

Report to the Earthquake Commission

**From Science to Practice:
Community-based public education initiatives**

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Executive Summary

The aim of this report is to provide the Earthquake Commission with a set of concepts and considerations to assist in the design of a successful community-based public education initiative. As public education alone does not provide people with enough motivation to prepare for earthquakes and other hazards, other ways to motivate and increase preparedness need to be explored. Community-based initiatives have been found to effectively increase preparedness through assisting with mitigation projects and by fostering the qualities in people that motivate them to undertake preparedness activities.

This study contains three elements; a review of local and international community-based education initiatives, a summary of issues around volunteering, and a guide to elements of programme evaluation. The programmes reviewed range from a conventional community-based public education project to projects that involve physical modifications, community action projects and action research. Following each case study notes on the relevance of the programme to EQC are listed.

Volunteering is explored due to the fact that many community-based initiatives depend on volunteer labour. Understanding how to attract volunteers and sustain their participation is an important aspect of programme development. Evaluation methods are examined to provide scope to what is involved in an evaluation and to highlight necessary considerations for their integration into programme design.

Overall, the study identified numerous keys to programme success, to motivating and sustaining volunteers, and considerations for programme evaluations. Successful programmes are consistently attributed to factors such as community consultation, multi-partner collaboration, working with established groups and initially implementing simple and achievable projects. Volunteers can be attracted and retained by promoting opportunities that correspond with their motivations, by having specified tasks and matching their skills and interests with those tasks, and giving them recognition for their achievements. Evaluation requirements need to be contemplated at the same time as conceptualisation of the initiative in order to ensure the goals of the evaluation are met. To undertake a meaningful evaluation, the purpose, intended audience, information requirements and sources, and timing and budget for the evaluation need to be established.

1. Introduction

Recommendations given in a Ministry of Civil Defence and Emergency Management report on creating resilient New Zealand communities (Finnis, 2004) suggests that to increase community preparedness a combination of communication/public education and community development/education is required.

Traditional means of public education (e.g. delivery of hazard characteristics, recommended preparedness activities, how to respond to an emergency, emergency response contact details, etc) is a necessary tool to initially motivate people to prepare. It helps to create an awareness of the hazardscape, initiate discussion and thinking about hazards and their repercussions, and form an understanding of how certain actions will be of benefit. However, public education alone does not lead to an uptake of preparedness activities.

Community development and education programmes have been found to effectively increase preparedness and foster a sense of community through empowering communities (Finnis, 2004). These programmes foster resilient qualities in people, such as self-efficacy, using action coping mechanisms and a sense of community, which cannot be done through media communication.

Although some recommendations were given as to how a community project should be carried out, this report takes a more in-depth look at a greater variety of community development and education programmes in order to build a set of concepts and considerations that can be drawn from to create a tailored project.

As community-based public education initiatives depend on volunteer labour, motivations behind volunteering and sustaining volunteer interest are also being explored. People choose to engage in volunteer work for many different reasons, some of which may be catered for in the programme design. The degree of volunteer engagement also needs to be considered to optimise initiative effectiveness. Some projects require a long-term commitment from all volunteers, where others may only call on people for a day; each has different benefits and disadvantages.

Evaluation is an important part of a project to ensure that the desired outcomes are met. Once again, there are many ways a project can be evaluated depending on the way the project is carried out. A range of evaluation methods is being reviewed to get an understanding of which would be most applicable to the community-based public education initiative being developed.

This report will first give a brief summary of community-based initiatives that EQC has undertaken in the past, followed by reviews of local and international projects, volunteer motivations, and project evaluation methods. Finally, a summary of benefits, challenges and key concepts for designing successful community-based initiatives will be presented.

2. Project Reviews

A wide variety of programmes have been reviewed, ranging from the conventional concept of a community-based public education project, where education is issued at a community level, to projects that involve physical modifications, community action projects, and action research. Although they might not be focused on providing education, the programmes have been reviewed as they undertake beneficial physical modifications, bring about change, and/or empower communities and their residents by building on the qualities necessary to motivate preparedness. These qualities include sense of community, self-efficacy, problem-focused coping, response efficacy and outcome expectancy.

The projects reviewed include initiatives already undertaken by EQC, other national community-based initiatives, and international community-based initiatives. Table 1 provides a summary of the programmes, listing the focus of the programme – environment, health or safety, whether it is project-oriented or education-oriented, who initiated the programme – community or other organisation, the length of the project, the target community, the type of workforce used – paid or voluntary, whether it has been evaluated, and collaborating partners.

2.1 Community-based initiatives undertaken by EQC

Shake Safe Initiative

In 2001 Energy Smart, a provider of energy efficiency products and services, collaborated with a local iwi-based energy organisation and with EQC in a pilot project to install seismic restraints around hotwater cylinders in 350 low-income homes in the Hutt-Mana area. Overall, the project was to carry out energy conservation and home safety audits, then where necessary install products such as cylinder wraps, low-flow shower heads and energy efficient lamps, as well as seismic restraints.

The project was funded by the Energy Efficiency and Conservation Authority, the Hutt Mana Energy Trust, and Housing New Zealand, with additional contributions from the Public Health Service and the Fire Service. EQC supported the project by providing training for the people installing the restraints, and “How to Shake Safe Your Home” brochures for each house.

The project was seen as a cost-effective way to promote earthquake mitigation activity, and was to be expanded across all of New Zealand once the pilot project had been successfully completed.

On completion of the project, it was deemed a success, however, no true evaluation has been carried out. To date, the project has not been carried out in other areas. In this case, an evaluation may be necessary to show the cost-effectiveness of the project encouraging the programme to continue, or showing the pit-falls of why this initiative should not be perused.

Quake Safe Schools exercises

(Nui Pacific Ltd, 2006)

The Quake Safe schools exercise is a classroom based education exercise aimed to encourage households to protect their property from earthquake damage and minimise danger to themselves. The exercise has been carried out in schools in 6 regions since 1999.

The objectives of the exercise are to:

- promote general awareness of earthquake risk and preparedness at a young age
- raise awareness of the specific link between personal safety and property quake safing at a young age
- work through children to raise household awareness of both of the above
- provide a process through which parents are encouraged to take mitigation action
- lift the incidence of mitigation amongst the target group

Each school is sent classroom packs comprising: letters to teachers, teachers' guide, pen for each teacher, stickers, erasers, and pencils for each pupil, and quake safe booklets. Teachers are given a guide which includes instructions for the teacher, homework exercises, a letter for parents, some background information, and a feedback sheet. The schools are given incentive to return the checklists promptly by being entered into a prize draw and the students are encouraged to enter a poster competition.

The teachers are to talk about the risk of earthquakes, and about how to be prepared as part of the Health and Safety curriculum. At the end of the lesson the children are asked to take a letter and checklist home to show their parents. The checklist simply asks whether they have completed specific mitigation actions listed, if not, then the likelihood of doing them, and what they thought the two most important actions were. Parents are then to help the child fill out the checklist, and the child is to return it to their teacher.

The exercise is well received by the schools, teachers and students. Following the exercise, household intention to prepare increases and important actions such as having an emergency kit, fastening tall furniture, and strapping hot water cylinders are well recognised. Although return rate of the feedback sheets is low, follow-up research shows that most schools and teachers use the exercise in one way or another. Many teachers do not ask the children to complete the homework exercise in the way prescribed, due to knowledge about the children's home environment. Even though the success of the programme is apparently low and not reaching all the desired targets, i.e. parents, teachers and students are still receiving some value from the programme.

2.2 Community-based projects in New Zealand

Coast and Beach Care

(Dahm, Jenks, & Bergin, 2005)

Coast Care groups come into action generally due to a threat to either property, public infrastructure (e.g. surf club, reserves or beach access), or a valued resource (e.g. the beach or loss of native coastal plant species). The key players in the process are the groups themselves and Local Authorities through the provision of advice and resources. Successful groups are those that adopt ownership of their activities and develop successful partnerships with councils. Groups may be started either by community action (e.g. Papamoa East group) or by the local authority initiating a group and calling for members.

Once the groups are established, they may meet only once or twice a year to review conditions. The groups hold 1-2 working bees a year that last 2-3 hours. These working bees can also involve schools and other educational groups. Most groups employ specialist facilitators to assist the groups. These are usually council staff or contractors with strong management and facilitation skills. Facilitators advise groups on planning, consultation, and consent requirements; handle bureaucracy; and undertake widespread promotional and educational activities.

The key principles for successful groups were found to be:

- An open and inclusive approach
- The adoption of consensus style decision-making
- Early successes for the group
 - Start with simple issues on which there is a consensus
 - Group confidence and relationships improve and community support is strengthened as the group is seen to be achieving positive outcomes
- Celebrating success (e.g. newspaper articles, occasional newsletters, council recognition) is central to building group confidence and cohesion, as well as raising community awareness and support
- Developing a group culture that works through difficulties
- Keeping demands manageable is essential to maintain widespread community involvement and support
- Well advertised working bees held at times convenient for a wide cross section of the community

Notes for EQC:

- Conduct activities in the community that require a short-term commitment from the majority of volunteers – so they can contribute but don't have to feel tied in
- Widespread notification/education about projects is essential
- Although projects are community based, they need a facilitator dedicated to helping the groups get resources, and network with council/sponsors
- Simple, common concern projects
- Target the preparedness motivators of response efficacy (time, cost, skills (depending on project)), sense of community, outcome expectancy and problem-focused coping

Warm Babies Project

(Fyfe, 2005)

The Warm Babies Project (WBP) provides heating and energy efficiency solutions to young families on low incomes in Christchurch. The project was piloted in 2000 as a joint initiative between Community Energy Action and Plunket, and helped over 100 households. Community Energy Action is a charitable trust, established in 1994, whose primary focus is improving the energy efficiency of the low income housing sector to enable warmer and healthier living conditions.

Initial funding for the WBP was provided through a \$50,000 grant from On Energy, with Meridian Energy taking over sponsorship in 2002. Funding is supplemented through landlord contributions towards work carried out on rental properties and where possible subsidies are claimed from Energy Efficiency and Conservation Authority.

The aim of the WBP is to protect the health of infants who live in cold damp houses, and some school age children with health problems. To achieve this a "Home energy check" is carried out and appropriate action is taken through the following improvement measures:

- ceiling insulation
- underfloor insulation
- hot water cylinder wrap
- draft stopping of doors and windows
- vouchers for lined, thermal curtains
- home heating
- energy efficient advice

Householders benefited from the project in the following ways:

- Reduced anxiety about how they would keep their children warm
- Perceived improvements in future health
- Reduced power costs resulting in an increase in disposable income to spend on other essentials such as food
- Improved awareness of energy efficiency with information then passed onto others

There is a strong positive attitude towards the WBP from all those associated with it and a high level of satisfaction with the referral process from all groups surveyed (agency staff, households and landlords). Most participants felt their energy efficiency needs had been met: in terms of having a warmer, drier, less draughty house. Where there was a child health issue, there was a perceived improvement in the child's health.

Notes for EQC:

- It would be beneficial to contribute to this project by strapping hot water cylinders at the same time as insulation fitting
- Join with existing groups to implement small, highly beneficial projects
- Team up with other organisations for referrals
- Focus on a vulnerable population

Strategies with Kids – Information for Parents (SKIP)

SKIP is a community-based approach to provide practical knowledge and skills on safe, effective, non-physical ways of disciplining children. The programme is headed by Family and Community Services (Ministry of Social Development) and achieves its goals through: 1) working in partnership with national organisations to build their capacity to support parents; 2) establishing a Local Initiatives Fund and 3) developing resources for parents and the organisations that support them.

The Local Initiatives Fund supports communities to take the approaches they consider will be most effective in getting positive parenting information to all parents, not just to those who traditionally seek it out. Projects can vary from small one-off activities to community campaigns providing a range of activities for up to eighteen months. The Fund encourages local level participation in SKIP by building on the strengths of communities and encouraging local leadership and collaboration.

Key principles of SKIP:

- Co-ordination – the success of the strategy depends on central co-ordination to ensure coverage and avoid duplication
- Consistency – messages will be consistent across providers and audiences
- Transparency – processes will be clear, consistent and visible
- Coverage – a range of organisations will be involved to ensure all audiences are reached
- Community leadership – SKIP will be delivered by community-based organisations
- Sustainability – existing programmes and services will be built on to ensure lasting progress

Key success factors:

- Having a shared compelling goal that is not achievable by one organisation on its own – crucial in developing community partnerships
- Building trust and making personal contacts with members of community groups
- Listening to and showing respect for views expressed by community organisations
- Maintaining an ongoing interest of the work of voluntary groups
- Conveying the belief that the community organisations are capable of carrying out the project

Key lessons

- Family and Community Services (MSD) funded development work, so as not to ask organisations to work without the resources to support it
- Shared goal took time to identify – organisations had time to think and see the extent of the opportunity
- Partnerships with national organisations have taken longer to develop than relationships and contracts with local groups – time needed to get the whole organisation on board
- Work is focused on capacity building – includes training and looking for opportunities to include the key positive parenting messages in all their work

- Funded SKIP co-ordinator positions in each organisation to implement the initiatives and further develop opportunities for SKIP to strengthen their support for parents

Notes for EQC:

- This programme holds very well to the principles of public education – that there should be a clear, consistent message, delivered in various ways from various sources
- Centrally co-ordinated project that funds community-based projects
 - Allows message/material to be consistent, but delivered in a community personalised way
 - Facilitates communities to implement programmes as they don't have to fund projects themselves
- Finding common ground and building partnerships takes time, but leads to successful programmes
- Programme is not just about education but also about capacity building. Fosters problem-focused coping, self-efficacy, and sense of community

Ranui Action Project

The purpose of the Ranui Action Project (RAP) is to bring the Ranui community, government agencies, health providers, volunteer groups, and the council together to improve health and well being outcomes in Ranui. The project is funded through the Ministry of Health and receives funding from Child, Youth and Family as part of the Stronger Communities Action Fund. Waitakere City Council is the sponsor and fundholder for the initiative.

At the outset of the project in 2000, a group of Ranui people formed an initial Steering Group, appointed a full-time project manager, and set up RAP as an incorporated society with innovative rules to ensure that ownership of the project stayed within the wider Ranui community. The community then worked with the funders and the Council to create a devolved community funding agreement, initially for three years.

Main achievements to date include:

- Project launch – the launch of the project, in 2001 at the Ranui Fun Festival
- Community profile – data was collected from a range of organisations to develop an in-depth profile of the Ranui community
- Community visioning – 400 people at the Ranui Futures Creation Festival participated in a "community-visioning" process, which created a vision of the Ranui community to guide tangible projects
- Action plans – working groups have been established to implement seven action plans relating to young people's development, health and social services, public safety, education, employment and business, environment, and community identity
- Prioritised Projects – a number of community projects have gained momentum and are now the focus of developing social business enterprises
- Evaluation – took place up until December 2004 through SHORE (Centre for Social and Health Outcomes: Research and Evaluation)

Factors that have helped make RAP successful include:

- Wide involvement – the wide and active participation by all key groups within the community, including Maori, Pacific peoples, other ethnic groups, and young people
- Resources – the partnerships with Waitakere City Council, government agencies and health providers that have provided RAP with access to resources
- Project Management – having a project manager to help keep things moving
- Good communication – communicating with the Ranui Community through the RAP RAVE newsletter, website and Radio Ranui
- Fun – above all, the project ensures there are plenty of opportunities for the community to have fun

Key challenges during the project include:

- Getting everyone involved – getting all sectors of the community involved and engaged, and building community pride and leadership skills
- Going bottom-up – changing "top-down" mindsets within the community and government agencies
- Opening up – persuading the community to invest in intangibles like a visioning process, and to accept external assistance
- Going slow – getting people to understand the time it takes to develop and sustain relationships and partnerships with people, set up project infrastructure, and get results from the development work
- Keeping up – achieving goals with the resources of a continually stretched project manager and volunteers
- Dealing with conflict – dealing positively with inevitable conflict
- Resolving Treaty issues – working constructively through Treaty issues.

These challenges have been dealt with by:

- Involving people – keeping people interested by doing short-term, results-driven projects. Also, having focus groups representing different sectors of the community has helped form connections throughout the community
- Focusing on the positive – creating visions rather than "fixing problems". Giving local people the skills to help participate in and lead projects
- Incentives – small incentives for volunteers, such as training certificates, sending people to conferences, and providing food at meetings
- Coping with conflict – workshops with Violence Free Waitakere have provided excellent training in conflict resolution at the same time as being a community-building catalyst
- Involving local kaumatua and kuia – helped to work through our Treaty obligations.

Notes for EQC:

- Currently, there are many community action projects underway in New Zealand. Greenaway and Witten (2006) have evaluated ten of these projects and written a comprehensive report on structures and processes that either enhanced or impeded the projects meeting their objectives for social change
- Although implementing an entire community action project may not be the best strategy for EQC, key points from this case study are how to achieve success with a community project, challenges that can be expected, and how to deal with them
- Another important step in this project is profiling the community and giving the community input on the projects they see beneficial to undertake

- Once again, an opportunity to work with a community in small projects to increase their safety and overall well-being
- Overall project fosters problem-focused coping, self-efficacy and sense of community

Karori Civil Defence and Neighbourhood Support

Civil Defence in Karori is a well established group, with numerous volunteers, undertaking many activities and community education events. The group is supported by the local community constable, who is responsible for the Neighbourhood Support programme which he heavily promotes in conjunction with Civil Defence. Community Patrol, an active community policing group in Karori also work closely with the group.

Civil Defence information and activities are promoted mostly through school fairs, but also through presentations at local community groups and club meetings, such as the Bridge Club, Probus and sporting groups. Churches are also now becoming interested and inviting the Civil Defence Centre (CDC) manager, Barrie Keenan, to address congregations as part of the Sunday sermon. Dave Ross, the community constable, will also be part of the presentation, making people aware of how important it is in an emergency to know your neighbours and co-operate with them. The CDC has also established MOU's with the local supermarkets, pharmacies, recreation centre, and other vital stores and services for the requisition of goods and services in an emergency.

The Karori CDC is now also working closely with all the schools in the area by providing them with radios. Each day the schools, students and teachers, test the radio by using it at cross patrols, make relay contact between the schools, and make contact with the police station.

The success of Karori CDC activities is thought to be due to the nature of the suburb. It is a relatively isolated suburb, it has a low turn over of residents and generations of families have lived there and return to live there. Residents already feel a sense of community and are prepared to participate. CD is also making them realise just how alone Karori, in particular, will be in the event of a large earthquake, and how important it is that they help each other become prepared.

Notes for EQC:

- Not all civil defence groups are like this, but the ones that are would be ideal for collaboration. They are always wanting resources and information to give to the community, already have an established volunteer community that could help with specific projects, and have existing partnerships with other organisations, groups and businesses

Te Kotahitanga – Smoke Alarm Installation Project

Following a spate of fatalities in house fires from 1997 to 2001 (9 children and 3 adults) it was felt that some action needed to be taken in the community to prevent further deaths. Northland Fire representatives met to discuss a fire safety initiative, which led to a joint community meeting with Northland Fire and ACC at the Te Kotahitanga Marae in Kaikohe. This meeting launched a joint initiative to install smoke alarms in homes and to educate people on how to prevent fires and get out safely in the event of a fire.

A Hui/community action meeting was then held in Whangarei and attended by the Fire Service, Northland community groups and organisations, Northland iwi and three district councils. The aim of hui was to design an overarching and far reaching fire safety strategy, and to determine the most at-risk areas. The Fire Service appointed an iwi liaison officer to facilitate work in the Maori community. The initial supply of smoke alarms came from local Mitre 10, ACC and Northland Health. Housing NZ became the major sponsor in 2002-2003. In all, the Te Kotahitanga project has partnered with People Potential, ACC, Mitre 10, Northland Health, Housing NZ, WINZ, and Northland Fire Districts. The Community Injury Prevention Committee also promotes fire safety messages through Aged Concern, Whangarei Safer Communities, the public health Unit, Maori health providers, LTSA, Plunket, CYFS, State Insurance, Hard of Hearing Association, and Northland Iwi.

The Fire Service employed 9 Task Force Green workers as Fire Safety Ambassadors for 4 teams from WINZ (Work and Income New Zealand) and People Potential to install the smoke alarms and distribute fire safety information to the at risk areas. They received training for a week, then worked in teams of two based in Kaitia, Kaikohoe, Dargaville, and Whangarei. In the beginning, ambassadors engaged community members by door knocking, but then people became informed through referrals by other agencies and word of mouth. When accepted by a family or household, the ambassadors installed smoke alarms as required by Fire safety regulations (one in each bedroom, hall and lounge), guided each family through a fire safety plan, and provided education on how to prevent/escape fires. They also collected information such as the GPS coordinates of the property, number of alarms installed and serial numbers, household means of heating, lighting, cooking, house construction type, number of at risk people in the house, and the overall risk of house.

More recently, Northland Health has introduced a Wellchild initiative in which every newborn in Northland receives a gift pack including a smoke alarm to be installed by the fire service if required. ACC has also included an additional campaign directed to the elderly where ambassadors give out additional information on the prevention of falls. The Fire Service also teamed up with Ministry of Education, Northland Arts Promotion, and NZFS to stage the Mahuika – Fire Wise play for the 30 most at risk schools in Northland. Eight schools in the North Hokianga then worked together with funding from the Ministry of Education and Northland Arts Promotion Trust to develop and produce the above production which was performed to the Northland community in Whangarei.

Due to its success in reducing fire fatalities and incidents, the Te Kotahitanga project has now expanded to East Coast, eastern BOP and Taranaki.

Notes for EQC:

- This project targets a highly vulnerable community, where the only solution is an engineering one i.e., to install smoke alarms as people cannot afford to install them. Fire safety information and evacuation planning, however, is still essential
- The project employs ambassadors through Task Force Green (see volunteer section). This builds community capacity, doesn't strain Fire Service resources and is more stable than recruiting volunteers
- The community was consulted as to the best way to undertake the project
- Buy in from many organisations and local business initially distributed the costs and resources and got the programme running

Land Management Participatory Action Research Project
(Fitzgerald, 1999)

This action research project aimed to develop and test the participatory development of community-based management of pests and weeds, and other conservation issues in a rural community in the Kaikoura District. The work was carried out in stages according to the progress of the community, with the researcher facilitating the formation of a broadly-based group capable of planning for and implementing its own management efforts. In order to achieve this objective the researcher first had to assist in the social development of the community. The community established a new local organisation to serve as a representative forum for the district, which then addressed a variety of community, environmental and land management issues. Crucial to the success of the exercise was the modelling of inclusive/participatory processes by the researcher and the early identification of important relevant issues which catalysed local residents to work together. The key principle of participatory action research is that, in a development or change context, a 'project' participates in the life of the community, rather than the community participating in the life of the project.

The community action research occurred in four phases:

Phase 1: Community response building

This consisted of canvassing all property owners/managers in the area to develop a profile of the community and to build interest and commitment to participate. It was necessary to learn issues in and between community members, history, and current issues in the area. Where community support was evident, a community workshop was held to identify common issues in pest and land management, prioritise and map the incidence of the various problems identified, and initiate a plan for action where possible.

Phase 2: Action Planning

Where agreement was reached in the community, the development of a plan of action was facilitated through participatory planning workshops

Phase 3: Implementation of the community plan

Facilitate community planning and discussions where required, and monitor the development and performance of the group

Phase 4: Evaluation

A participatory evaluation of the outcomes was undertaken, and where possible, the applicability of the community-based approach to other situations assessed. This included interviews with four members of the original host group, comment on developments from reps of local agencies, and participatory exercise at group meetings.

The committee chose a project that: a) had the potential to include all sections of the community without aggravating existing sensitivities; b) had overall achievability (i.e. within available resources) and therefore ability to encourage future participation, and c) fulfilled a priority need. The project chosen was to develop a waste management system which is acceptable to the whole community. Although not directly related to DOC's original goal of community involvement in weed and pest management, upon activation it was clear that the community was choosing a path which had the potential to progress towards this goal.

Overall, the assessment found the greatest benefit to be the community development aspect, with the creation of a forum for better and broader participation in community affairs. The most crucial element that led to the success of the project was not rushing into a particular issue (pests and weeds), but allowing the community to determine its own needs.

The evaluation concluded that strategies for working with communities on conservation issues should:

- have the key ingredients for community action
 - a pressure for change – people must feel a genuine need to improve or change the situation
 - a shared vision
 - capacity for change
 - actionable first steps
- learn about, and profile the community
- identify and involve key people
- remain neutral, learn and transfer skills
- need to be flexible and responsive
- use a flexible methodology and creative techniques

Notes for EQC:

- Action projects move away from convention research/project implementation methods by involving the researcher and community in every phase. This gives greater community collaboration, project flexibility and potential for thorough evaluation
- Again, community profiling and understanding community needs is essential
- Initial community projects should be achievable and fulfil a priority need in the community
 - Although the need might not be specifically related to earthquake preparedness or mitigation, this step builds community capacity, creates trust and buy-in from the community and leads to further, more targeted projects
- Overall project fosters problem-focused coping, self-efficacy and sense of community

2.3 International community-based projects

Community Fireguard: A Bushfire Safety Programme

(Country Fire Authority, 2004)

Community Fireguard is a bushfire safety programme designed by the Country Fire Association (CFA) of Victoria, Australia, to reduce the loss of lives and homes in bushfires. The aim of the programme is to help residents plan for the threat of a bushfire and to manage their own fire risk by assisting community groups to develop bushfire survival strategies that suit their lifestyle, environment and values.

The programme covers aspects such as fire behaviour, personal survival, house survival, a street walk, fire protection equipment, and developing personal and household bushfire survival plans. Most groups will cover these aspects in four to five meetings over a twelve month period. However, groups vary in experience and understanding so, the number of meetings needed to cover the core information will vary to meet the needs of the group.

Groups are formed when residents of a local area choose to participate in the programme. Ideally, the groups are small, made up of neighbours or residents living in a shared bushfire risk environment. By becoming involved in a group, residents are able to develop strategies for themselves – strategies which work because they have local ownership and support. Groups make decisions about the best way to protect themselves in a way that fits their lifestyle, environment, physical capabilities, finances, and experience.

One example, the Sunshine Reserve Conservation and Community Fireguard Group, has managed to blend conservation values with fire prevention strategies in a way which has strengthened the local community. The group was formed after a public meeting and a street walk in the area. Group members became aware of the importance of developing bushfire survival plans, and of the need to make a choice about staying and being well prepared, or leaving early. This resulted in most feeling more emotionally and mentally ready to stay and protect their homes in the event of a fire. Their activities have included lobbying the local council to reduce the bushfire fuel loads and remove mulch in the area. The group has also worked to restore and revegetate the local creek. This involved clearing blackberries and other weeds, and collecting and propagating seeds. The creek is now flourishing with native grasses and plants, and the community has proud ownership of a new nature reserve.

An outcome evaluation by Rohrmann (1999) found this programme to be effective in getting residents to prepare for bushfires. The evaluation also identified avenues for further improvement of the programme.

Notes for EQC:

- These groups have similar properties to Civil Defence groups, however, are more training based, with specific themes for each meeting (encourages volunteers), are at a neighbourhood level, and have more input from the governing agency (CFA)
- Projects are successful as strategies have local ownership and support – tailored to community
- Project led to other beneficial community activities being carried out
- Project fosters problem-focused coping, self-efficacy, response efficacy, outcome expectancy, sense of community, and psychological preparedness

- Comprehensive evaluation of the project identified success as well areas for improvement

STRAW – Students and Teachers Restoring a Watershed

The STRAW project grew out of a project begun by a 4th grade class at Brookside School, Marin County, San Francisco, which wanted to do something about the problem of endangered species. Students researched and publicised the plight of the endangered California freshwater shrimp found only in certain stretches of creeks in the Bay Area. With help from a local environmental firm, The Bay Institute, students conducted professional restoration of riparian corridors. As word spread about the success of the students' efforts, ranchers asked to host students on their land to plant native vegetation for the benefit of native aquatic and terrestrial species and to help control erosion.

STRAW promotes an educational approach known as “project-based learning,” in which students are encouraged to pursue their own questions and projects focused on real-world issues. Students apply and deepen their knowledge of academic subjects through exploring creek ecology and hydrology, bird and aquatic insect studies, water quality monitoring, mapping, native plants, and nature writing and art with the assistance of STRAW staff and partners.

STRAW offers an annual three-day teacher training institute called “Watershed Week” before the school year starts. Approximately 80 to 100 participants in the STRAW network, including teachers, partners, and other education providers, gather in August to study local ecology, to learn hands-on methods of scientific inquiry, to share ideas about integrating environmental fieldwork with classroom curricula, and to prepare for creek restoration activities during the coming year. In 2005, local Native American teachers were sought to provide the cultural resources for teachers in Marin and Sonoma counties to incorporate native perspectives into their environmental education work.

STRAW brings together a network of schools, private landowners, public lands agencies, environmental organizations, restoration specialists, and community members. More than 1,200 students, 300 parents, and other volunteers participate in the restorations, erosion control and invasive vegetation removal projects each year. Students learn from exposure to adults whose lives focus on ranching and land management and protection, while also having the opportunity to participate as full members of a larger community working together to solve environmental problems.

Notes for EQC:

- Example of a good school-based community education project
- Needed help from only one external source to get started, but gained success through establishing connections with a vast number of community agencies, organisations and groups
- Not only greatly benefits children's education, but educates teachers, parents and other community members as well. Also fosters self-efficacy, sense of community, and problem-focused coping

AmeriCorps National Civilian Community Corps
(Simpson & Strang, 2004)

AmeriCorps*NCCC programme was established by the National and Community Service Trust Act of 1993. It is a 10 month, full time residential programme for men and women ages 18-24, operated directly by the Corporation for National and Community Service. Members are technically volunteers, however, they receive a small living allowance, health insurance, and accrue an education award that is awarded at the end of the service. The programme was designed to blend the best practices of civilian service with the best aspects of military service, including leadership development and team building. AmeriCorps*NCCC service includes an emphasis on disaster relief and recovery, co-ordinating local volunteers, and helping communities address their unmet needs.

A review of two successful projects undertaken in Berkeley, California and Pittsfield, Massachusetts highlighted elements of success from which a model might be proposed for other cities. Specific elements of this model include:

- *Specialised team training and recruitment* – CERT Train-the-trainer course, Incident command systems, specialised structural mitigation
- *Planned activity in advance* – the host community should have a well-planned strategy for team utilization and a full time staff member to help guide the team efforts
- *Structured staff approach* – the team needs to maintain a structured approach to the tasks and activities that they are undertaking in the community
- *Leverage to assist community staff and projects* – teams can be viewed as a means of giving a dramatic start-up boost to community efforts, but it must be noted that this will only work in instances where a community has some prior efforts in these areas or has a very well-defined plan for using the team in a new approach to this kind of programme. It is ineffective to bring in a team without a plan and close supervision and support
- *Mix of hands-on and administrative community organising activity* – teams benefit from having a mix of activities available to them and not a sole focus on community organizing and administration activity

Examples of projects that teams can undertake include:

- *Structural projects* – either homeowners in need or otherwise identified in the community, could include preparation for earthquakes (shearwall construction, foundation bolt-down), hurricanes (roof tie downs, hurricane shutters), floods (floodproofing structures), tornadoes (building “saferooms”)
- *Non-structural projects* – securing interior furniture for earthquakes, conducting “home hazards hunts” in which non-structural needs are identified. These could also be performed in schools or non-profit organisations, nursing homes, and similar places
- *CERT training*
- *Drills* – teams trained in how to conduct drills and assist communities that are conducting earthquake or disaster preparedness drills
- *Education* – distributing information to households and individuals in communities, about resources available to them in case of disaster

Key elements that were identified to improve project effectiveness include:

- At least one full-time staff member to supervise and help navigate the team's efforts throughout the city bureaucracy. That person is committed on a day-to-day basis with the only duty to ensure the team is kept functional and operating at high efficiency
- Specialised training should be a mandatory element, covering disaster preparedness and CERT-oriented programmes
- Commitment that goes beyond one staff person is needed from the city. Support is needed from upper levels of management, and indications that efforts will be made to ensure the team has access to the resources needed for it to succeed
- There should be evidence of support from the community, and demonstrable experience with using or leveraging community volunteers services for this type of activity (e.g. does the community have any history of utilizing volunteers, supporting non-profit organisations, etc)
- The host community needs to have some local resources available to support the programme activity

Notes for EQC:

- Although this type of volunteer programme (young adults committing nearly a year of their time to voluntary service) would probably not work in New Zealand, it still provides a good example of what can be done in communities and of lessons learned. Including disaster preparedness initiatives in such activities as Army Reserves, however, may be an option.

Health education of Asian Americans

(Sadler, Nguyen, Doan, Au, & Thomas, 1998)

In 1994, the University of California, San Diego (UCSD) Cancer Centre began a highly focused cancer education programme, which saw cancer education material being provided in Asian grocery stores. Grocery stores were selected as optimal educational sites, as Asian women of various degrees of acculturation, socioeconomic status and age could be reached in this environment. For the programme, a variety of bicultural and bilingual undergraduate health students were recruited from local colleges and trained to work as community health educators. Initially, the community educators were trained to disseminate information on cancers considered to be minimally intrusive of modesty. Gradually, culturally sensitive training modules were introduced for cancers more invasive of modesty.

A variety of approaches evolved that effectively bridged many communication barriers. Techniques that were found to be effective in initiating health promotion conversations include:

- Translated materials and posters with ethnically appropriate graphics to attract Asian population subgroups
- Multilingual signs announcing the programme was free and sponsored by the University helped allay suspicions about hidden costs, gave credibility to information being offered, and gave the students a level of authority shoppers were comfortable with
- Visual and hands-on teaching aids

- Use of culturally appropriate dress, salutations, body language and verbal style. Educators were best received when positioned as members of the community
- Student's age difference with audience proved to be an asset as elders took pride in witnessing achievement and dedication of "their children" and were supportive of their efforts to bring information "home"
- Having educators of both genders emphasised the universal applicability of the information, increased diversity of shoppers reached and permitted the information to be reinforced by family members
- Repeated exposure to, and experience with, the educational booth helped reduce barriers to communication. Men and women approached the educators with questions about the information they had previously received or brought others to the exhibit for information

Unobtrusive measures were used to evaluate the programme. Measures of success were observed through:

- Growing numbers of shoppers who began initiating discussions with educators
- Others returned requesting more specific information be sent to them
- Bringing friends and family to the community educators for training
- Requesting for more literature of a specific kind because the original one had been given away
- Infrequent findings of literature found on the property or in a waste bin
- Long-term, enthusiastic partnership with grocery store managers
- Minimal expense by using students and donated store space

Overall, the short-term goals were achieved. These were to develop and implement a programme that was: 1) acceptable to members of the Asian community regardless of education and acculturation; 2) accessible to those economically and educationally disadvantaged; and 3) cost effective.

Notes for EQC:

- Example of a simple but effective community-based education programme
- Education taken to the people by members of the community and delivered in a familiar setting
- Targeted minority/vulnerable group
- Use of students made project cost-effective, but also provided students with valuable health education training

Disaster Resistant Berkeley

Disaster Resistant Berkeley is an initiative of the City of Berkeley to encourage residents of the city to increase their emergency preparedness. The programme is dedicated to educating the community on how to be prepared for an emergency, training neighbourhood Community Emergency Response Teams (CERT), undertaking exercises such as emergency drills, and continuously monitoring the community for vulnerable populations and levels of preparedness.

Education is provided to the community through presentations and workshops in neighbourhoods or community groups, and events such as "Get Ready Berkeley Day". This project sees hundreds of volunteers walking the streets of Berkeley delivering emergency preparedness information to every household. This year, over

25,000 homes received door hangers, which provide information on preventing and responding to flu pandemic. In 2005, staff provided 39 workshops in preparedness and community presentations to over 1,313 people.

Berkeley currently has approximately 30 robust CERT's, with another 40 in development. Train the trainer workshops are also held giving volunteers the skills to lead their own neighbourhoods and groups in preparedness initiatives. Interest in CERT is found to be increasing.

A recent initiative has been to improve the city's disaster plans for pets and livestock. This work has included amending the City's Care and Shelter Plan, identifying and seeking zoning approval for an emergency cache of animal disaster supplies, identifying animal shelter sites adjacent to human shelter sites, researching and recommending post-disaster animal rescue services, coordinating municipal and animal welfare disaster responses, and pursuing the appropriate MOUs for all of these efforts.

Success of the programme is attributed to the development of numerous partnerships, and to community empowerment. The council has formed partnerships with local commercial and industrial businesses, emergency services, neighbourhood groups, the faith-based community, schools, social clubs, service organisations, and individuals. The City is also working with the private sector, the University of California, and community-based organizations to identify hazards and promote safety measures. Keeping the programme visible in the community by having regular training sessions, community events and presentations is the key to attracting and maintaining interest.

Notes for EQC:

- Although similar to New Zealand's civil defence groups, there seems to be much higher participation in the Disaster Resistant Berkeley initiative. This may be due to greater financial resources (see City of Berkeley Action Calendar 2006 for funding example), but will also be attributed to its vast collaborative and education efforts, visibility in the community and through providing practical, hands-on, interesting training in the form of CERT

Community-based programme	Activity	Type	Initiated	Time	Target Community	Workforce		Evaluation	Partners/Stakeholders/Funding
						Paid	Voluntary		
Shake safe	S	P	G	S	S	I/T		none	EQC, Energy Smart, EECA*, Hutt Mana Energy* Trust, Housing NZ*, Fire Service, Public Health
Quake safe schools	S	E	G	S	C	I		O ¹	EQC*, schools
BOP Coastcare	E	P	C	O	A	I	S	none	Environment Bay of Plenty and District Councils
EW Beachcare	E	P	G	O	A	I	S	none	EW, Hauraki DC
Warm Babies	H/E	P	C	O	C/S	I		O ²	Meridian Energy*, Plunket Family and Community Services (MSD)*, Plunket, Barnardos
SKIP	H	E	G	S	C	I		none	MOH*, MSD*, CYF, Waitakere City Council, Local health providers
Ranui Action Project	H	E/P	G	O	A		L	F/P ³	DOC
Kaikoura Pest & Weed Mgmt	E	P	G	O	A		L	F/P/O ⁴	Housing NZ*, ACC, WINZ, Northland Health, Mitre 10, People Potential
Te Kotihanga	S	E/P	F	O	S	T		none	WEMO*, Police
Karori CD/NS/CP	S	E	C	O	A		L	none	CFA
Community Fire Guard	S	E	F	O	A		L	O ⁵	Marin County, National Fish and Wildlife and many more
STRAW	E	E/P	C	O	A		S	none	US Corp for National & Community Service
AmeriCorps*NCCC	S	E/P	G	S	A		S	O ⁶	UCSD, Asian grocery stores
Asian Grocery Store	H	E/P	U	S	E		S	O ⁷	City of Berkeley, Fire Service
Disaster Resistant Berkeley	S	E	G	O	A		L	none	

Table 1. Programme summary matrix.

Legend

Activity: E = Environmental, H = Health, S = Safety

Type: P = Project-oriented, E = Education-oriented

Initiated: G = Government, C = Community, F = Fire Service, U = University

Time: O = Ongoing, S = Short-term

Target community: A = All, C = Children/youth, E = Ethnic group, S = Low socio-economic status

Workforce: Paid – I = Inhouse, T = Trained Volunteer – S = Short-term, L = Long-term

Evaluation: F = Formative, P = Process, O = Outcome

* = major funder

¹ Nui Pacific Ltd (2006), ² Fyfe (2005), ³ SHORE (2004), ⁴ Fitzgerald (1999), ⁵ Rohrmann (1999), ⁶ Simpson and Strang (2004), ⁷ Sadler et al. (1998)

2.4 Key points and common factors

From the fourteen programmes reviewed a number of common factors have been identified that lead to successful programmes. These include:

- *Collaboration* – the more support from community organisations, businesses and groups the more successful a programme is likely to be. Collaboration should also be sought with government departments, councils and emergency services. The more entities involved, the more resources there are, the more exposure for the programme and greater involvement from the community
- *Understand the community* – initiatives should be designed at a community level. Research into the community (e.g., demographics, local issues, needs) should be undertaken and the community consulted on the plan of action before a programme is implemented
- *Work with established groups* – in many cases there is no need to reinvent the wheel. Tying in projects or working with groups that are already active in the community is an efficient way to implement a programme, as there is local knowledge, established partnerships, and existing community participation
- *Targeting vulnerable populations* – assisting vulnerable populations physically prepare is a cost effective exercise as these groups tend to be the largest drain on resources in a disaster
- *Programme facilitator* – nearly every programme attributes some of its success to having a designated programme facilitator or co-ordinator. There needs to be at least one person whose sole task is to oversee the project and/or facilitate activities and communication between the community, stakeholders, funders etc.
- *Dependable funding* – successful long-term programmes require a dependable source of funding. A number of programmes described started with short-term funding from one source and with proven success, obtained larger grants and/or longer-term funding. Programmes may benefit from having numerous small grants lined up to share costs and maintain input from smaller stakeholders.
- *Simple, achievable projects* – the first project undertaken in a community should be something simple and achievable to attract interest and support. Even though a larger project may be more beneficial or appear more impressive, community and stakeholder trust and support will be lost if it doesn't come to fruition
- *Project diversification* – the community may not always choose to undertake a project that seems relevant to the issue or cause. However, if addressing this concern is important to the community, undertaking the project will foster partnerships and community interest in further projects
- *Exposure* – initiatives should have continuous exposure in communities to attract and maintain interest and participation from the public, volunteers, and stakeholders
- *Evaluation* – not all programmes were evaluated, with many (rightly) claiming success through a project's completion, a change being noticed or satisfaction from staff and the community. An empirical evaluation, however, can not only provide documented evidence to prospective stakeholders and participants but also help identify ways of making the programme more efficient or successful, or give a measure for comparison to other similar projects.

3. Volunteering

Most programmes require the service of volunteers to enable them to efficiently function. Volunteers are a valuable resource as they provide time and skills to a programme for free. However, if not managed correctly, they can be ineffective and may actually drain the limited resources of a programme.

When designing a programme, thought needs to be given to what type of volunteers are needed, or would be most efficient, how to engage them and if necessary, how to sustain volunteers for long-term efforts. For example, a short-term project-oriented programme may only require people to volunteer for one day in the year, where a community education/capacity building project may require long-term participation. Ultimately, in a national programme, both types of projects will be undertaken due to the varying nature of the work to be done, and the varying nature of the communities.

People volunteer for different reasons and have different expectations of their volunteering experience. It is also necessary to consider these issues when designing a project or programme. There is a vast amount of literature describing why people volunteer and how to engage, motivate, and sustain volunteers and communities (e.g. Batson, Ahmad, & Tsang, 2002; Clary & Snyder, 2002; Davis, Hall, & Meyer, 2003; Greenslade & White, 2005; Houle, Sagarin, & Kaplan, 2005; Lee, 2004; Skoglund, 2006; Taylor & Pancer, 2007). Hashim (2003), however, provides an excellent comprehensive review on recruiting and retaining volunteers, which will be used as a source for the following sections. Topics including reasons for volunteering, pre-recruiting considerations, how to recruit volunteers, sustaining volunteers, and evaluation are discussed, along with a brief discussion on alternatives to volunteers and a list of possible volunteer organisations EQC could team up with to undertake further initiatives.

3.1 Reasons for volunteering

It is important to know why someone is volunteering because it can help maintain the volunteer's interest. If the volunteer's activities are fulfilling their needs and expectations then they are likely to continue to volunteer. When the volunteer's expectations are not met, dedication and commitment will gradually decline, resulting in the loss of their services. Identifying and understanding the reason someone is volunteering makes it easier to give them a particular task that they will enjoy doing, increasing the likelihood that the volunteer will complete the task and avoid conflict.

Reasons for volunteering fall into six categories (Clary et al., 1998): Values, understanding, career, social, protective, and esteem/enhancement. Examples of each of these include:

- Values: Make a difference/help people, believe in the cause
- Understanding: Enhance/share knowledge, use skills and abilities
- Career: Improve job prospects, gain training and experience
- Social: Be part of a community, meet new people, follow family tradition
- Protective: To help others less fortunate, pass time, give back to the organisation
- Esteem/enhancement: Personal satisfaction/feel good, build self-confidence

3.2 Pre-recruitment considerations

Organisation preparation for volunteers is essential. This includes developing a volunteer programme, identifying tasks that volunteers can perform, and ensuring that the organisation/programme is attractive to volunteers.

To ensure the success of a project, a volunteer plan needs to be put into place. Guidelines need to be developed for dealing with a volunteer workforce and a volunteer co-ordinator needs to be assigned. Guidelines should include policies on:

- Recruitment – searching for prospective volunteers and encouraging them to participate
- Screening – finding the right person for the job
- Orientation – providing a realistic overview of the organisation/project to selected volunteers
- Placement – matching each volunteer to a suitable task or collection of tasks
- Supervision – assisting, motivating, and guiding each volunteer to help them develop skills that will improve performance
- Evaluation – determining the value (quantity/quality) of task performance against a mutually agreed outcome
- Recognition – acknowledging the services of the volunteers in a continuous and consistent manner
- Retention – keeping and inspiring able, experienced and motivated volunteers in the organisation over the long term
- Task evaluation – measurement of specific work output based on a mutually agreed upon target

Jobs and tasks for volunteers need to be identified. Prospective volunteers will want to know what kind of work is available and it makes it easier to find the right volunteers for a specific task. A detailed description of each task should be prepared, listing such things as objective, budget, time required for completion, location and frequency of effort, skills required, number of people involved, tools and working conditions, expectation, responsibility, and accountability. Common tasks for volunteers include:

- Administration/clerical – bookkeeping, updating mailing lists
- Counselling
- Fundraising – organising events, phone banks
- Technical/Mechanical/Maintenance – updating websites
- Publishing/Research – newsletters, photography
- Marketing – publicity and public relations
- Education/Tutoring/Mentoring – outreach activities

All potential volunteers are attracted to a well organised, credible organisation or programme. Factors that affect organisation and programme attractiveness to volunteers include:

- Good public image/publicity
- Proven track record
- Well identified goals
- Infrastructure in place
- Transparent operations
- Politically independent

3.3 Recruiting volunteers

Attracting volunteers to a project can be done in two ways: a general appeal or a targeted appeal. A general appeal is a call to all current members as well as the general public to become volunteers. The appeal is usually made as widely as possible, using as many media as possible. The objective is to get a large number of volunteers willing to do tasks requiring relatively low skills. A targeted appeal is a specific call to a particular individual or “qualified” volunteer with particular skills or expertise. These people are generally highly qualified and very busy, older, in settled jobs and/or have family commitments. To attract such people to be committed volunteers it is necessary to be persuasive, courteous, and tactful.

It is important to gather information on new volunteers: their tastes, abilities, preferences, former volunteer experiences and availability. When a candidate agrees to volunteer, depending on the situation, it may be beneficial for a formal agreement and confirmation of offer to be made in writing. The volunteer and supervisor should review the job description together to make sure that responsibilities and expectations are clearly defined, and any necessary changes made accordingly.

New volunteers should be given some form of orientation before they begin their work. The purpose of orientation is to make them feel worthy and welcome, develop a positive perception of the organisation, confirm they have made the right decision, build enthusiasm, ensure a mutual expectation of the task, and instil an understanding of the do's and don'ts of the job. Orientation also can provide an opportunity for existing and new volunteers to meet each other, share information, experiences, and skills.

3.4 Sustaining volunteers

The best way to ensure volunteers maintain motivation is to make sure that they get satisfaction from their volunteer work and do not feel taken for granted. Factors which affect volunteers' motivation include the work environment, personal needs, and recognition.

Common complaints by volunteers regarding work are that tasks are unclear or boring, there is little training, guidance, communication or work, and no support or recognition. If a volunteer lacks interest or aptitude for one job, if possible, re-assign them to another task that they are better suited to. When assigning tasks, it should be ensured that:

- Tasks are explained clearly
- Training is provided
- Volunteers understand how their task will benefit the cause
- Work is interesting and useful
- Success is attainable
- Guidance and feedback is provided
- Praise is given

Volunteers are most likely to continue being involved when they feel they are part of a serious, well run organisation that really helps people.

Another important motivator is whether or not the volunteer's personal needs, or motives, are being met. Needs are met when:

- An individual is doing a job he or she likes to do
- An individual is doing a job he or she is capable of doing
- The motivating factors that brought the individual to your organisation are being addressed
- The tasks are adjusted to meet needs and to provide new challenges

Ensuring that volunteers feel acknowledged and appreciated is a great motivator. One of the best forms is letting volunteers know how their work has contributed to the cause, such as how much money has been raised or a heart-warming story. It is also important to recognise the contribution of volunteers. This can be done in many ways and may depend on such things as how long the volunteer has been involved, and on available funds. Examples of recognition include:

- Give praise or make supportive remarks – say thank you
- Provide a free meal during a project
- Highlight the volunteers achievements in a newsletter
- Increase responsibilities
- Provide a letter of recommendation
- Thank you cards, certificates, trophies, or a special event

3.5 Evaluation of the volunteer programme

Evaluation is a key part of a volunteer programme as it highlights reasons for success and failure in attracting, training, and retaining volunteers. Co-ordinators and supervisors need to obtain feedback from volunteers on a regular basis to find out what is working and what elements may need to be changed. When volunteers leave it is also beneficial to establish their reason for doing so.

3.6 Alternatives to volunteers

For some project-oriented programmes it may be more efficient or necessary to employ people to undertake certain tasks. An organisation, however, may not have enough funds to hire fully skilled staff. In this case, alternative solutions need to be found. Possible examples include using secondary or tertiary students as part of a work experience or internship programme, drawing on the skills of special needs persons or older adults, or using an enterprise that is helping to get unemployed people training and skills to enter or re-enter the workforce. Work may not necessarily be provided for free, but at a lower, introductory rate, or supported by Work and Income, educational institutions or other local organisations. Not only does employing these generally more vulnerable groups help the project, but it also empowers those involved.

One example, mentioned in the Te Kotahitanga project is Taskforce Green. Taskforce Green is an initiative run by Work and Income that provides people with a subsidy to allow them to participate in project-based work where they can develop work habits and general on-the-job skills. This experience intends to help people progress towards unsubsidised, sustainable employment. Taskforce Green also benefits the community by providing workers for community or environmental projects that would not otherwise be done.

3.7 Volunteer/NGO Collaborators

The following is a list of volunteer and non-government organisations that have been identified throughout the researching of this report, to be good partners to potentially approach for project collaboration.

- Civil defence centres
- Red Cross
- St John
- United Way
- Adventist Development and Relief Agency (ADRA)
- Salvation Army
- Community Housing Aotearoa
- IHC/IDEA/Timata Hou
- Plunket
- Scouts/Girl Guides
- Lions
- Rotary
- Probus

4. Evaluation

Evaluation provides a systematic process for determining the success of a programme. It addresses questions about whether, and to what extent, the programme is achieving its goals and objectives. Those questions can occur at any time during a programme's lifetime, or beyond, and can frame almost any aspect of the programme that is of interest.

Knowing programme outcomes is not only valuable to those undertaking the initiative, but may also be of interest and use to researchers, participants, funders, and the general public. Results may help to show that a programme is cost-effective, explain why a programme didn't work and how it could be adapted for the future, give empirical proof that change in behaviour or environment was made, or attract support from new sources.

To undertake a meaningful evaluation it is necessary for the project to have clear aims and goals in order to know what to examine, when to examine, and how to examine programme elements effectively. It is also important to know the evaluation's target audience so that relevant information is collected and presented in an appropriate manner. Time and budget constraints will also be factors in the type of evaluation that can be undertaken.

The following sections provide an overview of evaluation elements and considerations. The first section describes the different types of involvement from researchers, clients, and participants that are possible in a programme. Evaluation approaches, purposes, methods and designs are then explained in the following sections. Duignan (2001) and McNamara's (2003) work on evaluation provide the basis for these sections.

4.1 Research Types

At the outset of any programme, before any communities have been selected or projects designed, consideration needs to be given to how much researcher involvement is required or necessary. Do you need researchers to simply evaluate the programme on its completion, scope out the community, implement an intervention, or do you want them involved at every stage? Should the community also be involved in design and evaluation of the project? Figure 1 shows the various combinations of researcher/client/subject involvement with a brief description of each listed below, summarised from Schein (2001).

Once the type of researcher/client interaction has been decided upon, the next step is to determine the appropriate evaluation approach, purpose, method, and design. Table 2 gives a general overview of these concepts, listing terminology commonly associated with each. A more in-depth look at each concept and explanation of the terminology follows.

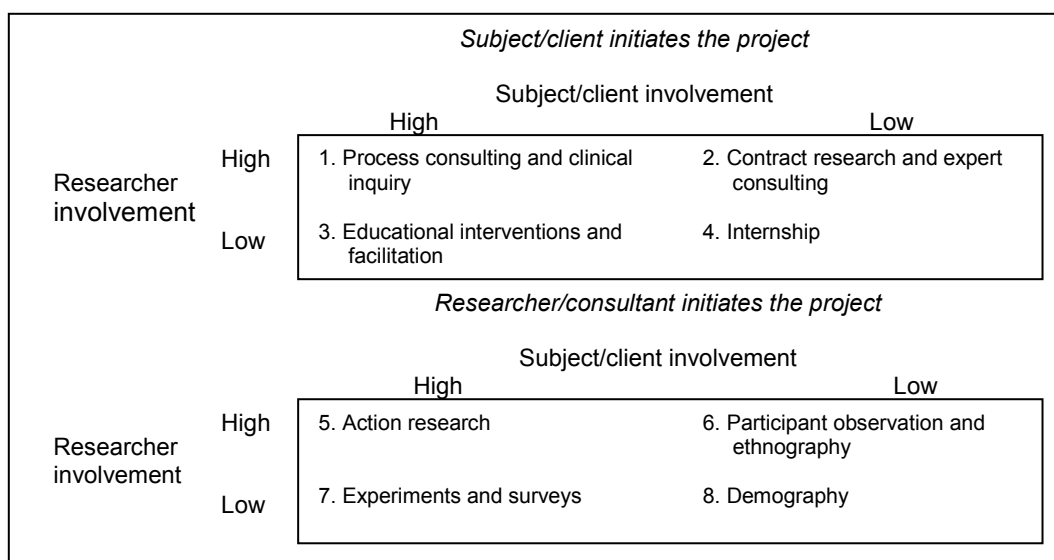


Figure 1. Combinations of researcher/consultant/subject/client involvement (modified from Schein, 2001)

Client initiated inquiry

1. *Process consulting and clinical inquiry*: Client and researcher work together on a problem the client is trying to solve
2. *Contract research and expert consulting*: The client decides the research agenda and hires a researcher to implement it
3. *Educational interventions and facilitation*: Researcher brought in to facilitate a meeting or implement an educational intervention but limited to client's directions
4. *Internship*: Researcher undertakes some exploratory research, but the client is in control of what will be done and how (similar to 3 but researcher less involved)

Researcher initiated inquiry

5. *Action research*: Requires all the participants to be collaborative researchers. Needs analysis, programme design, implementation and evaluation are carried out in a collective effort by all parties involved.
6. *Participant observation and ethnography*: Researchers become totally involved, while at the same time, trying to remain objective and to minimise their impact on participants
7. *Experiments and surveys*: Researcher formulates the question, issue or problem and requires involvement from participants
8. *Demography*: Researcher decides on a topic and finds a way of collecting data that, at the extreme, may not involve participants at all

Purposes	Approaches	Methods	Designs
Formative evaluation: - design - developmental - formative - implementation	Utilisation-focused Theory Based Goal-free Cost-benefit	Questionnaires, surveys, checklists Interviews Documentation review	Experimental Quasi-experimental Implicit
Process evaluation	Black box	Observation	
Outcome evaluation: - Impact - Outcome - Summative	Kaupapa/Maori	Focus Groups Case Studies	

Table 2. Evaluation terminology (modified from Duignan, 2001)

4.2 Evaluation purposes

There are various ways of describing purposes of evaluation activity, e.g. design, developmental, formative, implementation, process, impact, outcome, and summative. The evaluation purpose is best understood as identifying what an evaluation activity is going to be used for, whether it will be used to: a) help develop the programme, b) understand the workings of a programme or c) assess the programme's outcomes. These evaluation purposes can generally be described as formative, process, and outcome respectively.

Formative evaluation is also described in the literature as design, developmental and implementation evaluation, and needs assessment. Basically, it is any evaluation activity directed at improving a programme's design, planning, development and implementation, with its aim being to ensure that a programme is well developed. There are various models for how it can be undertaken, but it is directed at ensuring independent constructively critical input into programme development. Formative evaluation may use both quantitative and qualitative techniques.

Process Evaluation is any evaluative activity directed at describing or documenting what actually happened in the context or course of a programme. It has three main uses:

1. Describing what actually happened in a programme. It can be crucial for communicating best practice to others who want to replicate elements of a successful programme by providing detailed information on what was done, what problems arose, and what solutions were adopted, not just the outcomes.
2. Interpretation of outcome evaluation results. For instance, a programme may not have proved successful on outcome evaluation, however, when looking at its process evaluation, it will be clear that the negative outcome was a result of specific events throughout the programme that caused the problem.
3. Examine the context of a programme and the decision making leading up to that programme being introduced. For example, there may be issues in the early decision making phase about the programme objectives and what type of programme should be run, which leads to a programme being designed that is "easy to implement" rather than one which is more difficult to implement but more likely to achieve success.

Outcome evaluation also includes the terms intermediate outcome, impact and summative evaluation, and cost-benefit analysis. In general, it is any evaluative activity directed at determining whether a programme has achieved the outcomes it is seeking. Summative evaluation more specifically describes an evaluation that makes an overall assessment of a programme. Outcome evaluation results are very useful for stakeholders, particularly if they are in a form that compared with other strategies for achieving the same outcomes. Outcome evaluation is generally achieved through quantitative analysis, but can also be carried out through qualitative analysis.

These three purposes of evaluation are obviously linked – information arising out of a formative evaluation can be used for both improving a programme and also as part of process evaluation. Formative, process, and outcome evaluation from one programme can be used to feed into the formative evaluation of a new programme. Table 3 provides a summary of the three purposes.

Evaluation purpose	Reason	Timing	Questions Addressed
Formative	Improving programme	Before implementing the programme	What issues need to be addressed? Will the activities meet the needs? What is the target community like?
Process	Describing programme	During implementation	What is actually happening compared to what was planned? How are interventions related to outcomes? What caused the good/bad outcome?
Outcome	Measuring outcomes	Following the end of an activity or intervention cycle – immediate or long-term	Is the programme achieving any changes? Is the programme achieving stated objectives? What are the results of the programme, both intended and unintended? Have the immediate effects been sustained over time?

Table 3. Summary descriptions of formative, process and outcome evaluations

4.3 Evaluation approaches

An evaluation approach is a general way of looking at or conceptualising evaluation, which often incorporates a philosophy and a set of values. Table 4 describes some of the more common approaches, and lists their purpose, strengths, limitations, and an example question.

4.4 Evaluation methods

In addition to evaluation purposes there are evaluation methods. These are the specific research and related methods used in evaluations. In the past these tended to be methods originating from the physical sciences, but now they also draw extensively on methods developed in the social sciences. Table 5 describes a selection of common evaluation methods, along with their advantages and disadvantages.

Approach	Purpose	Description	Purpose	Strength	Limitation	Sample Question
Utilisation-focused	Formative, Process, Outcome	Yields immediate, concrete, observable, and useful information on programme decisions and activities as a result of evaluation findings	To increase the use of evaluation	Provides meaningful, relevant, and substantial information to empower users	Demands high expenditures of time, energy, and staff resources	What information is needed by stakeholders to improve future hazard education programmes?
Theory-based	Process, Outcome	Evaluation based on a model, theory or philosophy about how a programme works	To identify the causal relationships that affect, operate, and influence the programme	Presents rationale for choice of variables, and results can contribute to growing body of scientific knowledge	Conclusions are based on whether theory is correct or accepted	Is there a fit between the outcomes predicted by theory and the observed outcomes?
Black box	Outcome	Examines programme output without consideration of programme input	To determine programme effects	Determines whether a programme is achieving its goals	Fails to consider why something is effective or ineffective	Does awareness increase after a public education campaign?
Goal-free	Outcome	Gathers data directly on programme effect and effectiveness without knowledge of programme goals	To evaluate the actual effects free from constraints of goals and their outcome expectations	Attention to actual effects rather than alleged effects reduces tendency toward tunnel vision and increases likelihood that unanticipated side effects will be noted	Not goal-free at all but rather focuses on wider context goals instead of programme-specific objectives	What are the actual effects of an education programme?
Responsive	Formative, Process, Outcome	Responds to programme activities and audience need by allowing evaluation questions and methods to emerge from observation	To address the concerns and issues of the stakeholder audience	Directs the attention of the evaluation to the needs of those for whom the evaluation is being done	Reliance on individual stakeholder perspectives may lead to subjective designs and findings	What major question would you like the evaluation to answer?
Cost-benefit	Outcome	Compares programme costs and programme outcomes in terms of dollars	To describe the economic efficiency of a programme regarding actual or anticipated costs and known or expected benefits	Useful in convincing policy makers, and decision makers that dollar benefits justify the programme	Difficult to quantify many outcomes in monetary terms and to express costs and benefits in terms of a common denominator	What was the total estimated savings to EQC as a result of the water cylinder strapping project after the Wellington earthquake?

Table 4. Evaluation approach descriptions (modified from Unrau, Gabor, & Grinnell Jr, 2007)

Method	Overall purpose	Advantages	Challenges
Questionnaires, surveys, checklists	When need to quickly and/or easily get lots of information from people in a non threatening way	Can complete anonymously Inexpensive to administer Easy to compare and analyze Administer to many people Can get lots of data Many sample questions already exist	Might not get careful feedback Wording can bias client's responses Are impersonal May need sampling expert Doesn't get full story
Interviews	When want to fully understand someone's impressions or experiences, or learn more about their answers	Get full range and depth of information Develops relationships with client Can be flexible with client	Can take much time Can be hard to analyse and compare Can be costly Interviewer can bias client's responses
Documentation review	When want to get an impression of how a programme operates without interrupting the programme; review of applications, finances, memos etc.	Get comprehensive and historical information Doesn't interrupt programme or client's routine in programme Information already exists Few biases about information	Often takes much time Info may be incomplete Need to be quite clear about what looking for Inflexible means of getting data; restricted to what exists
Observation	To gather accurate information about how a programme actually operates, particularly about processes	View operations of a programme as they are actually occurring Can adapt to events as they occur	Can be difficult to interpret seen behaviours Can be complex to categorise observations Can influence behaviours of programme participants Can be expensive
Focus groups	Explore a topic in depth through group discussion	Quickly and reliably get common impressions Can be efficient way to get much range and depth of information in short time Can convey key information about programmes	Can be hard to analyse responses Need good facilitator for safety and closure Difficult to schedule a group of people together
Case studies	To fully understand or depict client's experiences in a programme, and conduct comprehensive examination through cross comparison of cases	Fully depicts client's experience in programme input, process and results Powerful means to portray programme to outsiders	Usually quite time consuming to collect, organise and describe Represents depth of information, rather than breadth

Table 5. Summary of main evaluation methods (McNamara, 2003)

4.5 Evaluation design

Evaluation designs are the way in which the evaluation ingredients – approach, purposes and methods – are put together into the final evaluation in an attempt to answer a set of evaluation questions. Evaluation design will indicate the overall evaluation approach, the mix of formative, process, and outcome evaluation and the methods to be used. There are three general evaluation design categories: experimental, quasi-experimental, and implicit.

1. *Experimental*: Experimental or randomized designs are the most rigorous approach for establishing causal relations between programmes and their results. They are characterised by a random assignment of potential participants to the programme and comparison groups to ensure their equivalence. Examples include: classical randomised comparison group design, post-programme-only randomised comparison group design, randomised block and Latin square designs, and factorial designs.
2. *Quasi-experimental*: These designs are close to experimental designs but do not use random assignment to create the comparison groups. This design allows researchers to look at relationships between variables rather than at causes and effects. Examples include: pre-test/post-test designs, time series designs, and post-test only designs.
3. *Implicit*: Implicit designs are more commonly used but are the least rigorous design. Measurement is made after exposure to the programme and assumptions are made about conditions before the programme. Any change from what was assumed to exist before the programme is attributed to the programme. Examples include: theoretical control group design, retrospective pre-programme measure design, and direct estimate of difference design.

4.6 Summary

Before a programme is designed and implemented consideration needs to be given to evaluation to ensure that the most efficient evaluation strategy is implemented. The above sections describe evaluation elements that need to be mixed-and-matched in order to design a suitable programme evaluation. These elements are research type, and evaluation purpose, approach, method and design. For example, a low resourced agency simply wants to find out whether people know about their agency as a result of recent advertising. The selected strategy might be: *Research type*: Demography, *Purpose*: Outcome, *Approach*: Black box, *Method*: Questionnaire *Design*: Implicit.

As a guide to helping decide what evaluation strategy should be applied, the following questions should be considered:

- For what purposes is the evaluation being done, i.e., what do you want to be able to decide as a result of the evaluation?
- Who are the audiences for the information from the evaluation, e.g., researchers, funders, management, participants, general public etc.
- What kinds of information are needed to make the decision you need to make and/or enlighten your intended audiences, e.g., strengths and weaknesses of the product or programme

- From what sources should the information be collected, e.g., employees, volunteers, participants, groups of participants, programme documentation, etc.
- How can that information be collected in a reasonable fashion, e.g., questionnaires, interviews, examining documentation, observing customers or employees, conducting focus groups among customers or employees, etc.
- When is the information needed (so, by when must it be collected)?
- What resources are available to collect the information?

For a good example of an evaluation of a hazard education programme, refer to Rohmann's (1999) evaluation of the Community Fireguard programme (see 2.3). This paper outlines the considerations given to the evaluation, explains the evaluation purpose, approach, methods and design, and reports on the findings.

5. Benefits, challenges and the keys to success

The aim of this report was to identify concepts and considerations necessary for developing community-based public education initiatives. This was achieved through reviewing case studies of various local and international programmes, examining issues around volunteering and reporting on elements of programme evaluation. Throughout the study a number of benefits and challenges of community-based initiatives were identified, along with key factors which lead to successful programmes. The following points provide a summary of the key findings and are intended to help guide the programme development process.

Benefits of community-based initiatives:

- Ensures a degree of physical preparedness for some communities
- Greater community participation – when seen to benefit the local community, more people are likely to participate, both in numbers and diversity
- Shared resources and knowledge – through collaboration resources and knowledge can be called upon from various sources
- Can become self-sustaining projects – empowers the community to keep the programme running, design initiatives and seek funding
- Greater political and stakeholder support
- Stronger links between councils and communities
- Increased community resilience through fostering a sense of community, self efficacy, problem-focused coping, response efficacy, and outcome expectancy

Challenges of community-based initiatives:

- Most of the projects were implemented in response to a threat or problem. Although earthquakes are a real problem, they are not a “visible” problem to the community
- Less homogenous products and delivery – programmes generally need to be tailored to each community, requiring more resources. (However, could have programme like SKIP where material is homogenous, just delivered with a community aspect)
- Greater time for initial design and set-up – takes time to build partnerships and consult with the community
- Sustaining volunteers and community support
- Additional staff costs – facilitators and evaluation

Keys to successful programmes:

- Collaboration with many partners and stakeholders
- Understanding the community and its needs, designing a programme with them not for them
- Working with established groups
- Targeting vulnerable populations
- Having a programme facilitator
- Securing funding – short- or long-term, one source or many
- Starting with simple and achievable projects
- Allowing project diversification
- Continuous community exposure to the programme
- Programme evaluation

Keys to attracting and maintaining volunteers:

- Promoting volunteer opportunities with consideration to volunteer motivations: making a difference (values), using skills and abilities (understanding), improve job prospects (career), meet new people (social), help the less fortunate (protective), build self-confidence (esteem)
- Having a clear purpose for volunteers – an inventory of jobs and activities that need to be done
- Providing volunteers with induction, orientation or introduction to the work and organisation
- Matching volunteers abilities and interest to tasks
- Keeping participation interesting – changing/rotating tasks or providing new challenges
- Giving volunteers recognition and praise – show them how they are helping the programme
- Volunteer evaluation – highlights reasons for success and failure in attracting, training and maintaining volunteers
- Volunteers may not be suitable for all projects – contracted or specially trained staff may be required

Key considerations for undertaking a programme evaluation:

- Determining the necessary degree of researcher/client/subject involvement
- Having well defined programme aims and goals
- Knowing what information is required from the evaluation and its intended audience
- What aspect of the programme should be evaluated; the developmental stage, the implementation stage, its outcomes or combinations of these (evaluation purpose: formative, process and outcome evaluations)
- What evaluation approach is most applicable
- Selecting the most efficient and/or effective way of collecting data, e.g. surveys, interviews, document review, case studies (evaluation method)
- Evaluation design – does the evaluation need to examine cause and effect, the relationship between variables, or simply describe an outcome

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