

***‘KNOW YOUR PATCH’  
TO  
‘GROW YOUR PATCH’***

***BRIEFING PAPER - May 2009***

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INTRODUCTION

The Understanding Communities Project within the Bushfire CRC aimed to provide a better understanding of the relationship between communities and their Fire Service providers. To achieve this, objectives included:

- A methodology for mapping communities at risk
- A framework and methodology for defining community values, attitudes, perceptions, needs and expectations in relation to bushfire risk.
- Guidelines for assessing organizational needs and expectations in relation to bushfire risk.

To meet these objectives an action research approach was taken. From very early in the project it was clear that the focus of the project was at the community level, particularly where the local brigade interfaces with the community. In addition, fire services did not have detailed relevant information at all levels of the organisation. This required some flexibility in carriage of the project. The outcome is “Know Your Patch to Grow Your Patch” which has been presented in two forms. The first is a guide or methodology for action at the local community level, and is necessarily brief. The second is this briefing paper which provides background for the development of the methodology. In both cases the information follows the ‘logic’ of the process of discovering: who lives in a community, their vulnerabilities and capacities; their perceptions of fire and expectations of fire services; and the needs of fire service organisations in relation to these matters. The basis for this methodology lies in a combination of two traditions from the social sciences: social assessment and participatory appraisal.

## RESEARCH APPROACH

Overall, an action research approach was taken to meet the aims of the Understanding Communities Project. To this end a variety of research methods including qualitative and quantitative research approaches such as interviews, surveys, focus groups, archival material and other documents were used. Action research can be described as a paradigm; a methodology; or in some cases, as a method or set of techniques. There appears to be no one 'right' definition for action research, just as there is no one right way of 'doing' action research. Whyte (1991, p.8) states that action research is for people who: "want their research to lead to social progress and yet do not want to give up claims to scientific legitimacy". A fully participatory action research approach (Chein et. al. 1948, McTaggart 1997a,b, 1999) was abandoned when it became clear that players in the various roles within agencies come and go, and even when meetings are scheduled with counterparts, often, new faces appeared. In addition, in some cases it was quite clear that some member of the fire services saw the project activities as being foisted upon them and had no real desire to participate.

The Understanding Communities Project saw participation by stakeholders in the design and process of the research activities as essential. Stakeholders included all parts of the fire service from volunteers to paid employees, rural fire services to urban fire services, as well as community members and local governments. From the inception of the project fire service personnel were consulted in the choice of issues to be investigated, design of research activities, interpretation of results, and have taken on the responsibility of using the information generated from the research in their work environments. Inevitably, community members also became involved because they are key stakeholders in fire service matters.

The iterative nature of action research (Wadsworth 1998, 2001) was integral to the Understanding Communities Project (C1). As researchers interacted with members of the fire services and the broader communities they are part of and serve, the clarity of the required and the possible outputs of the project unfolded.

In essence, the Understanding Communities Project was about contributing to organisational development by using an action research approach to understanding the

organisational information needs (Karlsen 1991, Pasmore & Friedlander 1982) of fire services in terms of the social and community contexts in which they operate. In addition, the generic nature of the action research methodology allowed for flexibility in the choice of data gathering and analysis methods. Due to previous over-use of survey questionnaires in studies involving fire service personnel, there was resistance to the use of this data gathering method in the project. The flexibility of action research allows for alternate methods of data collection and to adapt to barriers or hurdles encountered. The cyclic nature of action research allowed for responsiveness to these emerging factors during the course of the Understanding Communities Project.

The actual methods used for the research included reviews of academic and other publications, in depth interviews, group meetings, focus groups, and household surveys (see Diagram 1).

The background of the project leader is strongly influenced by two other methodological traditions in the social sciences: Participatory Appraisal and Social Assessment. These two traditions are elaborated on here for purposes of clarity.

### Participatory Appraisal

Participatory Appraisal developed out of Rapid Rural Appraisal developed in Britain in the 1970s, which in turn developed out of the traditions of activist participatory research, applied social anthropology, agrosystem analysis, and farming systems research (Beebe 1987, Chambers 1994a,b,c, Grandstaff & Grandstaff 1987, Jamieson, 1987). Initially, outside experts went to a community to conduct needs assessments for rural development usually in developing/ industrializing nations. Gradually, this process evolved into, a more community inclusive model, where researchers assist communities to identify their own issues and plans for the future. Participatory appraisal seeks to learn from local people, be prepared to adapt as new information arises, optimise tradeoffs in decision making, check information against a variety of sources, times and places, and identify diversity. Practitioners of participatory appraisal need to be critically aware of their own activities, take personal responsibility for activities they undertake, by using personal judgement rather than

relying on checklists, and sharing information with and between local communities (Chambers 1994b, Wageningen International 2008).

### Social Assessment

Social Assessment became a clearly enunciated practice as Social Impact Assessment, in the United States in the 1970s, but, again, was preceded by applied research in anthropology, geography and sociology (Taylor et al 2004, Vanclay 2002). Initially social impact assessment was a project focussed practice designed to ameliorate negative social impacts, but has evolved into a practice which is more inclusive of community participation and with more of a focus on increasing positive outcomes of, not only projects, but also other social changes (Lockie 2001). As Taylor et al (2004) suggest, social assessment is the preferred term for a process which “is focussed on individuals, groups, communities and sectors of society affected by change” (Taylor et al 2004:1). Social assessment is also used in the area of disaster and hazard studies (Barrow 2000, Britton 1986, Buckle et al 2001, Cottrell and King forthcoming) In this case, the process attempts to not simply post facto identify the social impacts, positive and negative, of hazards or disasters, but also to anticipate changes in a community in order to more effectively plan for, respond to and recover from a disaster.

These two traditions provide the basis for the method developed by the Understanding Communities Project to assist fire services at the local level work with the communities of which they are part, and which they serve, to identify local community vulnerabilities and capacities in terms of bushfire hazard, identify community perceptions of fire risk and attitudes about fire and fire services, community expectations of fire service delivery, understand how fire services view the issues and the differences and similarities they share with the community, organisation needs to assist and work with the community, and to identify ways forward for the local fire services and the community. This sits comfortably with the view of Taylor et al (2004) that for social assessments to be useful, they need to be focussed, and require judgement on the part of the researcher. This is not to suggest that these are the only methods for achieving this outcome. Other academic traditions use similar types of approaches, particularly community development from the social work sphere.

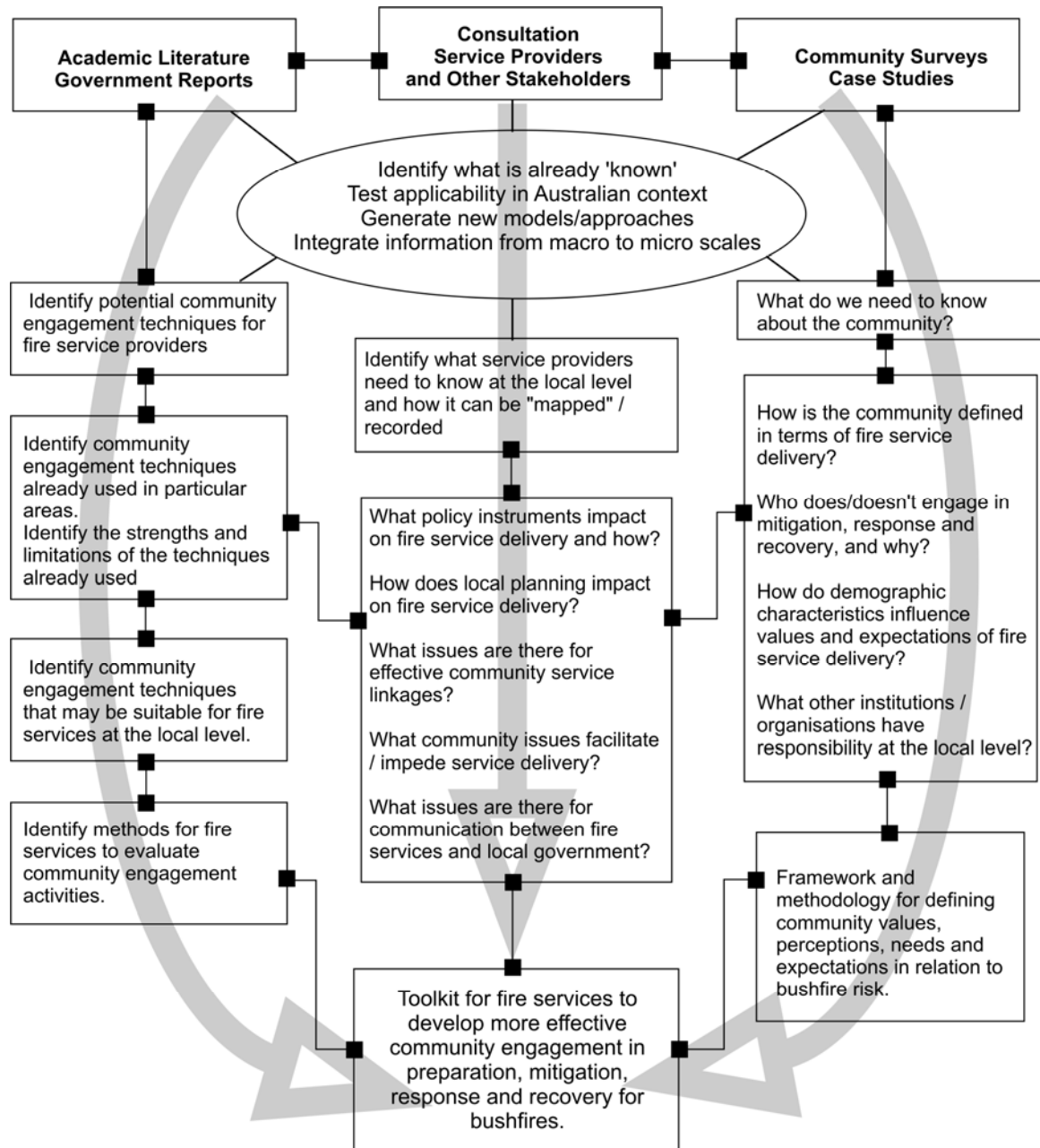
Through the action research approach, a slight change in focus developed, the three original objectives:

- A methodology for mapping communities at risk
- A framework and methodology for defining community values, attitudes, perceptions, needs and expectations in relation to bushfire risk.
- Guidelines for assessing organizational needs and expectations in relation to bushfire risk.

became the development of a methodology which identifies:

- Exposure to bushfire risk at the local level;
- Community profiling (who lives there) for fire services at the local level;
- Community capacities and vulnerabilities;
- Community perceptions of fire and expectations of fire services; and
- Needs of fire service organisations in relation to these matters (*Growing your Patch*).

As well, it is most important to recognise that the process outlined is to varying degrees, undertaken by many parts of the fire services, what this document seeks to do is make the process explicit, more accessible and transparent.



**Diagram 1:**

**The primary research methods used by the Understanding Communities Project**



## **IDENTIFYING EXPOSURE TO BUSHFIRE RISK**

An important first step, which may seem obvious, is to identify the geographical area that is to be covered, and its broader context. For example, if it is a brigade it would be the area covered by the brigade, a fire education officer may have a different area, and a local government would most probably confine itself to its boundaries. It may also be that a particular part of an area may need to be targeted, in which case the geographical focus would be smaller.

The availability of mapped information about bushfire risk in Australia varies between and within states, is at a variety of scales and sometimes based on outdated data. The scale of the maps is important and dependent on the availability of data and the use for which the information is intended. Utility across purposes may not occur. For example, maps used to determine the requirements for and location of new services at a regional level may not have utility for the planning of fire management practices at the local level. The availability of high quality maps at the local level is constrained in some remoter areas. For example, in several localities visited for the research, brigades did not have detailed maps of the area they served which identified the bushfire risk in terms of high risk vegetation, areas burned in the most recent natural fire and the date, nor the date and times of the most recent controlled burns. In some cases this was because another agency – government or private - was the holder of the information. Sometimes it was because brigades were unaware that the information was available, and could be obtained from ‘head office’. Sometimes the information was ‘in someone’s head, not a good place for the sharing of information.

This is not to suggest that highly detailed and technical maps are the only useful maps at the local level. Very useful maps can be produced from readily available street and district maps. Google Maps can also be a helpful source of information depending on the location. Maps are very useful for recording the information about high risk locations, areas burned in the most recent natural fire and the date, and the date and times of the most recent controlled burns. At the local scale this information may need to be constructed on the basis of local knowledge which is verified over time.

Maps provide a useful starting point for a conversation about where the bushfire risk is and who is most at risk in the community.

## **COMMUNITY PROFILING FOR FIRE SERVICES AT THE LOCAL LEVEL**

This section describes an approach to developing a community profile at the local level which seeks to identify the community, not only in terms of the individuals or households within it, but also in terms of the networks and organisations that are integral to the community. Community profiling is the starting point for any social assessment process (Taylor et al 2004).

An important starting point is acknowledgement that communities are different and are not homogenous (Cottrell 2005, March and Buckle 2001). Not all rural, peri-urban or urban communities are the same, and within any community there are smaller groups with which people identify that are of more importance to them than the community as a whole. The term ‘community’ means different things to all of its residents. A community is not just the sum of its parts and can be based on location, or more on networks (Cottrell 2005, 2007, Marsh and Buckle 2001, Stehlik 2006, Walmsley 2006). Talking only to householders will not provide a picture of the richness of the networks and relationships within a community, networks and relationships that are important to communicating effectively with and within communities and helping communities help make themselves more resilient to bushfires. The fire risk in communities may have some similarities, but a bushfire will not play out in the same way in two communities. Similarly, the way to inform and work with communities on bushfire matters will differ between and within communities as well as over time. To manage this variability, the focus of community profiling is at the local level of a brigade or a region.

### *Sources of information about who lives in the area*

How is it possible to identify who lives in a community without undertaking an expensive survey conducted by professionals? There are several sources of relevant information each of which has its strengths and limitations. It is important to obtain information from as many different types of sources as possible. A rule of thumb is that at least 3 different sources of information are needed to give reliable

information.<sup>1</sup> Information about the community can be gained from information that is already published, interviewing local government and organisational representatives and attending meetings of other (particularly voluntary) groups in the community.

It is important to note that the more direct the contact there is with community members, the more sensitive and careful the person collecting the information needs to be. As well, community profiling is not a ‘one-off’ activity, the information needs to be updated regularly.

The following lists of information about a community are common to both rapid appraisal and social assessment (Taylor et al 2004, Burdge 2004, King and Cottrell forthcoming) but adapted for the context of communities and bushfires. These lists are by no means meant to be exhaustive, nor checklists to be filled out and ticked off. They are a starting point for identifying who lives within a community in order to identify the people and groups who may need to be contacted, and the opportunities for contacting them.

#### *Published Information*

Census data (collected by the Australian Bureau of Statistics) helps identify:

- how many people live in an area,
- how old they are,
- whether they are male or female,
- level of education,
- home ownership levels,
- income levels,
- the types of employment people have,
- types of dwellings,
- occupancy rates,
- marital status,
- household composition and

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<sup>1</sup> In the social sciences, this is referred to as triangulation (Neuman 1997) but is not meant to imply only 3 sources of information.

- rate of change of the population
- ethnicity
- indigenous status

Census data are collected every 5 years in Australia and have the limitation that the information ‘dates’, but the census is a solid starting point.

Most fire services are able to provide a census profile for the area required, but it will not be exact because the census collects on the basis of its own defined boundaries and these often don’t align with districts for other agencies, all of which can change over time. Local government websites often summarise the census information that applies to their area and publish this in yearbooks or on websites. Some fire agencies have centralised services which can provide this information.

#### *Community organisations*

Local government websites or contacts lists often include community organisations such as:

- Child care facilities
- Schools, preschools and kindergartens
- Service clubs
- Conservation groups
- Sporting clubs
- Hobby groups
- Support groups
- Libraries and museums
- Welfare agencies
- Health care facilities
- Government agencies
- Religious organisations
- Ethnic associations/groups
- Indigenous communities
- Chambers of commerce and tourism associations

The organisations that are found in any particular community may be a means of identifying vulnerability to bushfires, and capacity to respond to them. These organisations can also assist in identifying sectors of the community that might be particularly vulnerable for reasons of, for example, disability, lack of connectedness to the broader community and so on. In some cases a community audit might need to be undertaken. For example, when it is known that the census data is particularly unreliable in an area such as when there has been a recent influx of new residents, it may be necessary to “door-knock” an area to identify how many people are living there. In a new suburb for instance, houses might be being built, but as yet no one lives there. If undertaking a community audit, care must be taken to ensure that privacy issues and legislation are not breached.

### *Key Stakeholders*

Key stakeholders include local government and organisational representatives. Local and state political representatives should have a picture of the community that votes them into office. Representatives of local organisations (that have been identified above) can provide a view of their organisations. Regular discussion with these local leaders will provide information about current issues and trends in the community, particularly issues such as population change. People with whom to make regular contact include:

- Local political representatives
- Representatives/office bearers of community organisations (previously identified)
- Local employers
- Real estate agents

Attending meetings of other groups in the community is also important:

- Regular organisational meetings
- Public meetings called for other purposes

Being an observer at local meetings is a way of understanding what issues are of current concern in various parts of a community. Offering to make a presentation on behalf of the fire services at other community meetings provides a non-threatening way of approaching various members of the community.

Recording brigade/ group knowledge about the community is important. Starting with what is known and then being prepared to revise views on the basis of new information, and that provided by community members and representatives is essential.

- What key stakeholders are part of existing links with your organisation
- How well are existing community organisations linked together

#### *Recording the information*

This information about the community needs to be recorded and kept in a place that is accessible. Information should be shared and be able to be updated. It should not stay in someone's head.

Notes about issues that arise from meetings with community members, or attendance at meetings need to be kept, also in a place that is accessible.

Issues to consider:

- Is this a well-networked community and/or are there groups or individuals who are isolated or not so well connected into the mainstream?
- Are there groups you possibly did not know about previously?
- Has looking at the information you have gathered changed the way you see this community in terms of bushfires?
- Is there any section of the community more exposed to physical risk from bushfires?

It the contacts identified from this process not only provide a profile of the community, but opportunities to assess vulnerability, capacity, perceptions of fire risk, and expectations of fire services delivery.

## **COMMUNITY CAPACITY AND VULNERABILITY TO BUSHFIRES AT THE LOCAL LEVEL**

### *People's capacity to deal with bushfires*

Community is basically about the networks and relationships that people have (Cottrell 2005). Places with a strong sense of community tend to be well networked and communicate well on issues such as bushfires (Paton et al, Prior and Paton 2009). Similarly, a well-connected community which shares and discusses concerns about bushfires tends to be better prepared. Some communities also have a 'culture of preparedness' which also contributes to capacity to deal with bushfires (Goodman and Gawen 2008, Prior and Paton 2008). Another issue to consider is the time since the last bushfire. Despite the increasing risk of fire over time, as the time since the last fire increases, community concern or attention tends to decrease. The last fire may be beyond collective memory, or the make up of the community may have changed considerably. For example, a town may have been based around the timber industry when it had its last fire, say 20 or 30 years ago, but now may be a tourism destination. Questions to consider include:

- is the community well networked?
- does the community talk about bushfires?
- from observation are they well prepared?
- When was the last fire?

### *Groups or sections of the community who might be vulnerable*

While there is a general view that certain groups in a community, such as the poor, the elderly and women, are more vulnerable to hazards than others, we need to be careful that we don't make assumptions about people's capacities or vulnerabilities. For example, over 65s might be healthy, well networked and informed about local issues and less vulnerable (Bushnell and Cottrell 2007), or in aged care facilities where other people have responsibility for them. People who are not permanent members of the community can be unaware of the risks. Recent arrivals from urban centres, other states or countries may be unaware of local risks (Balcombe 2007). Bushfire matters are often seen to be men's roles, so there is a need to ensure that

women and children are getting the necessary skills or information as well (Proudley 2008).

Much of the information about bushfires is targeted towards households. This can be very useful, but if household planning is made on the basis of the whole household being together at the time of a fire event, then this could result in poor planning. (see next section).

Questions to consider include:

- are there new arrivals, tourists, seasonal workers, drive-in/fly in workers?
- are there commuters or other groups not so well connected in the community?
- are women and children getting the necessary skills or information they need to get?
- residents of health care, aged care and other types of health and welfare facilities need special consideration, how prepared are their carers and relatives?
- Don't make assumptions about people's capacity, vulnerability or lack of capacity
- Households plan to be together, but may not be together when a fire comes

Identifying who in the community is most vulnerable, and why, is an important step towards identifying fire service needs at the local level. These may be the people who provide the focus for initial activity in the community. Identifying local capacity and potential capacity is essential for understanding how a community might be able to help itself during an event. This is also the starting point for discussing with different groups in the community their perceptions of bushfire issues and expectations of Fire service delivery.



## **COMMUNITY PERCEPTIONS OF BUSHFIRE ISSUES AND EXPECTATIONS OF FIRE SERVICE DELIVERY AT THE LOCAL LEVEL**

The people who are members of a fire brigade are aware of fire issues, the broader community generally is not as aware of fire issues or may prioritise fire issues as secondary to other concerns in their lives, and/or other hazards in their area. Members of a community also may perceive the fire threat and the ways to manage it differently from the fire services.

### *People's perceptions of bushfire issues*

In many communities, householders see fire issues quite differently to fire service providers. Sometimes views are shared, and sometimes they are quite different. Issues with a shared understanding can be viewed as being a starting point for cooperation and/or matters that may not require focus for a time. Issues which are viewed differently may require tactful negotiation and help from other parts of the agency or even other agencies in order to move forward. These might also be issues to be treated with priority (Bushnell and Cottrell 2007, Cottrell et al 2008).

As well there is a tendency for day-to-day activities to be of more concern to people in the community. Daily concerns of maintaining employment, being able to meet financial commitments, personal safety and children's safety, traffic issues, all these are daily concerns that take priority for many people (Balcombe 2007, Paton et al 2007, Prior and Paton 2008).

Households need to have more than one plan, and be capable of being flexible.

Household surveys in a number of communities show that people's understanding of

- How widespread in the community is the sense that bushfires are an issue
- How widespread in the community is preparedness and preventive measures
- Do people (think) they have plans
- Are plans well thought out
- Are other natural hazards more frequent
- What social issues are at the forefront which may affect preparedness for fires

Brigade members may find it useful to compare their own perceptions with those of community members to identify where to start to move forward in the community.

#### *People's expectations of service delivery*

People are generally unaware of who provides fire services in peri-urban areas (Balcombe 2007, Bushnell and Cottrell 2007). There seems to be a general perception that along with the standard kerbing and channelling in a housing development comes fire, police, and ambulance services. For some people there is no differentiation between urban and rural fire services. Many do not realise the role of volunteers in service provision. Importantly, it seems that people who plan to 'go' rather than 'stay and defend' are more likely not to prepare at all, and are more likely to rely on fire services (Bushnell and Cottrell 2007, Paton et al 2007).

- Does the community know who provides fire services in their area
- Is the community aware of the potential lack of bushfire services
- Is the community aware of the service being provided by volunteers or a combination of paid and volunteer staff
- Does the community understand what controlled burns are and why they are necessary
- Is there a widespread objection to controlled burns, and why

There is a perception within agencies that the more that is done for communities, the more is expected of agencies. If this is the case then this means that it is even more important for fire services to encourage communities to be more proactive in their own fire preparedness.

#### *Fire service expectations of the community*

- Clearly identify what you are asking members of the community to do – are these realistic
- Is the expectation that every member of the community will take the same actions or is there an expectation that actions taken might differ on the basis of location, housing style and so on.
- What fire service resources are available at the community level such as personnel, equipment etc

- What can be achieved with the available resources and can the limitations of the service be made clear in the community
- What other resources can be tapped within the fire services and other agencies to meet local community needs

Communities should not be viewed from the outside, and as being ‘a problem’. It is essential to engage with communities and seek solutions to fire issues from within and with the community. Remember also, that fire services are part of the communities they serve.

## **GROWING YOUR PATCH**

### *Needs of fire services at the local level*

Members of many fire services continually lament the low attendance at community meetings organised by the fire services. Research by Rhodes suggests that the attendance at community meetings is greatest when a fire event is underway and members of the community want information. Some research even indicates that community members would prefer not to meet with the fire services (Balcombe et al). This requires some creative thinking about how to reach the community. It is also important to be clear about what other activities fire services and fire community education are undertaking. It is very important to work harmoniously with organisational objectives because inconsistent messages lead to members of the community questioning the reliability of the information. Increasing outreach to the community in this way is seen as a way forward ( Sari and Sari 1992, by Ryan and Wamsley 2008).

Starting with the community profile as the means to obtain information about vulnerabilities, capacities, perceptions and expectations, it is also possible to identify the 'entry point' or key contacts for those groups you want or need to contact. There is a need to:

- Prioritise who needs to be contacted, for example, either on the basis of exposure to risk, or relationships to be built on, and/or local fire agency resources
- where possible work through community organisations to which already exist
- contact employers, tourism providers and managers of large facilities
- where possible, include community members in the discussions about what is important in their area, and how issues might be resolved

### *A way forward*

This process is about identifying who lives in a (geographic) community defined on the basis of the local fire service boundaries, engaging with a community by understanding its makeup and its needs, then negotiating a way with the community to address bushfire issues with that community. It is an alternative to telling people what to do, something which clearly does not work.

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