

PRO-ACTIVE PUBLIC PARTICIPATION FOR WASTE MANAGEMENT IN WESTERN AUSTRALIA

PART 1 - STRATEGIC RATIONALE

Why Should Communities Participate in Waste Management Technology and Siting Decisions?

FOR:

Western Australian Local Government Association (WALGA) &
Waste Education Strategy Integration Group (WESIG)

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BACKGROUND AND PURPOSE: WA'S WASTE COMMUNICATION CHALLENGE

Western Australian local governments and other agencies are now facing complex decisions about the design of future waste management systems. Recent State Government waste management policy, set out in *Towards Zero Waste*¹ is driving a shift in emphasis away from landfill-focused disposal systems, towards Integrated Resource Recovery (IRR) approaches which aim to balance prevention, recycling, and Secondary Resource Recovery (SRR), that is, the processing of waste to produce usable resources, including energy and compost-type products.

This policy is explicitly based on principles of environmental, social and economically sustainability. It aims to move Western Australia towards a 'Zero Waste society' which:

*'... does not borrow resources from future generations nor leave a legacy of unmanaged, unreclaimed waste. A society reflecting nature, in which all products are produced and consumed not in a 'cradle-to-grave' mentality but in a 'cradle-to-cradle' mentality. Where reduction, re-use and recycling are a natural part of life for everyone and waste as we now know it no longer exists.'*²

In most cases, Regional Councils, acting on behalf of their member Councils, are taking responsibility for leading these changes. The shift involves two inter-related planning challenges:

A) *The IRR design question*

What is the optimum design of an integrated resource recovery system for a particular region? That is, what is the preferred mix of waste prevention initiatives, recycling and green waste systems, educational programs, and secondary resource recovery capabilities to match the social, environmental and economic needs and constraints of a given region?

B) *The SRR selection question*

Within a regional IRR strategy, what is the appropriate SRR technology or mix of technologies and where should it or they be sited?

It's important to note that SRR technologies are costly industrial facilities, often novel in design and with a wide range of potential impacts. They may involve significant financial and/or contractual risks for local government. They can have significant heavy vehicle traffic impacts. They may involve difficult-to-dispose residues. They may require significant changes to established recycling and green waste systems. They may also require original regulatory and monitoring frameworks.

¹¹ West Australian Government, 2001, *Towards Zero Waste* - the report and recommendations of the WASTE 2020 TaskForce

² *ibid*, Preamble, p6.

Decisions about such facilities are therefore amongst the most complex and potentially contentious that local government can undertake.

The decision-making processes for such ventures necessarily require:

- a) High levels of environmental and social assessment;
- b) High levels of transparency;
- c) Demanding technological assessments;
- d) High levels of financial analysis and accountability;
- e) Responsiveness to community values and aspirations; and
- f) Attention to issues of social equity and justice (especially where an affected community may perceive that it is bearing an unfair burden of risk).

Western Australia is not alone in having a history of often bitter conflict over the siting of waste management facilities. This is a global trend in developed countries where publics are increasingly alerted to environmental risks and intolerant of remote and apparently unaccountable decisions which affect their interests.

As a result of these conflicts, the traditional 'DAD' strategy (Decide, Announce, Defend) has gradually been replaced by a range of responsive and trust-building community involvement processes. This has been fundamentally recognised by the WA Government which has recently affirmed its commitment to increasing participation in all aspects of government policy. (Department of Premier and Cabinet, Citizens and Civics Unit, 2002)

It is important to note that this greater public input into decision-making in the UK, the United States, Canada and Australia, is not necessarily being driven solely by considerations of transparency, democracy or social justice. As the literature on risk management attests, the change is also driven by the demands for higher levels of technical competency and improved risk management. That is, waste authorities are choosing to involve their publics in waste management decision making because this leads to more technically competent and defensible decisions that reduce the risks for government.

This report - the first part of an overall project to develop a Public Education and Communication Strategy for IRR / SRR in WA - reviews the relevant literature on communication, education and community engagement in environmental management and critically assesses the various approaches for communication and community involvement in new waste management systems. It seeks to provide the theoretical and conceptual basis on for the further development of a strategic approach by WESIG members together with the consultancy.

The report is primarily based on a review of published, peer-reviewed studies which examine community engagement in environmental management and in waste and hazardous facility siting processes. The articles are for the most part published in journals in the fields of sociology, science and society, waste management, and risk management. The consultancy also reviewed a number of standard risk communication texts and carried out a wide internet search focusing on community engagement in waste facility siting.

THREE REASONS FOR PUBLIC PARTICIPATION IN THE PLANNING PROCESS

Numerous evaluative studies have examined community engagement in government decision-making in environmental management, waste management and hazardous site selection processes in the USA, Canada, and the UK over the past decade.

After reviewing these studies, and considering the situation in Western Australia, we conclude that there are at least four compelling reasons for waste management authorities to involve their publics in decision-making. These are state policy, government legitimacy, improved managerial competence and better risk management.

1.1.1 Increased legitimacy for government

In Western Australia, increased community involvement in decision-making is strongly promoted at State Government level. The incoming government established a Citizenship and Civics Unit in the Premiers Department to drive this change. The Premier recently launched *Consulting Citizens: A Resource Guide*³ which reiterates many of the principles discussed below. This move accords with emerging practices in government throughout the developed world (OECD 2001).

Trust in government is low throughout the developed world. Publics tend to be highly sceptical of government decisions and often unwilling to accept the judgements of technical experts. Publics are especially dubious of close relationships between industry and regulators, suspecting that economic interests may dominate the unbiased assessment of environmental and social impacts.

There is strong support for the contention that the *credibility* of government agencies is the single most important factor in the successful communication and resolution of technology siting issues (Kasperson 1986; Fewer 1999; Siegrist and Cvetkovich 2000; Siegrist, Cvetkovic and Roth 2000; Siegrist 2000; Sandman et al 1993; Petts 1994; McComas 2001).

This credibility of agencies is closely linked to perceptions of fairness, lack of bias and consistent pursuit of public interest in the decision-making process (McComas and Trumbo 2001).

This is the case even when those decisions are adverse to the interests of an effected communities (Lind and Tyler 1988).

It follows that an agency should not be both a proponent and a trusted player in a technology siting issue. Where a government body is a proponent, care should be taken to ensure to that the decision-making process itself is independent of that body.

³ The guide can be downloaded from <http://www.ccu.dpc.wa.gov.au>

The onus is on governments to establish decision-making processes which are transparent, incorporate public values and avoid perceptions of unfairness. In such decisions, government needs to be seen to be an umpire or honest broker.

The literature supports the contention that the *perceived* legitimacy, credibility and neutrality of government are best assured by direct involvement of members of public in *shaping* and *deliberating* in decision-making processes that affect their interests (Weideman and Femers 1993, Petts 1997, Vasseur et al 1997, Kuhn and Ballard 1998, Tuler and Webler 1999, Hunold and Young 1999, Beierle and Konisky 2000).

1.1.2 Technical competence

A number of studies have suggested that deliberative decision-making processes result in better technical decisions. (Fischhoff 1983, Petts 1997, Hunold and Young 1998, Petts 2000).

'The public are not information-poor: they can capitalise upon a range of cultural and experiential resources.' (Petts 1997, p378)

'A decision arrived at through inclusive communicative democratic procedures is likely to produce the wisest decision, in that it grasps the consequences and has considered alternatives.' (Hunold and Young 1998, p87)

'Participation and deliberation are not only a matter of political expediency but also promote analytical robustness.' (Petts 2000, p830)

Importantly, the studies do not support the frequently expressed fears of managers that the public are not competent to comprehend complex data or balance risks:

'Contrary to expert fears, it is evident that when scientific uncertainty or lack of expertise is openly acknowledged, and when management mechanisms to deal with the situation are explained, demands for zero-risk options are not forthcoming from the majority, and experts are not rebuked. Members of the public who have an opportunity to address issues in an informed manner are willing and able to balance risk and benefits.' Petts 1997, p 378)

1.1.3 Risk management

There is evidence that public participation provides a degree of assurance against two significant risks faced by waste managers: political risks and environmental risks.

Public *outrage* is the result of technology and siting decisions which are perceived to be uncontrolled, unfamiliar, involuntary, non-beneficial, or unfairly distributed (Rowan 1996).

Once public outrage commences it can be difficult to contain, with the media playing spoiling role, enhancing and sustaining the perceptions of conflict and unfairness (Sandman et al 1993, Seigrist and Cvetkovich 2000).

The literature consistently asserts the importance of participatory processes in minimising conflict.

'For the most part, siting processes do not fail because of inadequate environmental or technical considerations, but because of the adversarial decision-making strategies employed by the proponents'. (Kuhn and Ballard 1998)

A number of studies have asserted the value of community involvement in minimising the technical risks for decision-makers by allowing the proponent's technical assertions to be challenged and tested.

'There is evidence in the information shaping in the Hampshire process that members of the public can act as quality assurers in the risk management process.' (Petts 1997)

'Well-conducted public participation, stakeholder consultation and deliberation procedures can enhance the policy process and improve the robustness of strategies dealing with high-stakes investment and risk management challenges.' (O'Connor, M., and S. van den Hove 2001)

Moreover, official risk management standards ⁴ require appropriate communication and consultation activity to take place as part of the overall risk management process. The standards documentation is strongly advocates two-way communication approaches:

'Communication and consultation involve a two-way dialogue between stakeholders with efforts focused on consultation rather than a one way flow of information from the decision maker to other stakeholders.' (AS/NZS 4360:1999 Risk Management)

⁴ AS/NZS 4360:1999 Risk Management and Standards Australia/Standards New Zealand guidelines for environmental risk management.

WHEN SHOULD INFLUENCE BE EXERCISED?

This project arises from concerns about finding the best way for local governments to engage with their publics over complex and potentially vexed issues of waste management technology choice and siting.

There is a concern amongst decision-makers that the public is not well equipped to understand the reasons for a shift to SRR technologies, nor to comprehend the consequences of the different technologies available. There is a fear that public ignorance may lead to unreasoned conflict, and that better understanding is essential.

Therefore authorities have expressed an interest in *community education*, *public relations* and *social marketing* approaches to fulfilling this educational need.

All three use similar tools: media stories, advertising, direct mail, print products etc., however they have different purposes which affect the content of the communication. In essence:

- *Community education* seeks to answer the public's need for information.
- *Public relations* seeks to influence the public's attitudes towards a brand or product.
- *Social marketing* seeks to promote socially beneficial behaviours.

While education campaigns deal primarily in facts, the other approaches seek to influence choices and may have only token educational content, relying instead on *selling* an idea by selectively reporting facts, manipulating fears and desires, and creating unconscious associations with comfort, ease, popularity, opulence, sex, success, celebrity or power.

How useful are such approaches in the field of waste management technology choice?

The literature on risk communication, in particular, provides decisive guidance. It suggests there may be a number of weaknesses in the assumption that primarily educational or marketing approaches are appropriate in this context.

To summarise a number of studies, the literature tells us that:

1.1.4 The public's concerns are not the same as waste managers.

While waste managers are concerned with efficient and sustainable systems, the public is more likely to be concerned with potential health and amenity risks and the alternatives, (Weidemann et al 1991), with potential unfairness in the distribution of costs and benefits of the new technology, (Smith and McDonough 2001) and with the immediate day-to-day convenience of systems.

Further, waste managers talk in a highly codified, jargon-laden, assumption-rich language which reflects their own professional and technical concerns. This language requires considerable interpretation before it can be meaningful to lay people. (Fischhoff et al 1983)

These issues suggest that the kind of information which managers think is important may not be the kind the public is liable to find relevant and meaningful.

1.1.5 Managers may lack appropriate information

The process of establishing a new waste system is replete with uncertainties and unknowns. Even if and when the technical data can be agreed, managers are unlikely to be able to answer the public's most salient questions, like 'What is the risk?', 'What would be the impact on my life and lifestyle?', 'How could this affect my family's health?' (Kasperson 1986)

This suggests that the information may not currently exist which can form the basis of a meaningful education campaign. It is also possible that purely information-based campaigns may raise concerns which managers have no way of answering. Therefore interactive processes may be required which create and shape new information that responds sensitively to public concerns. (Petts 1997, Rowan 1996)

1.1.6 Credibility is vital

The choices required for a new waste system are unlikely to be simple matters of balancing logic or data. They require *judgements* on incomplete information, informed by local *values* and concerns: hence they are inherently moral endeavours (Garvan 2001, p449), which are as much about policy as facts (Fischhoff et al 1983).

Significantly, there is strong evidence that the *credibility* or *trustworthiness* of authorities is central to the resolution of public concerns over waste management facilities.

Research demonstrates that lay members of the public trust their experience and tend to distrust scientific information which they know is open to manipulation and misuse.

Where the public have no direct experiences allowing them to make judgements about a technology, they rely on the judgements of authorities. The credibility of those authorities becomes the most important determinant of how the public perceive the risks and benefits of new technologies.

'The believability of risk information is closely related to institutional credibility and trust.' (Kasperson 1986)

'Results indicate that social trust is a key predictive factor of the perceived risks and benefits of a technology...' (Siegrist, Cvetkovic and Roth 2000)

Educational attempts, based on simplified, incomplete and unsatisfying information, may therefore work to damage the credibility of authorities, leading to potentially unsolvable conflicts. (Kasperson 1986)

Messages that involve propaganda and manipulation - to a media-savvy and alert public - may be even more damaging to an authority's credibility. The public legitimacy of such messages by government tends to be limited to matters of obvious health and public safety, such as cigarette warnings, seat belt advertising, and AIDS education. (Committee on Risk Perception and Communication 1989, p90)

Honesty is essential in building trust in relationships, hence hidden agendas or vested interests may damage credibility (Frewer et al 1996). Attempts to deceive or manipulate the public also destroy credibility (Leiss 1995, Rowan 1996, Kuhn and Ballard 1998).

These conclusions suggest that the use of public relations 'spin' to manipulate public attitudes or gloss over the potential risks of proposed waste facilities runs the risk of exacerbating public conflict and damaging the institution's credibility.

The US Committee on Risk Perception and Communication summarised the state of knowledge in 1989, warning that agencies exercise great care in the use of influence strategies, notably when 'there is unresolved public controversy over the issue, particularly if there has been no public forum at which relevant voices have had their say' or when the influence strategy involves a degree of deception. (Committee on Risk Perception and Communication 1989, p169)

'Those who prepare risk messages, and particularly those in government organisations, need to be circumspect about using 'influence strategies' in their risk messages to influence recipient's beliefs or actions, and they should expect their audiences to suspect attempts to influence even when the intent is simply to inform.' (Committee on Risk Perception and Communication 1989, p168)

This again points to the unsuitability of one-way information processes which rely on assumptions about the ignorance of the public and the primacy of technical knowledge.

1.1.7 The public have their own legitimate forms of knowledge

Technology choice and siting involve complex and subtle matters of policy with strong political dimensions.

Far from being 'ignorant', the public are likely to be rich in relevant knowledge, experiences and values which managers need to make sound decisions. Several studies raised doubts about the utility and unquestioned legitimacy of value-free technical knowledge, and point to the fact that many conflicts were between different, equally valid, kinds of knowledge. (Petts 2000, Kasperson 1986, Garvan 2001, Rowe and Wright 2001).

It is clear that one-way communication processes which do not legitimise and explore the public's store of knowledge may reduce the *competency* of decision-making by denying managers valuable forms of information, especially about potential social and environmental impacts which inherently involve community perceptions and values.

1.1.8 Conclusion: communication is more than just information

The risk management literature conceptualises these problems through the idea that risk communication has three dimensions: *pathos, ethos and logos*.

- *Pathos*: understanding and respecting the audience's mindset, including emotions, beliefs and values;

- *Ethos*: focusing on the character, reputation and credibility of the organisation;
- *Logos*: careful attention to the content of the message.

'Experts should understand public concerns (pathos), express a commitment to dialogue and power sharing (ethos), and develop accurate risk assessment information (logos). If we focus only on the last, or even the first and the last items, we may miss what is very important in risk communication: the credibility of the speaker. That credibility must be grounded on sharing power with the public. Nothing undermines it more quickly than a manipulative approach.' (Rowan 1996 p28)

The explicit conclusion from the literature is that all three dimensions benefit from intimate, two-way *involvement* with the audience.

This is supported by recent guidelines by Standards Australia for environmental risk management:

'Consultation is not the same as public education or public participation. Public education or public awareness programs are generally a one-way process to present information and to increase understanding of certain issues, and are about getting information out to audiences... In contrast, consultation is a mutual process, where information is provided to participants and new information and views are fed back in... (It) is aimed at involving the community in a process of decision making. It is premised on the right of the public to know what decision-makers are doing on their behalf, and to be involved.' (Standards Australia / Standards New Zealand 2000)

The methods used to elicit this involvement have rapidly evolved through trial and error in Europe, the USA, Canada, and more recently, in the UK and Australia. The last decade in particular has seen a notable shift from more passive kinds of *consultative* processes, to more collaborative and *deliberative* processes which shift the community's involvement closer to the centre of the decision-making process. This is shift is discussed below.

Summary of common communication problems in environmental management

There are a number of problems in communicating with the public over environmental management, technological choice and siting issues, all of which have been borne out in recent waste facility siting disputes in Western Australia.

- a) the public often feels powerless, fearful and outraged upon hearing of a newly disclosed threat to it's health or amenity;
- b) many risks are unprovable, and the public is aware that risk statements are influenced by the values and self-interest of the proponents;
- c) information is often communicated by industry spokespeople, managers or politicians who lack credibility with the public (Seigrist et al 2000);
- d) the news media promote conflict and sensationalise stories; once outrage starts it can be hard to contain (Sandman et al 1993);
- e) once a mind-set is formed - whether amongst politicians, the media, or the public - that a facility or process is hazardous, it is extremely difficult to overcome (Garvan 2001);
- f) the languages of science and management are codified, jargon-laden and rarely provide straightforward answer the questions like, 'Is it safe?' (Garvan 2001);
- g) the general public frequently has little faith in scientific statements about the safety of facilities or processes; (Petts 1994; Garvan 2001);
- h) industries under attack often resort to defensive public relations, ranging from the inept to the deceitful. ⁵

⁵ This listing is based on Ford Rowan's summary of risk communication issues in Rowan 1996.

COMMUNITY INVOLVEMENT IN ENVIRONMENTAL DECISION-MAKING

1.2 The rise of community consultation

The concept of 'community consultation' is now a central feature in environmental management and policy-making.

Community involvement in government planning and policy became firmly established in Australia in the 1980s. A range of well-known and now traditional consultative mechanisms are in wide use. For example:

- a) exhibition of draft documents and calls for submissions;
- b) community consultative committees;
- c) community values and visioning workshops;
- d) surveys;
- e) public information meetings.

There is now evidence that well run participatory techniques can be highly effective in introducing public values into decision-making processes, in resolving conflict between stakeholders, and in building trust in government agencies. (Beierle and Konisky 2000)

Meanwhile educational tools, such as educational and social marketing campaigns, which use a range of advertising and public relations techniques have been applied to encourage participation in waste systems (e.g. recycling, green waste collections, hazardous household waste collections), and to encourage more sustainable personal behaviours (e.g. anti-littering, home composting, and 'green cleaning').

1.3 The shift to deliberative forms of participation

During the 1990's the weaknesses in traditional consultative techniques came to be widely recognised in the UK, Europe, the USA and Canada as authorities faced intense, costly and frequently successful campaigns by the public, particularly against native forest logging, waste facility siting and the nuclear industry.

This led to an increased interest in extending public consultation from relatively passive consultative processes, towards 'deliberative' processes which involve the public and stakeholders in two-way discussions and involvement in the decision-making process from an early stage. (Petts 2000; Beierle and Konisky 2000, Weideman and Femers 1993, Vanderwal 1999).

In the USA these frequently took the form 'stakeholder' forums which sought consensus between the public, government, experts and proponents over contentious issues, especially in watershed management, forestry management and hazardous facility siting. In Canada the well-resourced 'Round Tables' (1993) process provided national leadership promoting in consensus-based decision-making at all levels of government. In the UK, the Blair government created a nation-wide citizens panel for Cabinet decisions and provided a supportive environment for the introduction of European deliberative models such as citizen juries and consensus conferences.

This shift to more *deliberative* forms of consultation was principally driven by two perceived failures of conventional government planning (Beierle and Konisky 2000; Petts 2000):

- a) rigid expertise-based managerial approaches which often produced outcomes opposed to community values and opinions, resulting in a loss of trust in government;
- b) chronic conflict between community, stakeholders, proponents and government which led to paralysis of the planning system and excessive resort to the courts.

It is clear that Australia has lagged behind other developed nations in the use of more innovative deliberative approaches. Only in the recent years have citizen juries and deliberative forums been used in Australia e.g. The Citizen Jury into Container Deposit Legislation in NSW 2001, and Search Conferences into Genetically Modified Foods and the Republic. The NSW Department of Planning is now strongly involved in promoting deliberative planning processes, especially Search Conferences, through its *Plan First* initiative. (Carson and Gelber 2001)

Importantly, the current Western Australia government is at the leading edge in introducing these techniques. Leadership is being provided by the Citizenship and Civics Unit in the Department and Premier and Cabinet. The Department of Planning is actively applying deliberative techniques in solving some of the state's most contentious development and planning issues (e.g. the Freight Review, Road Train summits, NE Corridor Employment Node, Reid Highway Extension, and proposed re-developments of the Scarborough High School site and Leighton Beach, Fremantle (pers. comm. Dr Janette Hartz-Karp March 2002)

The Australian mining industry is also leading this change. The Mining, Minerals and Sustainable Development (MMSD) Australia project brought together mining companies, Government officials and environmental and other stakeholders over the course of two years. Its objectives were to identify the means by which the minerals sector could best contribute to society's transition to sustainable development and to build trust and credibility between stakeholders.

The MMSD's final report was issued in May 2002. It suggests further consideration of a 'rights-based approach' to stakeholder engagement. This 'rights-based approach' would formally recognise that stakeholders have fundamental rights to participate in decisions that impact their lives and interests. Such an approach would fundamentally shift the traditional power relationship in a typical government/community decision making process. (MMSD Australia Project 2002)

1.4 Deliberation and conflict resolution

Participatory approaches have been shown to be effective in resolving conflict between competing interests. It has been argued that collaborative, participatory decision-making is more likely than adversarial decision making to result in lasting and satisfying decisions. This may be partly attributed to the injection of shared community values into the decision making process (Beierle and Konisky 2000).

In their study of siting processes for four Canadian hazardous waste facilities, Kuhn and Ballard 1998 conclude that 'For the most part, siting processes do not fail because of inadequate environmental or technical considerations, but because of the adversarial decision-making strategies employed by the proponents'.

Kuhn and Ballard noted that proponents who seek to impose facilities are creating a conflictive process (win-lose), whereas communities that are able to make their own decisions make siting a voluntary and cooperative process.

Where proposals are seen to be imposed, public involvement processes become adversarial, as the public may feel the process is intended simply to placate their concerns.

In their empirical evaluation of 29 case studies, Beierle and Konisky 2000 concluded that 'Even when existing relationships were poor, many [participative] processes were able to resolve conflict and even increase trust.' (p598)

THE SPECTRUM OF COMMUNICATION AND COMMUNITY INVOLVEMENT METHODS

Engagement between government and citizens takes a range of forms. US academic, Sherry Arnstein, developed perhaps the best known categorisation of community involvement approaches with her 6 step Ladder of Participation:

non-participation,
manipulation/therapy,
information,
consultation,
collaboration,
empowerment. (Arnstein 1969)

The Office of Public Management in the United Kingdom has developed a similar 5 step model:

giving/listening,
consulting/listening,
exploring/innovating/visioning,
judging/deciding together,
delegating/supporting/decision making. ⁶

The International Association for Public Participation (IAP2) uses a widely adopted 5-step ladder:

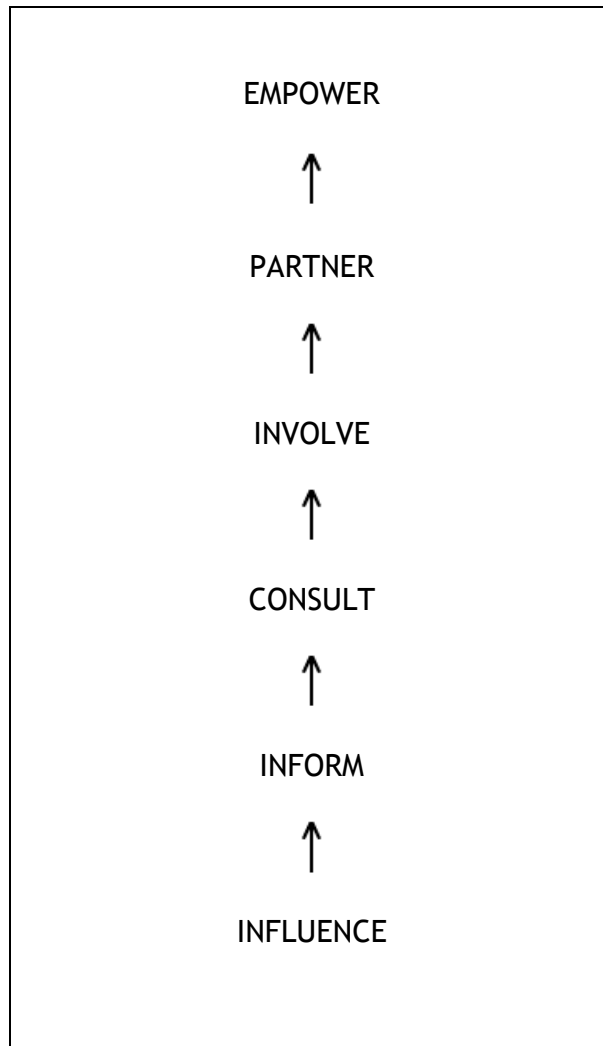
inform,
consult,
involve,
collaborate,
empower. ⁷

For the purpose of this study, we adopt a modified ladder which combines the Arnstein and IAP2 models.

⁶ See *Consulting Citizens: A Resource Guide*, launched in April this year by the WA Department of Premier and Cabinet's Citizens and Civics Unit, page 6.

⁷ International Association for Public Participation 2000: www.iap2.org

Table 1: Community Engagement Ladder



It's important to note that in practice a public campaign will consist of an *integrated mix* of initiatives. The waste strategy campaigns in UK counties such as Hampshire and Cheshire, for instance,) involve distribution of information materials to the community ('Inform'), consultative surveys with the broad community ('Consult') and community workshops ('Involve').

The six approaches are described below.

1.5 INFLUENCE (public relations, marketing, social marketing)

- *Objective:* to alter the opinions and attitudes of an audience in favour of a proposal, product or brand.
- *Example tools:* media management, publicity, direct mail, advertising, letter-writing and talk-back campaigns, and, sometimes, the creation of front groups. 'Public Relations' involves the promotion of brands. 'Marketing' involves the promotion of products. 'Social Marketing' involves the promotion of beneficial behaviours.

- *Output:* altered community attitudes and choices.
- *Discussion:* Influence techniques are recommended only in cases which involve the disinterested promotion of public health and safety, such as sun screen advertising, cigarette warnings, or road safety campaigns. (Committee on Risk Perception and Communication 1989, p90) Risk communicators warn against the use of manipulative techniques on the basis that perceptions of manipulation, deception or vested interests can damage or destroy the credibility of government agencies and exacerbate distrust, often resulting in intractable disputes with the public. In particular, influence techniques should be avoided where public conflict already exists.

1.6 INFORM (education, awareness campaigns)

- *Objective:* To provide the public with information, to increase understanding and awareness about a particular strategy, proposal or system.
- *Example tools:* brochures, fact sheets, media stories, advertisements, stalls, web sites, seminars, public information nights.
- *Output:* improved public understanding.
- *Discussion:* One-way information campaigns are appropriate where information gaps are a problem and knowledge is relatively certain. Complex environmental proposals however involve uncertainty, conflict about alternative 'truths', and gaps in expert knowledge. Hence 'inform' techniques may be inappropriate where there is a need for processes that gather, shape and interpret new knowledge. Siting issues usually involve questions of social values, justice, equity and trust - these require *judgements* rather than information.

1.7 CONSULT

- *Objective:* To obtain feedback and constructive comments from the public on a draft strategy or proposal.
- *Example tools:* exhibition of documents for comment, surveys, workshops, public meetings, precinct committees.
- *Output:* critical comments and alternatives for a particular proposal.
- *Discussion:* Community consultation has been a mainstream government practice for over 20 years in Australia. The widespread use of tokenistic consultations however has led to increased community scepticism and resistance. Conventional consultation methods are now being superseded by deliberative methods in cases where the potential for agency-community conflict is high and decisions have not yet been made.

1.8 INVOLVE

- *Objective:* to work directly with the public, constructively discussing issues and eliciting views, with the aim of ensuring that public concerns and values are fully understood, and public knowledge gathered.
- *Example tools:* workshops, community consultative committees, deliberative polls, citizen juries, search conferences.
- *Output:* a detailed understanding of community knowledge, perspectives, values, and preferred options.
- *Discussion:* Intensive, facilitated, workshop-style processes are valuable wherever community knowledge or values need to be gathered and interpreted, for instance in urban planning where community visioning processes and Charrettes⁸ are widely used. 'Involve' processes are about extracting complex and subtle data from the public as a form of advice to decision-makers.

(This is a *deliberative* approach).

1.9 PARTNER (Collaboration)

- *Objective:* To establish genuine collaboration between public representatives, technical experts and decision-makers. The aim is to resolve conflict over evidence, interpret expert knowledge, understand and explore opposing perspectives, solve problems, and find common ground.
- *Example tools:* deliberative forums, collaborative project committees, consensus decision making processes.
- *Output:* locally-sensitive decision-making, conflict resolution, with increased legitimacy and public trust. Often a set of authoritative recommendations for decision-makers.

⁸ The Charrette is an intensive one or two day planning process widely used in the planning profession. The public are involved in workshop-style deliberations to find answers to immediate challenges of a particular development.

- *Discussion:* these processes bring together a mix of views and often opposing interests into a single 'round table', under a neutral chair, to explore common ground and attempt to resolve conflicts in an informed, rational atmosphere. Long used in Canada, where they are called Round Tables, ⁹ (Doering 1993) and the USA, where they are called stakeholder committees or Consensus Based Decision Making projects (Pellow 1999). They are now widely used in Australia. In NSW, for example, they are used by Government agencies in regional water use allocation, native vegetation management, forestry conflict resolution, and catchment planning. The 'partner' concept involves mixing activists, experts, agency reps, and sometimes neutral members of the public, in committees which meet over several months to find solutions to complex management problems or resolve entrenched conflicts over land management or siting issues.

(This is a *deliberative* approach).

1.10 EMPOWER

- *Objective:* to devolve decision-making to a community-based body or to the community-at-large through a referendum.
- *Example tools:* management committees, referenda.
- *Output:* locally-sensitive decision-making with a high level of legitimacy.
- *Discussion:* referenda have been widely used by Australian local governments to resolve difficult planning or policy issues. Management committees are commonly established by government for many purposes. These typically involve a degree of devolved power to spend money and make decisions, usually about the on-going management of community facilities or projects. Standard meeting rules, however, generally prevent management committees from being effective forums for conflict resolution.

⁹ Canadian Round Tables is a nationally-led program run by The National Round Table for the Environment and the Economy: The Round Tables are based on well-conceived Guiding Principles - see Appendix 3.

1.11 Summary of communication methods

As a broad generalisation, the literature suggests that the more open, inclusive and deliberative the process, the greater the capacity to deal with complex information, elicit community values, solve problems, and resolve conflicts.

Table 2: The capacities of different community engagement methods. © Les Robinson 2002

EMPOWER				
↑				
PARTNER	↑	↑	↑	↑
↑				
INVOLVE	Increased capacity for information processing and learning	Increased capacity to elicit values	Increased capacity for problem solving	Increased capacity for resolving conflict
↑				
CONSULT				
↑				
INFORM				
↑				
INFLUENCE				

Another useful way of illustrating the different engagement methods is to map them against the level of potential risk in the situation and the complexity of information which needs to be understood by the participants for informed decision-making to occur. See Figure 1 below.

SELECTION TOOLS FOR WASTE MANAGERS

Waste managers require tools to confidently select the appropriate depth and style of public involvement for each stage. This is no simple matter, since the choice is highly contextual. It depends on purpose, politics, history and local sensitivities.

Furthermore there are at least five different situations which require waste management communication. Each has a different purpose and each will require a customised engagement strategy. These stages are described in Table 3.

Table 3: Five strategic situations for waste management communication.

STAGE	1) Developing a Regional IRR plan	3) Siting and technology choice	4) Implementing SRR	4) Educating the public on using the new system
PURPOSE	<p>Design of an integrated w.m. strategy that is:</p> <ul style="list-style-type: none"> • triple bottom line sustainable; • regionally specific; • locally sensitive; • internat'l best practice. 	<p>A transparent, defensible process which develops performance criteria that are:</p> <ul style="list-style-type: none"> • technically appropriate; • socially sensitive; • locally sensitive; • financially sound; • best practicable environmental option; and • meets or exceeds international benchmarks. 	<p>Public trust is engendered through a process of independent, transparent monitoring of performance of facilities.</p>	<p>Residents understand and participate in the new system, as typically measured by:</p> <ul style="list-style-type: none"> • high participation rates; • low contamination rates; • high diversion rates; and • adoption of more sustainable lifestyle practices.

To make sense of the numerous methods of engagement that exist, we propose two dimensions, common to all contexts, which help determine the suitability of a community involvement approach: the level of risk in the situation, and the complexity of information needing to be understood before an informed judgement can be made by the participants.

1. *Level of risk inherent in the decision*: this includes the potential for environmental damage, for social dislocation, or for political and social conflict inherent in the decision, based on the best judgement of the management team.
2. *Complexity of information*: this includes the volume of information, and the level of abstraction, technicality and jargon which needs to be comprehended and processed before *members of the lay public* can be expected to make informed judgements on the risks of different options.

With these two dimensions in mind, we have devised a simple decision tool, *The Public Involvement Matrix*, to assist managers to select an appropriate level of public involvement - see Figure 1. The full tool is given as Appendix 1(A).¹⁰

¹⁰ The assessment questionnaire is inspired by a similar tool developed by the International Association for Public Participation.

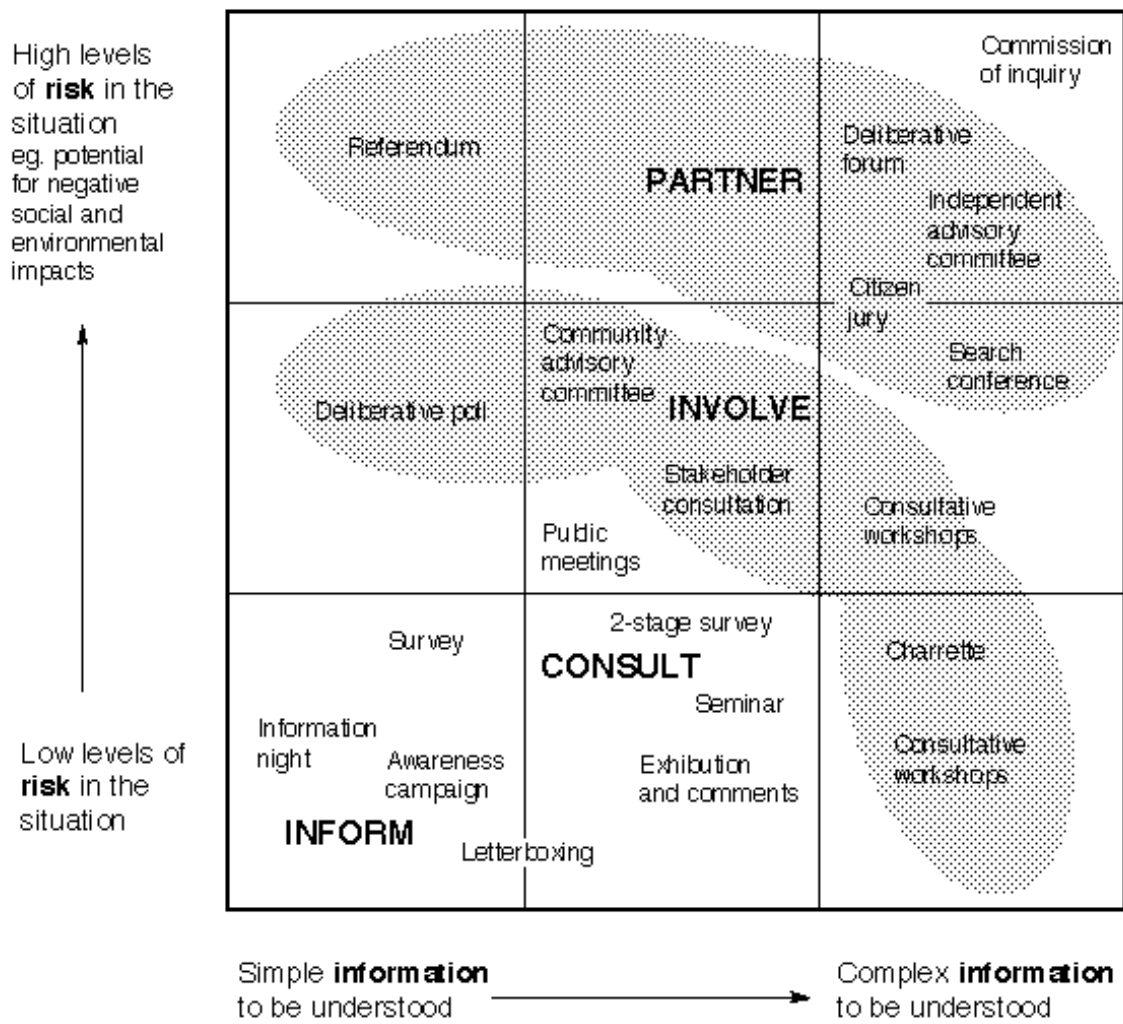


Figure 1: Community Involvement Matrix. © Les Robinson 2002

The Public Involvement Matrix provides managers with a tool to select the appropriate *approach* to be followed. In practice, this becomes the highest level of community engagement within an integrated public involvement strategy. However the exact *method* of public involvement (for instance, whether an advisory committee, or a citizen jury, or a survey) cannot be determined by a simple tool. It is partly a matter of taste, partly a matter of experience. In any case, there is evidence that the exact choice of method is less a determinant of success than the perceived fairness of the process (Smith and McDonough 2001), and the achievement of underlying quality criteria such as those listed below under *Qualities of effective participatory processes*.

A second tool, *The Vroom-Yetton Decision Tree*, was originally developed to assist business managers to determine the appropriate level of involvement by subordinates in decision-making. It has since been adapted to government-community relations and appears to be well-suited to the waste management context. See Appendix 1(B).

1.12 Multi-faceted programs

Note that the splitting of involvement programs into different levels is a little abstract, since in practice, multi-faceted programs are the norm. These mix a range of techniques in order to maximise the extent of community involvement:

'Implement a public participation program with various forms of public participation. A program that seeks to involve as many individuals but also strives for extended discussions to develop alternative solutions might use a Community Advisory Committee for sustained interactions, workshops to develop options, and any number of techniques - public meetings, interactive technology, various types of polls and surveys - to involve larger numbers of people.' (Chess and Purcell 1999, p2691.)

As a guide, we recommend the following *minimum* levels of involvement in the 5 stages of waste management:

Table 4: Recommended *minimum* levels of community engagement in different waste communication situations.

STAGE	1) Developing a Regional IRR plan	3) Siting and technology choice	4) Implementing SRR	4) Educating the public on using the new system
<i>Minimum</i> recommended level of public involvement	An integrated program of: INVOLVE + CONSULT + INFORM	An integrated program of: PARTNER + INVOLVE + CONSULT + INFORM	An integrated program of: INVOLVE + INFORM	An integrated program of: INFLUENCE + INFORM

ISSUES IN PUBLIC PARTICIPATION IN TECHNOLOGY CHOICE AND SITING

The literature focuses on a number of key themes in the design of public participatory processes. These are discussed in detail below in order to guidance for program managers.

1.13 Agency commitment

A number of researchers emphasised the importance of having an agency committed to public involvement (for instance Beriele and Konisky 2000, Curtis and Lockwood 2000).

In Kuhn and Ballard, in their 1998 examination of four Canadian hazardous waste facility siting processes, found that the commitment of the agencies to open decision-making processes was the key element in retaining public trust which in turn made the difference between success and failure.

Aronoff and Gunter 1994 examined seven studies of locally based technological hazard disputes and identified three factors that contributed to better outcomes: the first of these was the agency-community relationship '*reflecting the agency's willingness to negotiate collaboratively with lay persons.*'

Petts 2000 concluded that this is a key challenge for government:

'It will also require change in the procedures of governance, in particular a need to break down the barriers of compartmentalised decision making by different authorities and groups.' (p830)

1.14 Risk perception, outrage and fairness

All waste facilities involve a degree of environmental risk, and public concern about the inequitable distribution of risk is a major factor in siting conflicts. This concern is magnified by perceptions of unfairness and exclusion in the decision-making processes. (Kuhn and Ballard 1998, Hunold and Young 1998). Where novel technologies are proposed, public concerns are further heightened (Kasperson et al 1988).

Risk communicators have identified a number of factors which influence how individuals perceive risk, including (Rowan 1996):

- 1) risks that are judged to be *controllable* by individuals are deemed less risky than those which are uncontrollable;
- 2) risks that are *familiar* to the individual and well known to science seem less risky than those which are unfamiliar and unknown;
- 3) risks that are *voluntarily accepted* appear less risky than involuntary exposures;

4) risks with a direct *benefit* to affected individuals are deemed less risky than those which lack a clear and direct benefit; and

5) risks which are *evenly distributed* across society are perceived as less risky than those which inequitably burden certain individuals or communities.

The typical response of communities to apparently uncontrolled, unfamiliar, involuntary, non-beneficial, or unfair risks is *outrage*.

There is a highly political dimension to outrage: as Rowan points out, these perceptions are expressions of various types of power: informational, decisional, and distributional. When people feel deprived of facts, unable to control their lives, and forced to bear the costs but not the benefits of change, outrage is a natural response.

Hence, risk communicators have long agreed that power-sharing is an inherent aspect of effective risk communication.

Justice and fairness is also an aspect of risk communication. Where processes are perceived to be just and fair, public satisfaction increases, even when outcomes are unfavourable (Lind and Tyler 1988).

Webler et al 2001 included fairness as one of five public-identified perspectives about good process. Smith and McDonough 2001 interviewed participants in a natural resources management consultations and concluded that perceptions of fairness in decision-making were more important than the choice of the particular participation method. Elements of fairness included:

- Access to the process for affected groups;
- Voices being heard;
- Serious consideration of participants views; and
- Decisions based on logic.

Hunold and Young 1999 derived related conditions for 'procedural justice' in hazardous siting decisions:

- Inclusiveness
- Consultation over time
- Equal resources and access to information (to help overcome power imbalance)
- Shared decision-making authority
- Authoritative decision-making.

1.15 Trust and credibility

Where the public have personal experience of a risk, they make up their own minds. However, where they lack experience, they necessarily rely on experts. The credibility of agency spokespeople is therefore a central issue in effective risk communication.

This is because the public tend to judge risk not only on the basis of the *information* itself, but on the *credibility* of experts and spokespeople who interpret and make judgements on the basis of the information. This relationship between expert credibility and risk perception has been affirmed in numerous studies (Kasperson 1986; Fewer 1999; Siegrist and Cvetkovich 2000; Siegrist, Cvetkovic and Roth 2000; Siegrist 2000; Sandman et al 1993; Petts 1994; McComas 2001).

'Results suggest that the lay public relies on social trust when making judgements of the risks and benefits when personal knowledge about a hazard is lacking.' (Siegrist and Cvetkovich 2000)

'Results indicate that social trust is a key predictive factor of the perceived risks and benefits of a technology...' (Siegrist, Cvetkovic and Roth 2000)

The effect is that new technologies introduced by trustworthy institutions are perceived to be less risky and more beneficial than those introduced by untrustworthy institutions.

Following her intricate examination of the advisory committee process for Hampshire County Council's waste strategy, Petts 1997 concluded:

'It is the credibility of the expert that is at least as important, or more important, than his or her knowledge. Credibility is gained by personal and organisational performance, by evidence of independence, and by evidence that the expert is acting with the interests of the public in mind.' (p378)

A number of studies in the fields of communication research and risk management have attempted to unpack the public's understanding of 'trustworthiness'. These studies variously suggest that the public perceives trustworthy authorities as possessing (McComas and Trumbo 2001):

- competence and expertise
- dynamism
- lack of bias
- fairness
- concern for the community's well-being
- honesty and openness
- consistency and predictability

It follows that an organisation should not be both a proponent and a trusted player in a technology siting issue. Where a government body is a proponent, care should be taken to ensure to that the decision-making process itself is independent of that body.

The role of the media is also a factor in risk perception. Sandman et al 1993 carried out risk perception experiments with members of the public and concluded that news stories filled with distrust and outrage increased the reader's perception of risk compared to stories without distrust or controversy, irrespective of the informational content.

Counter-intuitively, there is evidence that public may perceive bad news stories to be more trustworthy than good or neutral stories (Seigrist and Cvetkovich 2000).

Yet conflict and conflict-focused news stories are a virtually inevitable fact wherever a new waste facility is proposed. This underlines the importance of government agencies remaining, wherever possible, unbiased mediators and umpires dedicated to the public interest, rather than interested proponents of new technologies.

Openness and credibility

The risk communication literature strongly recommends that communication be open and demonstrate respect and trust in the community. The US Committee of Risk Perception and Communication summarised the state of knowledge in 1989:

'In many cases risk communication efforts have foundered because public trust and credibility were damaged because risk management was conducted behind closed doors or because of a patronising attitude towards interested outside groups. Risk communication is a two-way street. Organisations that communicate risks should ensure effective dialogue with potentially affected outsiders. This process should exhibit a spirit of open exchange in a common understanding, not a series of canned briefings; discussions should not be restricted to technical 'non-emotional' issues; and early and sustained interchange, including media and other message intermediaries.'

QUALITIES OF EFFECTIVE PARTICIPATORY PROCESSES

Numerous deliberative methods are described in the literature, and in practice these are further adapted to suit particular situations. It's fair to say that designing a deliberative process is likely to be more an art than a science, and the input of experienced practitioners should always be sought.

What make a participatory process successful? The literature suggests that a successful process depends less on the formal method of involvement than on the underlying qualities of openness, trust, respectful interaction, shared control and agency commitment.

Chess and Purcell 1999 concluded that the success of a participation program does not depend on the particular *form* of participatory process chosen. The factors affecting success or failure instead included the history of the issue, the context of participation, the expertise of those planning the effort and the commitment of the agency.

Beierle and Konisky 2000 identified qualities of successful processes: the quality of the deliberative process; the quality of communication with government; the commitment of the lead agency; and the degree to which jurisdiction over the process was shared.

- Poisner's 1996 evaluation of participatory processes suggested seven criteria for the effectiveness of community involvement processes:
 1. Do the participants represent all significant sectors of the community?
 2. Does the process focus on the common good?
 3. Does the process engender critical reflection of the values underlying the discussion?
 4. Do the participants communicate in person, face to face?
 5. Does the process involve citizens, as opposed to individuals hired to represent citizens?
 6. Does the participation process encourage dialogue?
 7. Does the process inculcate civic virtue?

Tuler and Webler 1999 interviewed participants in a major US forest management consultation process and derived seven 'normative principles' for effective community consultation processes:

1. Access to the process: physical access at times and places that suited the participants.
2. Power to influence the process and outcomes: participants could influence the agenda and consultative process.
3. Access to information: participants requests for information where satisfied.

4. Structural characteristics to promote constructive interactions: e.g. neutral facilitator, sensitive seating arrangement.
5. Facilitation of constructive personal behaviours ie. the process promoted respect, openness, honesty, understanding, listening and trust.
6. Adequate analysis: process goes beyond assertions, and tries to empirically verify facts.
7. Enabling social conditions necessary for future processes:
 - resolving conflict not heightening it;
 - building better relationships between different participants and interest groups;
 - promoting a sense of place; and
 - being aware of public concerns about the cost and effort of such a process.

Compare these with the conditions of procedural justice in hazardous siting decisions set out by Hunold and Young 1999:

- inclusiveness;
- consultation over equal resources and access to information (to help overcome power imbalance);
- shared decision-making authority; and
- authoritative decision-making.

Similar evaluative criteria have been developed by other researchers (Duffy, Halgren et al 1998; Beierle and Konisky 2000).

1.16 Advice for designers

A number of studies provide useful advice for those who design public involvement processes.

Chess and Purcell 1999 concluded that empirical research supports 'rules of thumb' which are based on the accumulated experience of practitioners:

1. Clarify goals (e.g. ensure the agency's underlying goals don't contradict it's public support for participation).
2. Begin participation early and invest in advance planning.
3. Adapt traditional participatory forums (e.g. precinct committees) to meet desired process and outcomes goals, and involve experts from outside agencies to provide technical assistance.
4. Include a mix of participatory methods eg. community advisory committee for sustained interactions, workshops to develop options, polls to involve larger numbers of people.
5. Collect feedback on the public participation effort, so you can demonstrate that it 'worked'.

Lyn Carson 2000, in her work for Planning NSW, proposed a four-step process which built on the work of Ortwin Renn in Germany (Renn et al 1993).

1. *Visioning*: a randomly selected group of community members, that is demographically representative of the affected community, is brought together to establish visions, values and the criteria against which the process can be evaluated.
2. *Operationalising*: 'experts' who may be knowledgeable members of the community, advocates, or technical experts, are brought in to assist the first group to form an action plan and test it against the stated values.
3. *Testing*: the plan is put to the community as a whole, typically through a survey.
4. *Evaluation*: if the proposal is approved, a firm recommendation is made, the result is communicated to the whole community, and the participant group evaluates the consultation process against the criteria established in step 1.

Carson suggests this structure can be adopted to suit a range of deliberative methods including consensus conferences, citizen juries and Charettes.

Dr Janette Hartz-Karp in the WA Ministry of Planning, is utilising *community consensus forums* to seek solutions to some of Perth's most difficult land use conflicts. This model mixes community activists, randomly selected community members, agency staff and technical experts in intensive one-day consensus seeking events. The participants are broken into work-groups under the guidance of facilitators, who are specially trained for the event.

She simultaneously utilises *deliberative polls* to consult with the community (where subjects a mailed an information pack with the survey) in order to test the broader public's views. (pers. comm. Dr Janette Hartz-Karp March 2002)

Specifically concerning facility siting processes, Kuhn and Ballard 1998 in their analysis of the siting of Canadian hazardous waste facilities proposed a generalised 'Open approach' with seven steps:

1. establish general environmental criteria;
2. broad public consultation;
3. invitation to participate;
4. consultations with interested communities;
5. site investigations;
6. community referendum;
7. site decision.

CASE STUDIES

Three case studies have been developed to illustrate the use of high level public participation processes in waste management decision-making.

1.17 United Kingdom: County Council strategic waste consultations

Over the last decade county councils in the United Kingdom have found themselves in closely analogous situations to WA's regional councils.¹¹ The decline of landfill space and more recently EU environmental policies have driven the development of integrated waste management strategies with increasing emphasis on incineration of waste with energy recovery.

Consultative processes have ranged from exhibition of a waste management strategy for public comment (Dorset Country Council¹², Durham County Council¹³), to the distribution of attractive full-colour booklets which included a survey to all residents and the publicising of the results (Lancashire County¹⁴, Cheshire County¹⁵).

The **Lancashire County Council** consultation process lasted for 3 years from 1997 to 2000. It aimed to develop a 20 year waste management strategy and did not involve contentious siting issues. The consultation process included:

- a four page colour newspaper supplement and survey distributed to 450,000 households;
- a 34 page consultation document which asked for answers to 7 key questions, 1,750 copies were distributed to interest groups;
- a major technical report, 225 of which were sent out on request;
- public forums;
- a Citizens Jury which focused on the issue of incineration. (The county council accepted the recommendation by the jury that a decision on incineration be deferred for 3-5 years until the effectiveness of concerted reduction, recycling and composting alternatives had been monitored and evaluated.)

The final strategy was published last year as 'A Greener Strategy for a Greener Future.'

¹¹ The European Union Landfill Directive requires member states to develop national strategies to reduce the biodegradable content of waste going to landfill, and to treat waste to recover value and prevent environmental harm. The UK Waste Strategy provides the policy framework for implementing the directive in the UK. Its targets include 40% of municipal waste to be recovered by 2005, with 25% of that achieved by recycling or composting.

¹² www.wasteuptowaste.com

¹³ www.durham.gov.uk

¹⁴ www.lancswasteinfo.com/strategy/intro.html

¹⁵ www.cheshire.gov.uk/waste/home.htm

The **Hampshire County Council** process was one of the most extensive in the UK and is well documented.¹⁶

In 1991 Hampshire County Council attempted to establish a 400,000 tonne incinerator in Portsmouth and met concerted, well-organised public and political opposition. The county council had adopted a paternalistic 'the County knows best' stance, utilised a public relations approach, and made little real effort to listen to people's views. The opposition claimed that a range of options should be considered, not just incineration, and that a more integrated holistic strategy should be adopted that considered reduction, recycling and recovery. (Petts 1997),

The proposal failed to gain planning approval, and in 1993 the county commenced a new public involvement process to develop a 20 year integrated waste management strategy that responded to the public's call for a more holistic approach. The program lasted 2 years and involved:

- three Community Advisory Forums;
- a survey of 500 opinion leaders;
- a telephone survey of the public;
- a public outreach program to inform the public about the waste problems and possible solutions. This consisted of exhibitions, displays, media campaign, telephone hotline and a newsletter;
- distribution of 44,000 booklets.

Petts 1997 evaluated the Community Advisory Forums in considerable detail. She especially examined the public-expert interface, recording the difficult (though not unpredictable) questions asked by the public, and discussed the ways that new technical information was shaped and balanced by community interaction, effectively allowing waste managers to make more competent decisions.¹⁷

¹⁶ The Hampshire County Council process documents are available on the website www.integra.org.uk, it was the subject of a book, *Project Integra - A personal history*, by Robert Lisney, and the public forums were evaluated in depth in Petts 1997.

¹⁷ Her conclusions are worth quoting at length:

"Contrary to expert fears, it is evident that when scientific uncertainty or lack of expertise is openly acknowledged, and when management mechanisms to deal with the situation are explained, demands for zero-risk options are not forthcoming from the majority, and experts are not rebuked. Members of the public who have an opportunity to address issues in an informed manner are willing and able to balance risks and benefits."

"It is the credibility of the expert that is at least as important, if not more important, than his or her knowledge. Credibility is gained by personal and organisational performance, by evidence of independence, and by evidence that the expert is acting with the interests of the public in mind. It is the process of interaction with the expert that provides the opportunity for credibility to be either lost or enhanced." (p378)

The consultation process produced *Project Integra*, an integrated waste management strategy which was adopted by the 11 member councils and the waste contractor. It included actions in reduction, recycling, composting, support for anaerobic digestion, use of recovery technologies, 3 to 5 waste processing facilities, and residue to landfill. There was a strong emphasis on education, with *Project Integra* launching its first major education program, *War on Waste*, in 1996.

The issue of incineration proved more protracted, with a final legal action against the proposed waste-to-energy facility being dismissed by the UK High Court in June 2001. The judge found that the county council's report to its members had been 'admirably clear, comprehensive and balanced' and that the claimant had 'failed to get off the starting blocks with the facts.' This perhaps adds weight to the evaluator's conclusion that:

'There is evidence in the information shaping in the Hampshire process that members of the public can act as quality assurers in the risk management process.'
(Petts 1997, p378)

1.18 Canada: Comparison of four hazardous waste facility siting processes

Canadian researchers Kuhn and Ballard analysed four hazardous facility siting processes from the 1980s and 1990s.¹⁸ Their review provides instructive guidance to WA authorities considering the establishment of novel waste facilities.

Two of these processes, in Alberta and Manitoba, were successful. They followed 'open' decision-making processes which involved the public at every stage and the final decision was never a *fait accompli*.

Two processes, in British Columbia and Ontario, failed due 'closed' top-down processes which generated concerted public opposition.

1.18.1 Alberta: The Swan Hills integrated hazardous waste facility

This process commenced in 1981 and concluded in 1984.

The initial stage involved conventional hearings and recommendations from an expert committee to build the facility.

The Alberta Cabinet, however, balked at accepting a largely technically-driven option and established an Hazardous Waste Management Team, independent of government, to identify a site under a strict policy of environmental and social criteria. The process involved extensive site selection processes, solicitation of volunteer communities, followed by local assessment processes and consultation.

The team engaged in extensive public outreach and consultation activities including numerous community forums and seminars which were kept to under 50 participants to allow for two-way discussion. Opposition was not avoided or overtly countered.

¹⁸ Much of the following is taken directly from Kuhn and Ballard 1998.

After extensive consultation, the residents of Swan Hills (population 2500) were prepared to accept the facility and expressed support through a referendum.

The Alberta Special Waste Treatment Centre was officially opened in 1987 and was the first hazardous waste facility in Canada to be sited using both environmental and social criteria.

1.18.2 Manitoba: The Montcalm Hazardous Waste Facility

The Manitoba Hazardous Waste Management Corporation followed the Alberta example and improved on it, adopting the principle of co-management agreement between the proponent and the community.

The process lasted from 1981 to 1987 and included extensive public involvement. Residents finally expressed their support in a referendum. The proponent noted:

'there seems to be an 18 month rule having to do with building the level of support in a community. It seems to be just the amount of time that it takes for a community to become involved and make decisions.'

Kuhn and Ballard noted:

'The proponents found that trust alone could not keep communities in a voluntary process. For communities to progress in the siting process, three concerns had to be met: 1) environmental and public safety; 2) the nature of the site selection and decision-making process; 3) economic opportunities. Provided the first two elements were felt to be under local control, communities would remain in the process if economic benefits were apparent.'

1.18.3 British Columbia

The British Columbia Ministry for the Environment began accepting proposals from industry to develop a Special Waste Management System in 1982. In 1983 the ministry signed an agreement with a consortium which proposed construction of an incinerator in Lower Mainland. The government left public consultation to the consortium and intense local opposition blocked the project in 1984.

In 1987 the ministry tried again, appointing a Special Waste Advisory Committee to examine hazardous waste treatment technologies and review regulations. Again the government accepted industry proposals and the committee selected a consortium of companies (The Envirochem Group) to build and operate an integrated facility.

Meanwhile 120 communities had received invitations to host the facility. Ten responded and public hearings were held by ministry officials, Envirochem Group reps and advisory committee members.

Officials subsequently identified Cache Creek and Ashcroft as having the best biophysical conditions. All other communities dropped out because of strong citizen opposition to the facility design. Many communities had asked for the incinerator to be dropped from the design, however the consortium refused to alter their plans.

Several public information hearings were held in Cache Creek and Ashcroft. In May 1998 a referendum was held and approx 60% of the voters favoured continuing the siting process. However this public support quickly faded when Envirochem Group began secret test drilling on sites it had selected.

The government's credibility was further eroded when it disbanded the independent siting advisory committee, leading to a community backlash. By Oct 1988 support had totally disintegrated and the province decided to end the siting process.

Kuhn and Ballard's review concluded that the British Columbia government was not truly committed to an open approach. Although communities volunteered for the process, the province and the private consortium failed to follow through on maintaining trust and power sharing.

In particular, the province failed because it became involved in trying to convince communities to accept the facility. Once the siting process came to be seen as little more than a public relations effort, public opposition galvanised.

1.18.4 Ontario

The Ontario Waste Management Corporation was formed in 1981 to develop an integrated hazardous waste facility for the province.

The Corporation chose an essentially top-down, technically-focused process, which included immense investment in community consultation, but nevertheless failed to create trust in the process.

The initial site identification process involved 300 public meetings, six seminars and 1000 mail contacts state-wide.

The second phase, focusing on the Golden Horseshoe region in southern Ontario, included three weekend seminars, five site selection workshops and 53 meetings with elected officials and the public.

Twenty candidate areas were chosen and a further 59 meetings were held to refine the siting process.

Finally eight sites were chosen and subject to another round of public consultation. At this stage a citizen coalition formed to criticise the process.

West Lincoln emerged as the preferred site and the local government launched a court case to obtain an assessment under the Ontario Environment Act. They lost the case, but the province relented and granted a review and hearings under the act.

Despite the numerous chances to be heard, the residents of West Lincoln considered themselves to be the 'losers' in the consultation process and the local council formally opposed the facility.

Kuhn and Ballard concluded that the process created opposition because citizens believed they had no real ability to influence the decisions which were made exclusively by Corporation staff or government officials. Although the public consultation was extensive, accepting or rejecting public evidence was totally at the discretion of the officials.

Despite numerous economic incentives and a generous compensation agreement, the local community continued to oppose the facility, essentially due to its distrust of the process and of government.

Fourteen years and \$140 million (Canadian dollars) later, the Ontario Waste Management Corporations' attempt to site a hazardous waste facility in West Lincoln ended in failure.

In reviewing these four cases, Kuhn and Ballard conclude:

'Power is fundamental to successful siting. Power must be granted to citizens potentially affected by the construction of a hazardous waste facility early and be carried forth throughout the four siting stages. Citizen participation through community meetings, seminars or questionnaire surveys alone does not necessarily imply that power to either accept or reject a facility has been granted. Participation does not mean influence. If the latter is absent, community distrust will rapidly develop. Offering financial incentives in the form of jobs or infrastructure developments will not be enough. Incentives will only work once trust and commitment are established between the proponent and the public.'
(p543)

1.19 Australia: NSW Waste Boards' residual waste treatment consultations

The NSW Waste Boards were Government agencies that had statutory responsibility for developing regional approaches to waste management. In this regard, both the Hunter and Southern Sydney Regional Waste Boards commenced processes to develop regional Secondary Resource Recovery systems/technologies for their respective member Councils and communities. Nolan-ITU supported both Waste Boards in undertaking forms of community engagement around their processes in 2000 and 2001.

The processes had both similarities and differences. In terms of similarities, both processes:

- were part of the preparation of an Expression of Interest from the commercial sector to gauge Secondary Resource Recovery technology and site options;
- had **no preferences** or preliminary plans for technology type and/or site;
- undertook community engagement **prior** to the public advertisement of the Expression of Interest to the commercial sector;
- were guided by publicly stated **consultative principles** (such as transparency in decision making and respect for all viewpoints) approved by constituent Councils;

- were independently and neutrally facilitated;
- sought to inform the community of the overall rationale for Secondary Resource Recovery and of the decision-making process;
- sought stakeholder and community feedback on Secondary Resource Recovery as a concept (rather than about specific technology and/or site options);
- promoted improved trust between Government, communities and stakeholders and resulted in no negative political/media responses; and
- utilised a mix of community engagement methodologies, including dissemination of public education materials (such as brochures, posters, information kits, websites, regional and suburban newspaper advertisements, and regional radio advertisements), conduct of stakeholder meetings (more than ten), conduct of public meetings (more than 20), and conduct of telephone surveys (approximately 1200 participants in total).

The Hunter and Southern Sydney processes were different in the following ways:

- The Hunter and Southern Sydney regions are socio-demographically, geographically and economically distinct;
- The whole of the lower Hunter region had been recently politicized by several separate proposals to develop large scale landfills in the region, while significant concern about waste management facilities in Southern Sydney was largely historically limited to individual communities (Waterloo, Sutherland, and Rockdale);
- The Hunter process involved a small number of constituent Councils (4) while the Southern Sydney processes involved a large number of Councils (11);
- The Hunter process featured a Stakeholder Reference Group (consisting of individuals and groups known to be concerned with waste management outcomes in the region) that was used as a 'touchstone' for all community engagement efforts;
- The Hunter process was continually monitored by an independent probity advisor; and
- The Hunter process moved through issuing the Expression of Interest, receipt of submissions and evaluation of submissions and is continuing to progress, while the Southern Sydney process has stalled due to a restructure of the NSW Waste Boards.

A number of key issues of stakeholder and community concern were identified through qualitative techniques such as the attendance by activist groups and highly interested citizens at public meetings or through their written submissions. These issues were then 'verified' in terms of general public attitudes through quantitative means, eg, telephone surveys. The issues of concern included: facility siting, net environmental impact, and the need to promote waste avoidance strategies rather than just technology based approaches.

The Hunter and Southern Sydney Waste Boards and their project teams (Council representatives) then incorporated identified issues into the Expression of Interest documentation. Effectively, technology proponents were asked to show how they would address the issues raised in the community engagement process.

As a result, both projects - in the estimation of stakeholders, project managers and consultants - could claim greater legitimacy for their Expression of Interest, as well as lower risk profiles.

Both community engagement processes achieved their objectives for three major reasons. First, both processes were 'open', eg, the Government bodies involved were transparent about having no specific plans with regard to technology type or site and were not advocates of any one approach. Second, and relatedly, both processes took place early in the overall decision making / technology selection and development cycle. Thirdly, through the process' consultative principles, participants in the community engagement process were clearly informed how their input was to be used in decision-making and where they stood.

GLOSSARY

Consultations *

Information-gathering processes, where members of the public are invited to have their say, on the basis that they may influence a decision made elsewhere.

Typically includes facilitated forums, workshops, surveys, search conferences, citizen panels, charrettes, precinct committees.

Deliberations *

Problem-solving discussions, where people are brought together to share ideas and views, learn, exercise judgement and make decisions.

Includes formal councils or boards, empowered committees (e.g. management committees), citizen juries, inquiries (e.g. formal government inquiries or informal processes like community indicator projects).

Public relations

One-way communications designed to influence public attitudes towards a product, brand or proposal.

Typically includes advertising, publicity events, public meetings, direct mail, newsletters, media management, commentators, letter-writing campaigns, and, sometimes, the creation of deceptive front groups.

Education

One-way communications, designed to engender knowledge, skills or attitudes.

Includes formal classes, training seminars, social marketing campaigns, stalls, public meetings, demonstration projects.

Social marketing

One-way communications which utilise product-marketing tools to encourage socially-desirable or healthy behaviours.

Includes advertising, seminars, direct mail, stalls.

Communication

General term for any transfer of information, stories or images.

* These are called 'participative', since people are invited to actively express their views, rather than simply passively receive information.

APPENDIX 1: TWO TOOLS FOR CHOOSING THE LEVEL OF COMMUNITY PARTICIPATION IN DECISION-MAKING

The choice of process depends on the context and appears to be as much an art as a science. Advice from experienced practitioners should always be sought when designing a community involvement process. However as a guide, the following tools may be useful.

1.20 The Public Participation Matrix ¹⁹

The choice of a community involvement process depends on your assessment of two factors:

- the *risk* inherent in the situation e.g. the potential for negative environmental or social impact, or the risk of community conflict.
- the *complexity* of information which needs to be digested before informed participation is possible. Here are some questions to help you evaluate these factors.

1.20.1 Inherent risk

1) How do you rate the potential for conflict with the community over this decision?

<input type="checkbox"/>	Low	<input type="checkbox"/>	Medium	<input type="checkbox"/>	High
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2) How do you rate the potential for social, environmental, or financial damage if the wrong decision is made?

<input type="checkbox"/>	Low	<input type="checkbox"/>	Medium	<input type="checkbox"/>	High
--------------------------	-----	--------------------------	--------	--------------------------	------

3) How many unknowns are there in the current decision-making equation?

¹⁹ The assessment questionnaire is inspired by a similar tool developed by the International Association for Public Participation.

<input style="width: 100%; height: 100%;" type="checkbox"/>	None	<input style="width: 100%; height: 100%;" type="checkbox"/>	A few	<input style="width: 100%; height: 100%;" type="checkbox"/>	Many
---	------	---	-------	---	------

1.20.2 Complexity of information

4) How much information needs to be communicated to the community for them to participate?

<input style="width: 100%; height: 100%;" type="checkbox"/>	A few simple facts	<input style="width: 100%; height: 100%;" type="checkbox"/>	A detailed proposal	<input style="width: 100%; height: 100%;" type="checkbox"/>	A significant amount of technical data
---	--------------------	---	---------------------	---	--

5) How much learning is required by the participants before they can be expected to make an informed decision?

<input style="width: 100%; height: 100%;" type="checkbox"/>	Low	<input style="width: 100%; height: 100%;" type="checkbox"/>	Medium	<input style="width: 100%; height: 100%;" type="checkbox"/>	High
---	-----	---	--------	---	------

6) How many abstract or technical concepts need to be digested before an informed decision can be made?

<input style="width: 100%; height: 100%;" type="checkbox"/>	None	<input style="width: 100%; height: 100%;" type="checkbox"/>	A few	<input style="width: 100%; height: 100%;" type="checkbox"/>	Many
---	------	---	-------	---	------

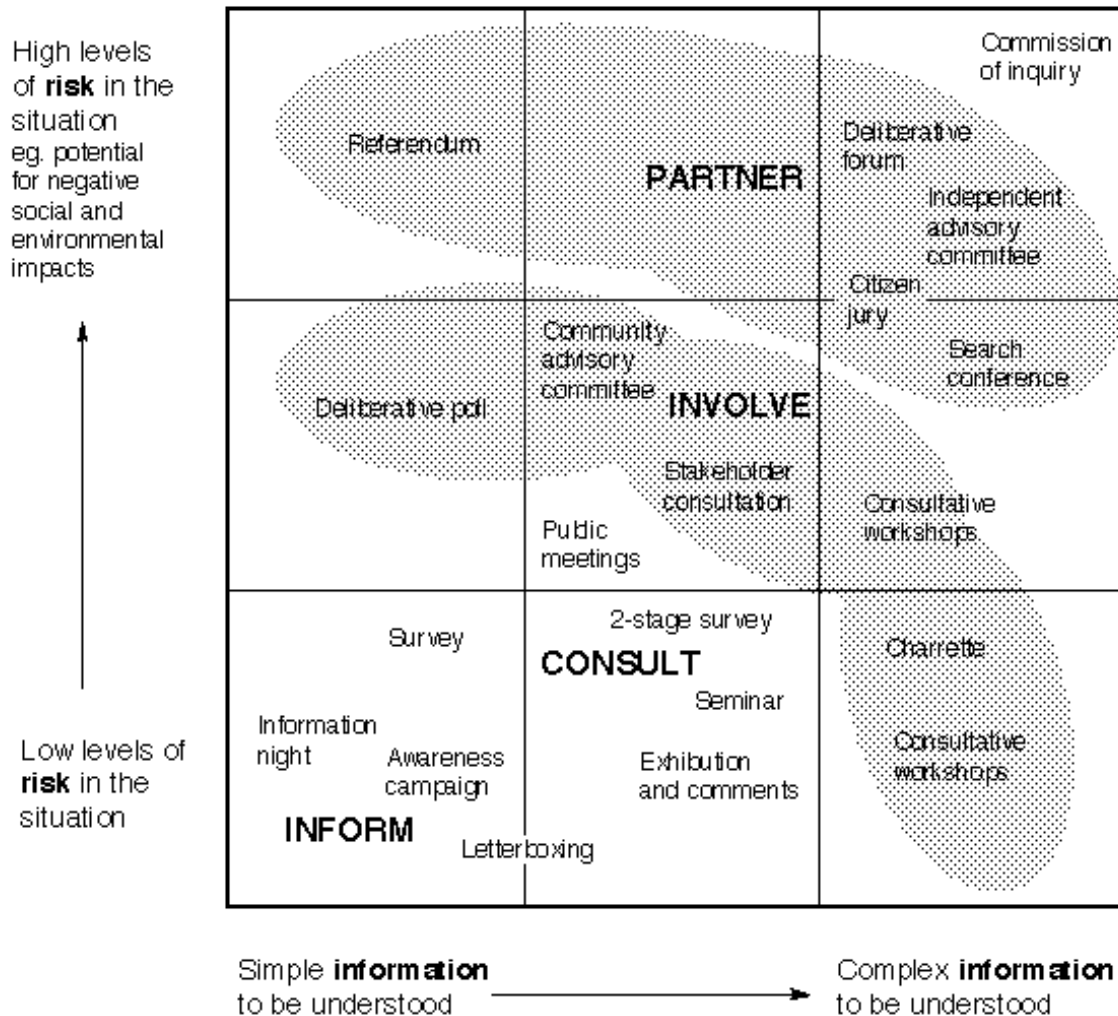
1.20.3 Interpretation

IF most of your answers are in the left hand boxes, then CONSULT methods may be sufficient.

IF your answers are scattered between the left, centre and right hand boxes, then INVOLVE methods may be sufficient.

IF the most of your answers are in the right-hand boxes, then you should consider using PARTNER techniques to minimise your risk and maximise the amount of knowledge and perspectives brought into the decision-making process.

The matrix below is a guide to particular community involvement methods which may be suited to the risk and complexity of your situation.



1.21 Vroom-Yetton Decision Tree

In 1973 Victor Vroom and Phillip Yetton introduced a contingency decision-making model for the business world. The model was intended to aid in deciding on the level of participation by subordinates would improve the quality of decision making in a corporate setting. The utility of the model has been verified in a number of empirical studies.

The model was subsequently modified slightly to allow for public participation in general and in natural resource decision-making in specific, and has been tested in a number of independent studies (Lawrence and Deagen 2001).

We have altered the model slightly to improve clarity and suit the Australian context.

KEY

A: The manager solves the problem or makes the decision alone without public involvement (=INFORM).

B: The manager seeks information from segments of the public, but decides alone in a manner which may or may not reflect public influence. (=CONSULT)

C: The manager shares the problem with separate segments of the public or stakeholders, getting ideas and suggestions, then makes a decision which reflects public influence. (=INVOLVE, with separated stakeholder segments)

D: The manager shares the problem with the public and stakeholders as an assembled group, getting ideas and suggestions, then makes a decision which reflects public influence. (=INVOLVE, with mixed participants)

E: The manager shares the problem with the public and stakeholders as an assembled group, and together the manager and the group attempt to reach agreement on a solution. (=PARTNER)

1) Does the manager have sufficient information to make a high quality decision?

2) Is the problem structured such that there is space for alternative solutions?

3) Is public acceptance of the decision critical to effective implementation?

4) If public acceptance is necessary, is it reasonably assured if the manager decides alone?

5) Are the public and stakeholders willing to engage in a dialogue in order to improve the situation?

6) Would the quality of public input (or future relations) be improved if learning occurs among the public and stakeholders about the issues?

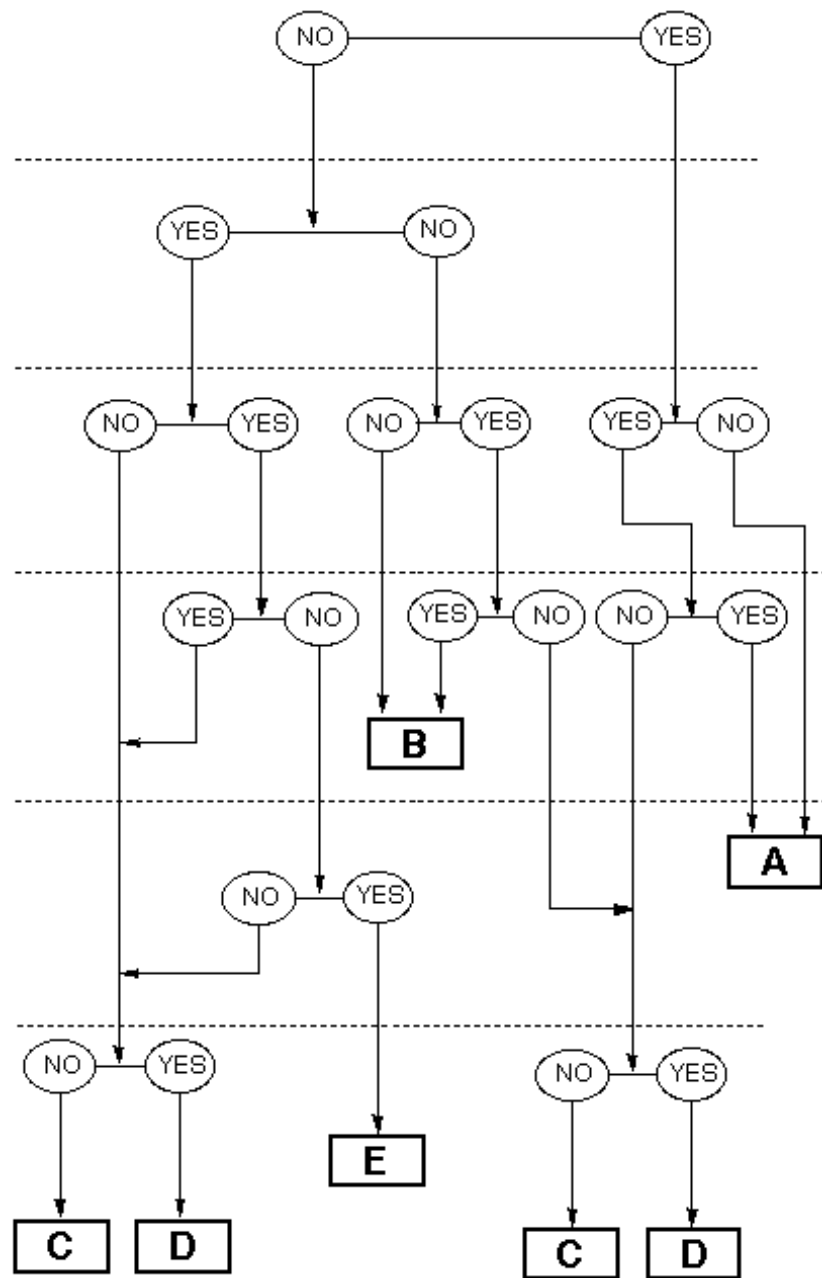


Figure 1: Revised Vroom-Yetton decision tree for selecting involvement methods for environmental decision making.

Source: Lawrence, R.L, and D.A Deagen. 2001, Choosing Public Participation Methods for Natural Resources: A Context-Specific Guide. *Society and natural Resources*, 14:857-872.

APPENDIX 2: SEVEN DEADLY RISK COMMUNICATION SINS

A veteran risk manager provides these salutary warnings to waste managers who need to communicate with the public over proposed waste facilities. (Nitschke 1998)

'The first sin is the sin of omission. This sin has a legal analogue where not only the truth but the 'whole truth' is requested. Sometimes this sin is committed unwittingly but other times not.

'The second sin is the sin of oversimplification. Here is a well-intentioned attempt to portray complicated matters in a simple manner, key elements are omitted and misleading and incomplete pictures are presented.

'The third sin is the sin of arrogance. This sin has two heads. One is the head of 'I know more than you do:' the other is 'I know what is best for you.'

'The fourth sin is the sin of 'loss of big picture'. This sin is commonplace in bureaucratic environments where only one's piece of the puzzle is important.

'The fifth sin is the sin of ignorance. The sin is a failure to know that you don't know.

'The sixth sin is the sin of deception. This sin manifests itself as hidden agendas and 'risk shopping'.

'The last sin is less common but nonetheless undesirable sin of blind compliance. This sin is primarily committed by those who don't have to pay the bill.'

APPENDIX 3: GUIDING PRINCIPLES FOR CONSENSUS PROCESSES

1.22 The Canadian Round Tables

Frustration with the rigidity of conventional consultation methods led to experiments of consensus-based multi-stakeholder processes in Canada in the late 1980s.

This model was eventually adopted and strongly promoted by the Federal Government as Canadian Round Tables, launched in 1993. The guiding principles of Canadian Round Tables are listed below.²⁰

The approach involves a committee with representatives from government, industry, NGOs and community groups. The parties address each other directly, engage in debate and make decisions as a group, usually aiming for consensus. The aim is to provide authoritative advice to government, which may or may not be followed. (Vanderwal 1999)

The optimism of the founders has generally been confirmed in practice and the model is now widely followed in environmental management and dispute resolution at all levels of government in Canada (Vari 1995, Vasseur et al 1997, Kuhn and Ballard 1998, Vanderwal 1999, Konisky and Beirle 2001).

This model is essentially similar to 'stakeholder' or 'Consensus-Based Decision-Making' in the USA and to the stakeholder advisory committees established by Australian governments e.g. the catchment management, native vegetation management and water reform processes in NSW.

The Canadian Round Tables are based on the following guiding principles.

- **Principle #1 - Purpose Driven**
 - People need a reason to participate in the process.
- **Principle #2 - Inclusive not exclusive**
 - All parties with a significant interest in the issue should be involved in the consensus process.
- **Principle #3 - Voluntary Participation**
 - The parties who are affected or interested participate voluntarily.
- **Principle #4 - Self Design**
 - The parties design the consensus process.
- **Principle #5 - Flexibility**

²⁰ See <http://www.mediate.com/articles/consen.cfm>

- Flexibility should be designed into the process.
- **Principle #6 - Equal Opportunity**
 - All parties must have equal access to relevant information and the opportunity to participate throughout the process.
- **Principle #7 - Respect for Diverse Interests**
 - Acceptance of the diverse values, interests, and knowledge of the parties involved in the consensus process is essential.
- **Principle #8 - Accountability**
 - The parties are accountable both to their constituencies, and to the process that they have agreed to establish.
- **Principle #9 - Time Limits**
 - Realistic deadlines are necessary throughout the process.
- **Principle #10 - Implementation**
 - Commitment to implementation and effective monitoring are essential parts of any agreement.

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