireland. [HAZ staff]

7.1.2 Impacts on the Warm Homes Scheme

Representatives from the DSD expressed how the learning from the project had been useful, particularly the ways in which the project illustrated the interaction between the different factors producing fuel poverty and, as a consequence, how solutions need to take these complexities into account.

In terms of actually pulling together our policy, it was a lesson about the holistic approach that was required. As a government organisation we're not that good at engaging with people at a community level, we can put broad frameworks in place. [Statutory partner]

The "Home is where the heat is" project fed into the design of the Warm Homes scheme in some fundamental ways. For example the "Home is where the heat is" project demonstrated that in order to provide a total solution in a rural area, more resources are required than if a similar intervention was taking place in an urban setting. As a result of this lesson, the upper limits for how much the Warm

Homes Plus Scheme could spend on each household was adjusted (DSD, 2003).

One interviewee, however, commented that in spite of this learning, the total solution approach may be perceived by policy makers as problematic to implement, and that there is still more to learn from the project.

What about total solutions in other schemes? It is in the “too difficult” basket... They can’t incorporate flexibility, they feel that they need strict lines, and if they change anything they need to create another strict line. They do not take them on a one to one basis or look at individual need. At one level I can understand this, but it should be possible to incorporate some more flexibility. Warm Homes is not flexible enough. It is age and benefit based, not fuel poverty based. It doesn’t really target fuel poverty because the complexity that is involved in fuel poverty... I can appreciate that it would be difficult to administer, but they could try. If the principles are right, they would get a better result. [Private partner]

7.1.3 The Northern Ireland Fuel Poverty Strategy

The first two Health Action Zones in Northern Ireland, that is the Armagh and Dungannon HAZ and the North and West Belfast HAZ, both initiated schemes that specifically looked at fuel poverty from the view point of health and health inequalities. ADHAZ staff expressed that, in their experience, the “Home is where the heat is” project had assisted in putting the link between fuel poverty and health firmly on the governmental agenda, as a part of the consultation document for a Fuel Poverty Strategy for Northern Ireland (DSD, 2003).

When you look now at Northern Ireland fuel poverty strategy [consultation], a huge wave has added the emphasis on the impacts of health and wellbeing, huge. [HAZ staff]

A main learning point and influence on the draft strategy identified by the DSD was the success of working in partnership with local communities and community representatives.

The main theme of [the strategy] is partnership. We see [fuel poverty alleviation] being delivered by engaging with communities, community organisations, residents associations or groups of people who are likely to be vulnerable to the effects of fuel poverty, such as elderly people or parents with young children etc. [Statutory partner]

The learning from local partnership work in the Armagh and Dungannon and the North and West Belfast Health Action Zones is specifically recognised in the Fuel Poverty Strategy Consultation Document (DSD, 2003).

7.1.4 Investing for health

With fuel poverty on the Northern Ireland public health agenda through Investing for Health strategy (IfH) (DHSSPS, 2002), organisations such as the HAZs and IfH partnerships are developing projects to meet fuel poverty targets within IfH. Partners commented that the learning from ADHAZ has impacted on developments in the other Health Action Zones.

Having spoken to both the Western Health Action Zone and the Northern Neighbourhood Health Action Zone, I think there's probably two influencers for them, the first is the fact that fuel poverty is in Investing for Health, then there is a very real experience there's been at Armagh Dungannon Health Action Zone. [Voluntary partner]

Other health organisations are also beginning to focus on fuel poverty. For example, the South and East Belfast Trust developed in 2001, in collaboration with NEA, a strategy to eradicate fuel poverty in their area (NEA/ SEBT, 2001). In implementing the strategy, some of the learning that the NEA acquired through taking part in the "Home is where the heat is" project is applied. Specifically, a community worker has been employed, and great care is taken in the application of community development approaches.

Learning outcomes from the project were also capitalised on by other health organisations involved. The experience of community development approaches is impacting on internal policy making within such organisations that are now required to establish community development strategies and practice (DHSSPS, 2004).

The whole community development approach was a very good model of working on an equal basis with the community, and we're going through an exercise at the minute now of revising [our] policies of how we would engage with users and with the public on different issues, and again I think it's a very useful model. [Statutory partner]

The legacy of the project was seen as impacting not only on health organisations, but also on the ways in which government departments plan and carry out projects.

I think government departments will try to introduce more schemes like that across the province because of the success of Aughnacloy and Darkley [...] I think that it's still very much alive and I think that has been taken on board and people have seen, right, this is a scheme that has worked, this scheme here has great potential for helping, not just people under the Fuel Poverty line, but also the Health Service right through, it has great potentials. [Elected representative]

7.2 SUCCESSES

7.2.1 Impacts on individual households

Most of the benefits to the households identified by the partners as key successes were similar to those discussed in chapter 5. Living in an energy efficient home was described as having profound effects on people's well being and social lives, and the fact that the project had affected 320 households in this way was pointed out as the key success of the project.

Things like not having to bring in coal, the whole house being warm, people feeling better [...] And of course the savings, the money, you know.
[Community representative]

7.2.2 The building of trust

The key mechanisms identified as having produced the project's success was the combined approach of partnership working, the application of community development approaches, and the provision of a support structure in the form of a full-time Community Energy Advisor. As outlined in chapters 5 and 6 the representatives from the steering partnership were very positive in their assessment of how the partnership had worked together. The prominent role of the community groups, the shared ownership and strong leadership were pointed out as key factors that had contributed to the project's success.

The work of the partnership was considered to have been aided by a clear vision, commitment and the establishment of strong relationships and trust, which facilitated increased co-operation and made the ongoing work easier.

Now we can lift the phone to get advice in a way we wouldn't previously.
[Community partner]

Strong leadership demonstrated by the HAZ manager and the Community Energy Advisor was also pointed out as important for the work of the partnership (see chapter 5). As a result of the trust that was built up, the partners were able to exercise considerable flexibility in the implementation of the project. This ensured that the values on which the partnership's work was based (i.e. to meet actual need) could be achieved in instances where a more inflexible approach may not have allowed this to happen.

7.2.3 Value for money

Based on previous experiences, many of the respondents referred to the good value for money that the project represented.

Sometimes in projects you look at the sums of money spent and you think, oh, so much more could have been achieved, the money could have been put to better use. Nothing like this could be taken out of this project. Every penny was well spent. [Voluntary partner]

The improved situation for householders was also seen as having great potential for decreasing public spending on health care, since people were now able to live independently and in their own homes for longer.

Looking back on it now, there are several people who probably wouldn't be in their houses now... I don't know how many thousand pounds a month is required to keep a person in a home, but its about three and a half thousand to get the heating in and that will last them as long as they live. [Community partner]

The community representatives were involved on a voluntary basis, and the time they spent working on the project represents a substantial contribution in kind.

7.2.4 Uptake of measures

The good value for money was, in part, explained by the high levels of uptake among those who were offered energy efficiency measures. This was pointed out by several partners as a key success, which was explained by the community development approaches applied and the ownership local groups had of the project.

There were no cancellations!! I think this was due to people not thinking this was charity. It was seen as something the community was doing for themselves. There was local advocacy. [Private partner]

In other schemes, the fear of disruptions during installation has been identified as a barrier to the uptake of energy efficiency measures. The supporting role of the community representative and the Community Energy Advisor were pointed out as a possible explanation for the high levels of uptake in the "Home is where the heat is" project.

Disruption during installation is a very common barrier to people getting engaged. In this scheme it was explained carefully to them what to expect and there was support throughout. [Private partner]

7.2.5 Recognition and impact

ADHAZ placed emphasis on informing communities, as well as policy makers, about the project's progress. For example, when the first installation was complete, the Minister for Social Development came to visit the household, and the event was well covered by media. The resulting publicity was seen as

instrumental in raising the profile of the project and the fuel poverty agenda. This approach is unusual within the health sector, where media coverage is not often sought for ongoing work. This novel approach was seen as refreshing and a potential boost to moral among those working on the project.

The profile has been very high. [...] In the Health Service, we tend to do an awful lot of very good work, but we're so busy that nobody bothers trying to get publicity for what we do. I think the fact that people have the opportunity to demonstrate the good work that they do is a very big morale boost.

[Statutory partner]

The high profile also meant that policy makers and public representative were made aware of the project.

When it was brought up to a council chamber, every councillor round the table knew about it, they were aware of it which [is not always the case].

[Elected representative]

7.2.6 HPSS Award

The "Home is where the heat is" project was nominated, as one of 43 projects, and won the Health and Social Services Quality Award 2002. This prestigious award recognises and rewards innovation and good practice within the Health and Social Service sector in Northern Ireland. It was pointed out by several respondents that winning the award demonstrated both the success of the project and that the project outcomes were recognised as important by the health service.

Those things about recognition are important, because it's actually saying, well this is important, not just that Peter here is more comfortable in his house at night, but it's important for the Health Service that he's comfortable in his house at night. [Statutory partner]

7.3 CHALLENGES

7.3.1 Contextual challenges

Most issues, identified as challenges, related to what was earlier referred to as the partnership's context: that is, issues that the partnership itself cannot impact upon. Issues relating to rural areas were pointed out as presenting challenges to implementing a project such as this.

When you go into a rural area nearly every house is different, so there isn't a standard solution. The principles may be the same, but in terms of application you find the costs may be a lot higher because a) the different house type,

and b) the location, because the installer or the contractor would have to travel a further distance to get to his work; therefore his costs are going to be higher so his prices are going to be higher. [Statutory partner]

The standard of houses, which in some cases were too poor to make the installation of total solutions feasible, also represented a challenge.

There were two cases where we couldn't put the oil in and we had to go for electricity. The house wouldn't stand up. If we had put a pipe through the wall, the wall would have crumbled. [Voluntary partner]

In other cases legal issues, such as right of way, restricted the ways in which the project could provide assistance to the householders.

On one occasion we didn't have the capacity to take it on board, it was a whole legal issue. One of them, he's in hospital now. That was one we had to walk away from, I suppose we feel a bit guilty about it. You have to make hard decisions sometimes. [Community representative]

The foot and mouth epidemic in 2001 affected both project areas. This meant that all installations had to be put on hold, as vehicles were not allowed to travel into or out of the infected areas. The Community Energy Advisor, who herself lived on a farm, could not travel to the project areas for several months.

7.3.2 Process Challenges

Local supply

Several of the community representatives commented that it would have been a better use of resources, and more in keeping with the values of community development, if local services and businesses had been consistently utilised in all aspects of the project.

[He] said that it was very embarrassing that he had his fridge and freezer coming here from Belfast when they could have been supplied locally. [Community representative]

It was recognised that attempts had been made to recruit local contractors, but that none of them had submitted a tender. As the installation process moved on, however, local contractors were increasingly used for the installation of heating systems. The insulation installers were also based locally.

Controls

As described in chapter 4, many of the older householders found it difficult to

use the controls of their new heating systems. To improve the situation, training was provided in both project areas.

Negative comments

The vast majority of the community members who provided feedback to their community representatives were very positive in their views of the project. There were, however, a minority who had complaints.

Negative feedback mostly about people who didn't get anything or got less than others. [Community representative]

As the recipients of such complaints, the community representatives did occasionally find it uncomfortable and challenging to deal with. This was particularly evident when having to explain to people why they would not receive any of the measures.

I am the volunteer, I'm the one who hears "why do I not get it?". It's very hard to explain. [Community partner]

Some householders had been reluctant to give personal information to people from their own community for fear that others may learn details about their benefit and health status. Two strategies were used to get around this issue: householders either filled in the survey themselves, handing it in a sealed envelop, or they would be interviewed by the Community Energy Advisor who was not from either of the project areas and who ensured them of full confidentiality.

7.4 KEY LEARNING POINTS

7.4.1 Capturing and celebrating the process

Some key learning points from the project were identified in the process report (ADHAZ, 2002). The learning that derived from producing that report was in itself seen as a key outcome of the project.

The learning points were as much about what you don't do, as much as what you do, and I think that was really, really important to record because it's so easy to move from one project to another and not actually close off, and for me that document [...] left it living because now it's captured. [HAZ staff]

7.4.2 Engaging policy makers

The production and launch of this report and other efforts to publicise and raise awareness of the project were seen as part of engaging policy makers and politicians in the work, thus increasing opportunities for success and for impacting on policy making.

Tell politicians about it, let them be associated with the work and feel part of it.
[Private partner]

7.4.3 Working in partnership with the communities

While it was seen as essential to take a community development approach and enhance community capacities, it was recognised that the existence of some level of community structure was needed in order to implement a project as complex as this one.

You need a strong community group that is prepared to spend energy and time on it. [Community representative]

It was emphasised that, when working with the communities, the definition of issues and solutions need to be arrived at in dialogue.

Maybe our first lesson was that if you really were going for a community base, it's just not a matter of telling people what would be good for them. [HAZ staff]

It was suggested that getting community groups on board as part of the process, and letting them do the necessary negotiations with householders, was the best and most efficient method of reaching individual households.

[I would recommend to] "sell" warm homes to community groups, not to individuals. [Private partner]

7.4.4 Promoting wide community engagement

It was recognised that more work needed to be done, in the initial phases, in order to promote and maximise the use of local companies in the installation phase of the project.

What we got through the tendering process was good, and did a good job, and we got a result we could stand over. But still we should have put more work into trying to recruit local contractors. That could involve making people aware of the tender, to assisting people in explaining how tender applications should be filled in. [Private partner]

Recommendations, relating to rurality, included the need for flexibility with regard to specifications and costs of the installation of energy efficiency measures.

The main lessons from our point of view were, flexibility around specification and being prepared to have to pay more to install the right solution in a rural area. [Statutory partner]

One partner mentioned that, on reflection, providing householders with electric appliances may not have been the most effective way to ensure energy efficiency. This point was, however, not raised in other interviews.

7.4.5 Provision of adequate support

The need for adequate support structures was also identified as a key learning point from the project. The importance of the Community Energy Advisor, in addition to the community groups, in recruiting people and supporting them through the process of change, was pointed out as a central learning point.

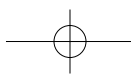
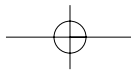
There needs to be an enabler in a community setting to allow people to access the assistance that they need [...] we've identified that it isn't just enough to put the insulation into peoples' home; you need to have a preliminary and follow-up service that supports people through the process. [Voluntary partner]

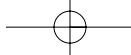
Such work was recognised as time consuming, but was considered necessary in order to provide total solutions for householders and energy efficiency advice to households as well as promoting higher benefit uptake. Ongoing support and the provision of energy efficiency training locally was also seen as key learning points to be taken forward.

People need a lot more assistance with incorporating messages around operating their heating system or how to make energy efficient choices in their home. [Voluntary partner]

8.5 CONCLUSION

The main successes identified, by the steering partnership and members of the community associations, related to the outcomes for individual households achieved by working in partnership, using community development approaches with adequate support structures. As for impacting on policy making, it was deemed essential to engage politicians and policy makers from an early stage and make them partners in the process.



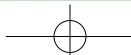
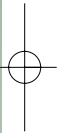
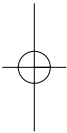


Chapter 8

Conclusions and

Recommendations

Recommendations



Chapter 8

CONCLUSIONS AND RECOMMENDATIONS

This chapter summarised the main conclusions from the different aspects of the research, and presents three sets of recommendations in terms of (i) fuel poverty projects, (ii) research into the links between fuel poverty and health, and (iii) future policy making.

8.1 CONCLUSIONS

The overall aim of the project as identified in the PID:

“To develop and deliver innovative, sustainable community-wide energy efficiency improvement programmes in partnership with key agencies and the community within the HAZ area. As a result to increase energy efficiency awareness and increase uptake in grants and schemes available in all housing sectors, and to reduce the adverse effects on health and wellbeing caused by cold homes particularly for those most likely to experience fuel poverty such as the old, disabled, infirmed, low income families and children” (ADHAZ, 2000:6-7).

The findings presented in this report indicate that this aim was largely met, and are summarised below

8.1.1 Outcomes for householders

The project initiation document identified a number of anticipated outcomes for householders:

- Increased comfort
- Improved health and well-being
- Increased awareness of energy efficiency and its link with environment, health and well-being
- Lower energy bills
- Decrease in levels of deprivation especially for those defined as fuel poor
- Increased uptake in grants and schemes available

Based on the findings presented earlier there seems to have been some impact made on all of these issues:

- It is clear that those who were selected for measures were in real need
- There has been an overall increase in benefit uptake and this increase was significant for non-intervention households and partial solution households. The income in these particular households may have increased as a result of the scheme

- Although many total solution households are still relatively cold, temperatures are now spread over a narrower range indicating a more efficient control of heat. It may be the case that as people gain more experience with their new system and how it impacts on household economy, they may increase the heat if they find they can afford it
- Satisfaction with the temperature of the home increased significantly for total solution households after the heating systems were installed
- The presence of condensation, mould and damp decreased significantly in the total solution houses in the post-intervention survey
- The mean number of illnesses reported per head in the total solution households decreased significantly in the post-intervention period
- The mean number of health service visits for total intervention householders fell significantly in the post-intervention period

8.1.2 Process outcomes

The project's objectives, as described in the PID (see chapter 3), which essentially related to the process through which the project was anticipated to move, were also largely fulfilled. When assessing the process that the project went through, three main issues emerged strongly as having contributed to the outcomes for householders: (i) effective partnership working, (ii) the application of community development approaches, and (iii) the existence of an adequate support structure.

Partnership working

The key factors identified as having contributed to the success of the partnership were:

- The constitution of the partnership, which included all relevant stakeholders. This meant that the partnership had the skills, knowledge and expertise to make decisions around the table
- The trust that was built up between the partners. This allowed for flexibility in making difficult decisions and for individuals to carry out work between meetings
- The strong impact of community representatives on decision making, which ensured that the project was embedded in the local communities

Community participation

All interviewees agreed that the partnership would not have been successful had it not been for the participation of the community representatives. Community development approaches were integral to the project model and the principles of community development seems to have been guiding the project.

The community representatives themselves expressed that they had been treated as full and equal partners and that the project had been firmly grounded. The participation of the community groups may have been facilitated by the very local nature of the project with tangible benefit for the communities.

The community groups reported that relationships with the communities and partner organisations from all sectors had strengthened during the project process. This may be likely to impact on future work, which again may facilitate further building of trust and relationships locally.

Support structures

Community development approaches require support. All interviewees emphasised the importance of having a Community Energy Advisor dedicated to the project. Her role as a key contact between the communities, the community associations and the other partners, as well as her personality and skills, contributed to the building up of trust between members of the community and the project. This was frequently pointed out as a key factor in the achievement of the project's success.

Policy outcomes

In the view of the interviewees, the project had been successful in engaging policy makers and impacting on current policy making processes.

8.2 RECOMMENDATIONS

8.2.1 Recommendations for fuel poverty programmes

It is recommended for future schemes to tackle fuel poverty or energy efficiency that:

- Community development approaches, facilitating full participation of local people and community groups, are central to programme planning and implementation
- Effort and emphasis is placed on building good working relationships and the development of trust between all stakeholders
- A flexible people centred approach is applied, which takes into account the circumstances of individuals and households
- Adequate support structures are established with personnel dedicated to the implementation of the project on the ground
- An area based approach with a locally focused partnership is taken
- Structures for evaluation of project processes and outcomes are built into the project and that such evaluation runs in parallel with the project
- Projects should include benefit checks to maximise uptake and increase household income
- Careful consideration is given to eligibility criteria. The use of benefit uptake may not be a suitable indicator. Further work is needed to take into account

the outcomes for specific population groups, such as lone parents or people on low incomes just above the benefit threshold

- Links with the health sector are developed in order to raise awareness and assist the health sector in identifying people in fuel poverty, and providing householders with information

8.2.2 Recommendation for research into fuel poverty and health

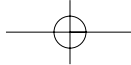
In order to contribute to the evidence base on the links between fuel poverty, energy efficiency interventions and health, it is recommended that research should:

- Ensure consistency in the collection of all pre- and post-intervention data. Ideally the same researchers or trained volunteers would be involved at each stage
- Collect income data before and after intervention in order to determine which households have been lifted out of fuel poverty, and which have not. This would facilitate analysis of the relative importance of income in the production of fuel poverty
- Give considerable thought to the collection of medical data. To ensure the usefulness and quality of the data, continuous work is needed in co-operation with local health organisations and GP surgeries
- Pre- and post intervention surveys, which include standardised health questions, should be collected in a systematic way. This could facilitate comparison across different intervention areas. Such surveys should also be repeated several years after intervention to assess long term health impacts
- Conduct temperature monitoring before and after intervention, and the post-intervention monitoring should be repeated 12-18 months after intervention in order to assess longer term changes in heating patterns once the householders are accustomed to the new system and the costs involved

8.2.3 Recommendations for fuel poverty policy development

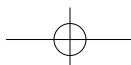
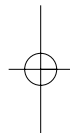
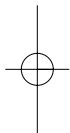
Based on the outcomes of the evaluation it is recommended that future policy development takes account of:

- The importance of the involvement of local people in the planning and implementation of policies that affect them
- The complex relationships constituting fuel poverty, which require co-ordination across the areas of responsibility of government departments.
- The level of poverty suffered by large population groups in Northern Ireland, which has a significant impact on levels of fuel poverty. As shown in this report, some households live in fuel poverty even after having received total solution energy improvements to their houses. It is essential to link the issue of fuel poverty to anti-poverty strategies
- The need for a high-level body that can draw together the experiences from a range of energy efficiency programmes and inform future policies. This should include support for co-ordinated fuel poverty research across different



areas to ensure sample sizes that are large enough to draw conclusions at population level regarding links between energy efficiency interventions and health

- The opportunities represented by initiating a cross-border fuel poverty intervention and research related to rural fuel poverty. In light of the development towards an all-island energy market this might be an opportune time for such work.



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