Working together in Thames-Coromandel

Guidelines for community planning

Parliamentary Commissioner for the Environment
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Contents

Tables

Figures

1 Introduction

In March 2005 the Parliamentary Commissioner for the Environment (PCE) released the report of an investigation assessing the effectiveness of the process used by Environment Waikato[1] and Thames-Coromandel District Council to address the environmental pressures arising from ongoing development within the Whangamata catchment. The report was called *Turning hopes and dreams into actions and results: Whangamata, a case study of community planning in a coastal area*.

The primary concerns raised by two Whangamata groups related to the management of the harbour and wastewater treatment system. The report concluded that, while participatory community planning is a good way of tackling complex environmental issues, the Whangamata process had shortcomings. These included:

- inadequate understanding by some parts of the Whangamata community of legal, environmental, and financial constraints affecting the achievement of desired outcomes
- the process not sitting comfortably with other local government processes, such as the planning and resource consent processes of the Resource Management Act 1991
- the lack of 'champions' for the process, dedicated resources, and awareness that the process was an enduring, long-term project requiring commitment from all stakeholders
- insufficient appreciation that ascertaining the causes of declining harbour water quality and securing sustainable improvements required an integrated whole-catchment-based management approach
- the lack of understanding by some parts of the community of the complex challenges faced by the district council in providing infrastructure to meet the needs of a seasonally fluctuating Whangamata population.

The PCE report made recommendations to address the shortcomings. (See Appendix A for full details of the investigation findings and recommendations.) Following the release of the PCE report, a workshop was held in Thames to obtain feedback on the findings and recommendations. At the workshop, discussion groups were invited to:

- consider the value of participatory planning within an integrated catchment management framework
- explore ways in which the process could be applied in Coromandel Peninsula communities.

[1] Waikato Regional Council

This report describes the key messages from the reports of the discussion groups and provides guidelines on participating in community processes. The primary purpose of the report is to provide information and tools that the workshop participants can apply to planning and consultation processes in their home communities, including the community outcome processes of the Local Government Act 2002.

This report also provides notes of three scene-setting workshop presentations that:

- summarise the PCE investigation
- promote integrated catchment management as a framework for coastal management on the Coromandel Peninsula
- promote a systems approach to the provision of infrastructural water systems services.

2 Key workshop messages

2.1 Background to the workshop

The PCE workshop was attended by representatives of Environment Waikato, Thames-Coromandel District Council, community boards, community interest groups, and private individuals.

The workshop commenced with scene-setting presentations on:

- the PCE investigation
- participatory processes
- integrated catchment management
- infrastructural water systems services.

Appendices B to D reproduce slides from three of the presentations.

After the presentations, six discussion groups explored the following themes:

- participatory community planning processes
- integrated catchment management as a framework for community planning
- management of the impact of human activities in significant natural environments.

A number of take-home messages emerged from the discussions. The messages can be grouped according to two main themes:

- the importance of maintaining dialogue during community planning
- the need to identify routes to solutions.

The take-home messages are discussed in Sections 2.2 and 2.3.

2.2 How to conduct the dialogue

The PCE investigation found that the process used for developing the Whangamata Community Plan helped to get disparate groups into constructive dialogue. However, several factors hampered progress, including:

- a lack of sufficient information
- uncertainty about the purpose of the process/plan

- uncertainty about how the plan would be implemented
- a lack of clear commitment by some key stakeholders
- a lack of awareness that the plan must become an enduring long-term project requiring the commitment of dedicated resources.

Key messages from the workshop discussion groups follow. The key messages are illustrated with comments taken from the discussion groups' report back sheets (shown in italics).

- Ensure **wide community participation**, from the start of the planning process through to implementation of the plan and its ongoing review

"Get diverse groups actively involved in the planning process"

"Get wide community ownership and participation, early"

- Provide **ongoing resourcing and organisation** so that the community, councils, and other parties with a stake in the community stay on the journey and maintain momentum

"Provide useful and relevant information"

"Provide $$$$$$$$"

- Ensure **full council and public authority support and commitment** to the planning process and its outcomes and to facilitating a 'team' planning approach

"Work as a team with the Council"

- Ensure **strong leadership** of the planning process, outcomes, and implementation to maintain trust, dialogue, and openness among all stakeholders

"The process must be championed by the community and by the Council"

"Participants must have the ability to look past their agendas"

- Establish **clarity of purpose** for the plan and the planning process.

"A clear purpose of what we want to achieve is needed"

"Be clear about limits and constraints"

2.3 Routes to solutions

Harbours, estuaries, and coastal waters are highly valued features of the Coromandel Peninsula environments and make the district a much sought-after area for occupation and recreation. The two councils face significant challenges. They must safeguard the quality of the environment from the adverse effects of urban development. They must also provide infrastructure to meet the needs of a seasonally fluctuating population.

The PCE investigation found that water quality in Whangamata Harbour had degraded. The investigation also found that water supply and wastewater treatment systems servicing the Whangamata community were under significant pressure during the summer months. The report advised that an integrated whole-catchment-based response to water quality problems was needed.

The workshop discussion of the PCE findings gave the following key messages about ways of moving forward (with comments from the discussion groups' report back sheets shown in boxes).

- Start at the appropriate level – the **harbour/estuary catchment** – but don't stay there

"Urban development needs its catchment to be sustainable"

"There's too much procrastination – all the attention is being given to the 'big picture' and strategic plan and the 'here and now' is being ignored or put aside"

- Work inwards from the catchment, **mapping out the ecosystem** as you go

"Recognise sub-catchments, understand downstream effects, and develop an understanding of constraints and barriers"

- Incorporate and respect **local knowledge**.

"Local knowledge is not acknowledged by decision makers"

"We need to get past the 'blame' mentality – include people to get solutions"

2.4 Conclusions from the workshop

Effective participatory planning requires all participants to:

- have a clear vision of the prize they want to win for the community
- take ownership of the process and outcomes they have selected
- have confidence in themselves, their neighbours, and their community boards and councils.

Three principles need to be borne in mind at all times:

Certainty **of the process and potential outcomes**

Commitment **to the process and desired outcomes**

Trust **in the process, local wisdom, and council expertise**

3 Guidelines for participating in community processes

3.1 Background to the guidelines

The guidelines are for individuals and organisations who are engaged in, or about to engage in, community decision-making processes. They are a result of requests made to the Parliamentary Commissioner for the Environment by those taking part in the workshop held at Thames on 18 March 2005.

The guidelines are a resource rather than a set of rules, and need to be tailored to suit the particular circumstances.

Carole Donaldson, Community Involvement Consultant, developed them under contract to the Parliamentary Commissioner for the Environment.

3.2 Purpose of the guidelines

The purpose of these guidelines is to provide an overview of what to consider when deciding whether to engage in a participatory approach to decision-making, particularly between communities and local or central government.

Much has been written about how to design a participatory process and about useful tools and techniques. However, these guidelines focus on fundamental questions about participation, including what types of behaviours and skills are required of **all** the participants, including the community participants.

Section 3.3 looks at levels of participation from 'information out' to full participatory approaches. It is important to consider whether the process is appropriate to the needs of the participants and to the issue at hand.

Section 3.4 considers the dynamics of groups and the reasons why a person or organisation should participate in a group process. It offers some insight into what characteristics a well-functioning group displays, and, conversely, how a non-functioning group behaves. This may allow participants currently engaged in a group process to identify problems, or create awareness amongst potential participants about group dynamics and expectations.

Section 3.5 describes some roles, behaviours, and skills that all participants should be aware of. Not every participant needs all these skills, but all processes need to include people with these skills to be successful.

Section 3.6 provides some suggestions for the structure of the process and project design. Having a structure that is well thought through and agreed to provides the group with a blueprint or baseline against which they can measure their achievements.

3.3 Levels of involvement in decision-making

Over the years, the public has demanded a greater involvement in decision-making, particularly at the local level. Governments and organisations have responded to this demand through a variety of processes, all of which fall under the broad term 'consultation'. However, these processes differ in how they work and in what they can deliver. It is important, therefore, to understand what each process offers, and whether it will deliver the outcomes and level of involvement desired.

Sections 3.3.1 to 3.3.5 describe common processes used when involving the public. Note that the processes described have simple, generic labels. Many organisations will use a different label to describe these processes. Table 3.1 summarises the main characteristics of each process.

Table 3.1 Levels of public involvement in decision-making

Type of process	Main characteristics
Information/education	Information is supplied with no expectation of comment.
Information feedback	Information is supplied about a decision and feedback requested, but the proponent[2] is not obliged to change the decision.
Public consultation	Commonly used where local authorities are required to consult. Minimal consultation can be carried out to meet legislative requirements. Input is usually through submissions and hearings.
Advisory committees	Committees are made up of major interests, and perhaps other interested individuals. Projects may or may not change in response to the committee's input.
Participatory	Processes go beyond what is required and provide for greater involvement of communities (and other interested parties). Processes are principle driven. Process of engagement (including how decisions are made) is transparent and actively seeks the best solution.

[2] That is the individual or organisation which has initiated the participatory process

3.3.1 Public information/education

A public information process is used to make the public aware of decisions that have more or less been made. There may not be any request for comment. Examples of this process include emergency management procedures, some municipal council regulatory requirements, and the results of polls or research.

Information on specific issues, such as how to conserve water or protect habitat, is often developed and distributed without public input and is considered 'educational' or 'awareness raising'. This information may be sent out before the start of a project or before a decision is made **to prepare the public for further involvement**.

3.3.2 Public information feedback

When a decision has made and the public has been invited to comment, we move slightly along the public involvement continuum. Examples of public information feedback include decisions regarding consents, or some policy decisions. This form of involvement is used where 'experts' or elected officials have discussed and decided on a policy, plan, or project, and they wish to have feedback from the public on that decision. **The public has no input at the conceptual stage** of the decision and, in fact, the process involves seeking affirmation for something that is already decided.

The decision maker does not usually have to take public comment into account.

3.3.3 Public consultation

We are most familiar with this level of public involvement. Much has been written about public consultation, including case law through the Environment Court.

Local authorities, in particular, often have a responsibility to consult with their communities on projects, plans, or policies where there is deemed to be sufficient 'public interest' or the risk of environmental harm. The public is notified of these projects through newspaper advertisements and submissions are called for. In some cases, the local authority will bring interest groups and interested individuals together to discuss the project and gather input.

Note that the public is not usually informed of the proposal until it is well developed and past the needs determination and conceptual stages.

These processes tend to be confrontational because something is 'on the table' and communities are being asked to comment.

3.3.4 Advisory committees

More and more, local authorities are using advisory committees. These committees often help identify potential issues and concerns about a particular project, plan, or policy. Input from the committee may be used to refine or reject what is 'on the table'. However, the committee does not share any responsibility or ownership in the project since the need was not determined with their input. Ongoing implementation may be totally out of their hands.

The committee often has little incentive to work for creative, alternative solutions – only to act as a critic.

3.3.5 Participatory processes

Truly participatory processes represent quite a leap on the public involvement continuum. These processes are by their nature inclusive. They recognise the rights of all affected parties to be at the table. They allow the participants to be part of confirming/refining the project 'need' and direction, as well as analysing the issues and identifying solutions.

Participatory processes are principle driven, that is, the work is carried out within a framework of principles. Examples of principles might be:

- all interests are represented and acknowledged – the process is inclusive
- all forms of knowledge are important – cultural, local, scientific, and so on
- consensus decision-making is the preferred approach
- all participants strive for active listening and constructive participation.

Participatory processes offer the most comprehensive approach to local decision-making. They engender greater ownership in the decisions thus making successful outcomes more likely.

3.4 How groups work

This section is useful for decision-making situations where the community is likely to be very involved in the process. It is important to recognise that no two groups will function in the same way. The same group may act differently from one meeting to another. This fluid dynamic makes working with, and being a member of, these groups challenging and exciting.

3.4.1 Engaged participants

Participants need to have a reason to participate, and confidence that the process will achieve a positive outcome. Several questions, therefore, should be considered before a process gets formally underway.

- What does the promoter of the process require? What do they expect to come out of the process – a community plan, a development plan, a policy?
- Is the need best met by a participatory process? (Ask whether decisions have already been made, what level and type of change is possible, and so on.)
- Are the resources available to support the process? (Resources include time, information, and dollars.)
- Is there a commitment to implementing the outcome of the process? What mechanisms exist for ensuring implementation?
- Is the promoter capable of leading a group process? For example, should there be a neutral facilitator?
- Who is likely to have an interest in the outcome and how can they be best represented? (It is better to have all interests 'at the table' than to have some outside the process as this can cause conflict and confrontation.)

3.4.2 Characteristics of groups

Groups display certain characteristics if they are functioning well and others if they are not functioning well. Many processes fail because of a lack of ability to recognise when, where, and why problems exist, and how to overcome problems.

Table 3.2 shows some of the characteristics of groups that are functioning well and groups that are not functioning well.

3.4.3 'Taking the pulse'

If the group falls into the 'not functioning well' category, it may be useful to consider the following questions.

- Is there an obvious area of discontent (such as purpose, tasks as delineated, lack of action, leadership)?
- Does the group have – and understand – a vision with objectives and strategies for achievement?
- Are there personalities within the group who are disruptive?
- Do the members interact and talk freely about problems and issues?
- Does the group lack confidence in, for example, the leader, the outcomes, or its support?
- Do the meeting environment and process encourage cooperation?

Table 3.2 Characteristics of groups

Groups that are functioning well	Groups that are not functioning well
Cohesiveness Sense of togetherness Team spirit Shared purpose and vision	Low morale No sense of purpose
Trust and cooperation evident Ability to solve problems Unified desire to accomplish tasks	Negative questioning of roles and tasks Inability to resolve issues.
Stable membership Limited absenteeism	Members come and go No stable core
Shared belief that tasks can only be achieved through working together and that the objectives are worth striving for	Strongly held beliefs that certain people are responsible No sense of pulling together or collective responsibility May form subgroups that 'take sides'
Strong communication between members both non-verbal (e.g. eye contact, body language) and verbal (e.g. ability to debate contentious issues in a constructive way) May even develop own jargon	Argumentative discussion over minor issues Reluctance to discuss substantive issues No active listening – members talk over one another
Leadership from wherever is appropriate for the task in hand, not necessarily the chair or the expert	No obvious leadership 'Loudest' often takes over Personality rather than outcome driven

3.4.4 Group development

Groups do not usually come together immediately as a unified, trusting entity. Several developmental stages are common to most groups. Table 3.3 shows stages of group development. The stages are presented sequentially. Note that groups may not go through these stages smoothly, that is, they may go so far, move back, move forward, go off on a tangent, and so on. However, the group will go through these stages at some time.

Acknowledge and understand the stages of group development to avoid writing off processes as unworkable if there is no apparent agreement after a couple of meetings. It can take several meetings (sometimes months) before the level of trust and purpose is sufficiently well developed to move the project forward.

Table 3.3 Stages of group development

Forming	The group is anxious and asks many questions. Members try to assess whether they belong and what the benefits of participation might be. Task definition is critical. Participants need some sense of how tasks might be achieved. They are implicitly searching for a leader. They are looking for the motives of the proponent and for behavioural norms. This stage is often characterised by suspicion, tension, and cynicism. Form and function are determined here.
Storming	Members begin to voice concerns more freely, and demand to be heard. Arguments occur over relatively minor points. Deviation from the agenda is common. Personalities become obvious. Hierarchy is challenged. Control efforts may become confrontational. Verbal attacks are common; defensiveness results. Some may attempt to redefine the purpose etc. Emotion can be displayed at this stage either for or against the project. **At this point, many group processes break down.**
Norming	Relief is in sight…members start to settle down. Opinions have been heard and there is now some understanding of interests. Many conflicts have been resolved and members listen more to one another and are more open-minded. Cohesion and unity become apparent. Members are more relaxed and trusting of one another. Members start to actively support each other; cooperation on tasks begins. Planning starts. Clear goals and objectives are established. Easy familiarity and communication are obvious. Individual strengths are recognised. Still may be some emotion from those who 'just want action' or 'to get on with it'. The group can easily fall back into 'storming'.
Performing	Fluidity exists in the way structures form and reform within the group. Members are very comfortable with purpose and tasks. Mechanisms for achievement are in place. More issues dealt with 'intuitively' without confrontational debate. Successes, even minor ones, are celebrated and the group moves easily to the next task in hand. Members reinforce and support each other. Enthusiasm may be high for more projects – possibly more ambitious ones.
Dorming	The group recognises and actively plans for the end of its work. Long-standing groups often find it hard to 'let go' once the tasks have been accomplished. A sense of loss may lead to some members trying to prolong the group beyond its mandate.

3.5 Roles, behaviours, and skills

The success of participatory processes depends not only on a well-defined purpose and well-motivated participants, but also on acknowledgement and acceptance of appropriate roles, behaviours, and skills.

3.5.1 Everyone has a role

Several roles emerge in a group process. Some of these, such as the chairperson or secretary, are part of the formal nature of task-oriented groups. Others, such as leader or facilitator, are a result of needs within the process. The exact nature of these roles will depend very much on the make-up and issues of the group and may change over time. Table 3.4 describes some of these roles.

3.5.2 Group behaviours

We can categorise group behaviours as 'participatory' or 'conventional'. Successful participatory processes differ from conventional processes in many ways.

Table 3.5 shows the differences in behaviour between a participatory group and a conventional group.

3.5.3 Expertise and skills of group participants

Every individual brings to the group an expertise or skill in something. Expertise and skills may include:

- extensive local knowledge
- complex scientific or technical knowledge
- good administrative abilities
- popularity or status within a community.

Well-functioning participatory groups acknowledge different types of expertise and skills and work effectively with them. Underlying these are some basic 'people skills' that enable the group to work cohesively and with a shared sense of trust and purpose.

Four basic people skills are required to work effectively as part of a group:

- understanding how people think and learn
- understanding body language
- active listening
- understanding appropriate language use.

These skills are all important elements of communication.

Table 3.4 Roles within a participatory process

Role	Responsibility
Leader	Motivates and animates the group. Ensures the group achieves its goals, enables all members to participate to the best of their ability. Is not necessarily the chairperson. A successful leader knows when to lead, when to allow others to lead. 'Each person is a trinity…leader/subordinate/colleague.'
Facilitator	Makes sure meetings run smoothly and effectively. Two types of facilitator exist: 1. The neutral professional 2. The 'socio-emotional' leader who has universal popularity and the confidence of all participants – the person participants often turn to when they want to discuss concerns and seek advice. Good facilitators can recognise conflict almost before it occurs. They can recognise consensus and prevent discussions going around in circles. They can act as 'counsellor', offering constructive advice and support to members who may feel disempowered by the process.
Chairperson	Lays out the rules and procedures of the meeting (as agreed by the members early in the process). Ensures people speak in turn. Keeps order at the meetings. May appoint subgroups and makes sure administrative duties are attended to.
Resource person	Provides advice and information on request, and clarifies specific questions or issues.
Group member	Participates positively in the group and commits to any action or decision reached by the group. Focuses on win–win results, and minimises conflict. Actively listens and hears all points of view with an open mind. Is willing to explore new ideas; asks pertinent questions and is a constructive critic. Confers with the organisation they represent as efficiently, effectively, and truthfully as possible so group process is not held up.

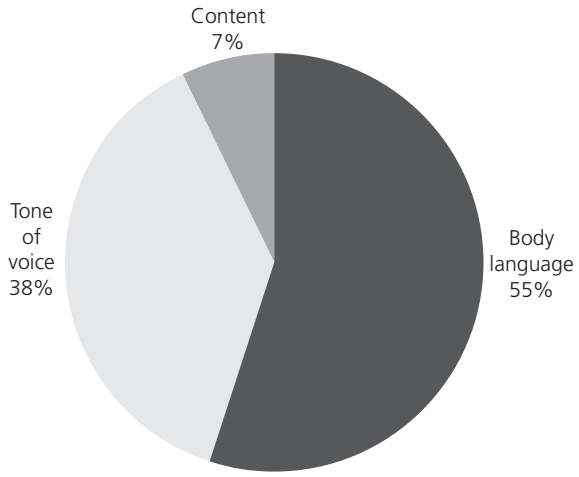
Table 3.5 Differences between participatory and conventional group behaviour

Participatory groups	Conventional groups
Everyone participates, not just the vocal few.	The fastest and loudest get more air time.
People give each other room to think and get their thoughts together.	People interrupt on a regular basis.
Opposing views are allowed to co-exist.	Differences are treated as conflict that must be stifled or solved.
People draw each other out with supportive questions.	Questions are delivered and perceived as challenges.
Each member makes the effort to pay attention to the person speaking.	Unless the speaker is especially captivating, people don't pay attention to the person speaking.
People are able to listen to each other's ideas and know their own ideas will also be heard.	People have difficulty listening because they are too busy rehearsing what they want to say, usually in judgement.
Members feel able to speak up on controversial matters; everyone knows where everyone else stands.	Some members remain silent and no one really knows where everyone is at.
Members can accurately represent each other's points of view – even if they don't agree with them.	Individuals rarely give accurate representation of views that do not coincide with their own.
People don't talk behind others' backs.	People talk behind each other's backs, or 'scheme'.
Members are encouraged to stand up for their values and beliefs.	People with minority perspectives are discouraged from speaking out.
Problems are not considered solved until everyone understands the reasoning.	Problems are considered solved as soon as the fastest and loudest pronounce them so; others are expected to come on board regardless of understanding.
Agreements reflect a wide range of perspectives.	Agreements are assumed to mean that everyone is thinking the same thing.

The ability to communicate clearly and effectively is perhaps the most fundamental skill required in participatory processes. One of the most common criticisms from group processes that 'they just don't listen' – whoever 'they' might be.

Communication is not just about speaking or fancy brochures. Numerous studies have shown that the impact of communication is 55 percent body language, 38 percent the tone and quality of your voice, and only 7 percent is the content. This demonstrates how critical it is to know how to deliver the content or its importance may be lost. Figure 3.1 shows these percentages as a 'communication pie'.

Figure 3.1 The communication pie



3.5.4 Understanding how others learn and think

People learn and think in different ways. This is a complex topic, but one way of describing different types of learners categorises people according to the three headings that follow.

Visual learners tend to process information as a series of images. That is, the 'mind's eye' sees the information in context and forms clear, mental pictures. This type of learner speaks quickly, and is adept at thinking and speaking on their feet. Remember the classmate who always had their hand up?

Auditory learners tend to turn information into more detailed sound bites. They have an 'inner voice' that may echo what is being said to turn it into more useable information. This takes longer for the brain to process, so this type of learner often appears to be deep in thought and may take some time to formulate a response.

Kinesthetic learners tend to turn the information into a series of motions; they feel a physical sensation as a result of the information. The brain takes time to process the information, therefore the person takes time to respond. Often these types of thinkers are 'written off' as non-communicative.

These explanations of different ways that people learn and think show that visual learners can easily take groups over. Visual learners can think fast on their feet, can formulate responses very quickly, and can overshadow or intimidate those who may need time to develop a response. Therefore, a group needs to allow time for everyone to consider and formulate their response.

Each learning type has a preferred method of communication. Therefore, information should be presented in a variety of ways using, for example, verbal presentations, maps and pictures, as well as detailed written materials.

3.5.5 Body language

Body language encompasses those elements of participation that are non-verbal.

Non-verbal participation includes the following elements:

- **Facial expressions** can convey happiness, surprise, fear, sadness, anger, disgust, contempt, interest, understanding, bewilderment, or neutrality
- **Eye contact** (or gaze) sends and receives information, signals attention and attitude, and facilitates speech interaction
- **Gestures and bodily movements** coordinate speech and create emphasis and emotion (such as fist clenching for aggression, face touching for anxiety, and scratching for self-blame or self-consciousness)
- **Body postures** reveal something about personal attitudes. Relaxed, attentive, and interested individuals tend to lean slightly towards the speaker. An assertive individual will have shoulders squared, chest out, and often hands on hips. An individual with an established position of power or status will sit relaxed, leaning back, and often with feet on the desk. Someone who is not interested in what is going on will be slouched forward or sideward, will often shuffle feet and hands, and will be distracted easily.

Note that those who appear relaxed, attentive, and comfortable with the situation are more likely to be trusted and respected than those who look agitated, bored, frightened, or aggressive.

3.5.6 Active listening

Active listening is the act of listening, processing, and responding to verbal information. Common complaints from public participatory processes are 'he doesn't really listen', or 'it goes in one ear and out the other'. Both complaints reflect that the receiver may have heard the words, but is not doing anything with or about them.

Active listening requires suspending judgement about what is being said until the speaker has finished and you are able to think about the information. Active listening is about demonstrating to the speaker that you are interested and taking in what is being said. Body language can demonstrate interest, as can asking useful questions of clarification or fact, and responding in a way that shows some reflection and consideration.

3.5.7 Language

Elements of verbal communication that influence the message received by the listener are tone of voice, accent, emphasis, speed, and pauses. Using language that is readily understandable yet not demeaning or patronising is critical. A skilled communicator can convey complex or technical information so that the audience understands it. A poor communicator will not communicate the meaning successfully.

3.5.8 Why is it important to know about communication?

This document is about enabling communities to participate effectively in decision-making processes. To achieve this, people need to be able to communicate clearly and effectively, both non-verbally and verbally. We are looking for ways to:

- understand and perhaps influence the attitudes and behaviours of others
- work cooperatively with others
- lead and/or facilitate the actions of others
- affect the emotional state of others (for example, by dealing with conflict, uncertainty, and disaffection)
- convey knowledge, information, and understanding.

3.6 Process and project design

Good process does not just happen; it is the result of agreement and commitment by the participants on several elements. Table 3.6 shows the elements of good process.

Table 3.6 Elements of good process

	Good process:
Principled	✓ **is purpose driven** – people need a reason to participate
	✓ **is inclusive** – all parties with an interest should be involved
	✓ **is self-designed** – the parties design the process
	✓ **is flexible** – looks for opportunities to improve
	✓ **is open to equal opportunity** – gives access to information, enables people to participate
	✓ **respects diverse interests** – shows acceptance of diverse values, interests, and knowledge
	✓ **shows accountability** – to those they represent, to the process, and to the agreed outcomes
	✓ **clarifies the limits** – sets boundaries and realistic timelines
	✓ **is followed by implementation and monitoring** – to ensure objectives are achieved
	✓ **respects voluntary participation** – respects and acknowledges volunteer effort
Designed	✓ **clarifies purpose** – why people should participate
	✓ **agrees on process** – what, when, how, where, who
	✓ **structures the outcome** – vision, goals, objectives, tasks
	✓ **uses good communication** – uses a variety of methods to suit target audience; uses feedback loops
	✓ **makes sure resources are available** – financial, time, human, information
	✓ **encourages commitment** – participants should share responsibility and be committed to the process and its outcomes
	✓ **monitors and implements** – contingency plans, success criteria, work plans
Flexible	✓ **is a learning process** – responsive to new information
	✓ **seeks the 'third way'** – looks at a new way of solving the issue or selects the best from different views
	✓ **is willing to change** – doesn't hold on to preconceived ideas if they are found wanting
	✓ **accepts conflict** – turns conflict into creative tension

3.6.1 Making decisions

A further consideration in the design of a process is how decisions are to be made. Participatory processes often work most effectively using a consensus approach. Note that a fallback process should also be discussed where consensus cannot be reached.

Consensus decisions are decisions or 'packages' that the group can live with – not necessarily the decision each individual might have made. Everyone involved must agree or the decision is majority determined rather than consensus.

In consensus processes, participants work together to design a process that maximises their ability to resolve differences. The process leader or facilitator needs to recognise consensus when it is reached. When groups agree on something, it needs to be captured or brought to closure to avoid the discussion opening up again and 'going round in circles'.

Fallback processes could include:

- agreeing to limit the length of time given to each item on the agenda
- closing discussion at one meeting and allowing it to be placed on a further agenda
- assigning responsibility for the decision to an individual or group
- asking for further information.

If none of these processes work, consider taking a vote. The group must determine at the outset what constitutes a majority – a simple majority (that is, anything over 50 percent), or a larger number (for example, 60 percent).

Discussing how you will make decisions and having this clearly recorded is important to maintaining good process.

3.6.2 Elements of good projects

Most participatory processes result in projects aimed at resolving the issues that precipitated the need for the process. Participants should be aware of what they need to consider when designing a project. Table 3.7 shows the basic elements of good projects.

Table 3.7 Elements of good projects

1. Create the 'big picture'	What is the need/issue? What is the scope of the project? What are the limits or boundaries?
2. Design the team	What skills or information are needed? How will the team operate? Who will lead the team? Who will take on other roles?
3. Develop the project plan	Add details to the big picture. Determine boundaries. Assess schedules and budgets. Assess risk. Identify fallback positions and criteria for success.
4. Carry out the tasks	Monitor progress. Manage changes as required.
5. Evaluate achievement	Evaluate achievement using established criteria. Celebrate success. Recognise lessons learned for future projects.

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Appendix A: Summary of the Whangamata Community Plan investigation findings and recommendations

Introduction

This executive summary summarises the Parliamentary Commissioner for the Environment's (the Commissioner's) findings and recommendations from an investigation into the process used in the Whangamata area to create the Whangamata Community Plan.

Background

The investigation was instigated by two concerns raised with the Commissioner: the encroachment of mangroves into the harbour and the performance of the town's wastewater treatment plant.

The investigation's terms of reference were to:

- investigate and assess the community planning process used in the Whangamata catchment and coastal area to address the adverse effects from development
- produce a report based on the investigation and make it available to the various stakeholder groups in Whangamata and other communities with similar issues.

Conclusions

The investigation has shown the potential for local authorities to work *with*, rather than *for*, communities to develop ways to address the many social, economic, and environmental factors of concern to all developing communities. Local authorities must consider such factors when making decisions and setting goals within the sustainable development approach required by the Local Government Act 2002 and with a view to sustainable management as required by the Resource Management Act 1991.

The investigation's recommendations must be read in the context of the terms of reference's focus on the role of community planning. This focus was chosen because of community planning's potential to address and resolve divergent community perspectives on issues relating to the environment.

The findings and recommendations relate to three areas:

- community plan development
- community plan implementation and maintenance
- environmental outcomes and futures.

The findings within each topic are summarised below, with recommendations and explanatory notes where appropriate.

Community plan development

Finding

The process used to develop the Whangamata Community Plan was successful, with the consultation process generally supported, despite strongly held feelings in some parts of the community. However, some parts of the community held unrealistic expectations about the process's ability to achieve their desired outcomes and did not consider the limitations imposed by other statutory and planning frameworks. Participants in the process may also have lacked sufficient information.

Recommendation 1

To all councils and their constituent communities: When a council and community engage in a community planning process, the council makes it clear early in the process:

- the purpose of the process
- how decisions or recommendations as a result of the process might be put into effect
- how those decisions or recommendations might fit within the council's ongoing planning and policy development and implementation.

Recommendation 2

To all councils and their constituent communities: When a council or community are about to engage in a community planning process, the council, early in the process, reviews and summarises all relevant initiatives and strategies, so stakeholders can ensure that they consider the potential effect of these initiatives and strategies on the future community plan during the consultation process.

Finding

The community planning process helped to get disparate groups into a constructive dialogue, but the plan's development was limited by the:

- implementing agencies' apparent lack of capacity or commitment to implement the plan
- community's uncertainty over the plan's status with respect to statutory planning documents
- plan's recommendations being beyond the ability of the councils and community to implement without support from other agencies.

Finding

The community planning process could be improved by:

- ensuring key stakeholders' early commitment to the process
- setting realistic expectations early in the process
- prioritising outcomes
- developing mechanisms to implement the plan whenever possible, but taking into account the legal context and its limitations on the plan's implementation.

Community plan implementation and maintenance

Finding

Despite implementation problems, the community planning process successfully set agreed actions to address many of the community's environmental and community concerns.

It is encouraging that Thames-Coromandel District Council (TCDC) reports that many of these actions have been completed or at least initiated. However, many of the more challenging actions have not been implemented.

Recommendation 3

To Thames-Coromandel District Council (TCDC) and Environment Waikato (EW): TCDC and EW work together to develop strategies, policies, and processes to progressively implement the aspects of the community plan that are within their jurisdiction and that have not been implemented.

Finding

The Long-Term Council Community Plan (LTCCP) is a planning tool well suited to addressing the issues identified in the community planning process.

Recommendation 4

To TCDC: TCDC clearly identifies how it has used the various community plans in its district (including Whangamata's plan) to develop its LTCCP.

Finding

Information gaps were identified during the community planning process.

Recommendation 5

To TCDC and the Whangamata Community Board: TCDC and the Whangamata Community Board, as part of the community plan's ongoing development, develop a programme for addressing critical information needs. This information is collected to inform discussions about future versions of the community plan.

Finding

The community plan's implementation can be improved.

Recommendation 6

To all participants in the community planning process: Participants in the community planning process enable the community plan's more effective implementation by:

- ensuring ongoing political and community commitment to the plan
- defining the plan's relationship to the council's day-to-day operations
- appointing an effective champion (a group or an individual) of the plan
- monitoring progress, reporting, and reviewing the plan.

Finding

The community plan's effectiveness and implementation are affected by the extent of delegated power provided to the Whangamata Community Board.

Recommendation 7

To TCDC: TCDC, as part of any future review of the implementation of the community plan, assesses the effectiveness of the Whangamata Community Board's delegations.

Finding

Appropriate resources need to be dedicated to facilitating the plan's development, keeping the plan alive and working, and keeping the community engaged in the ongoing process.

Recommendation 8

To TCDC: TCDC allocates sufficient resources to ensure ongoing community participation in the community plan's implementation and review, including regularly using forums and information bulletins. These resources should:

- build TCDC's capacity to support facilitation and participatory processes and the community plan's implementation (for example, by appointing a full-time staff member dedicated to community plan support activities)
- address the community's distrust of the council by appointing suitably skilled neutral facilitators.

Finding

Participatory community planning processes provide more effective outcomes when they involve an ongoing participatory dialogue between the community and decision makers.

Recommendation 9

To TCDC, the Whangamata Community Board, and EW: TCDC, the Whangamata Community Board, and EW reinvigorate the community plan with a new round of consultation that updates progress, raises new issues, and encourages ongoing constructive dialogue among all parties.

Environmental outcomes and futures

Finding

The water quality of the Whangamata Harbour has degraded. Some areas are probably unsafe for swimming and shellfish gathering at most times and it is probably unsafe to swim in the harbour immediately after heavy rain.

Recommendation 10

To EW: EW undertakes further rounds of water quality testing in the harbour to determine what effect, if any, the recent improvements undertaken by TCDC to the wastewater treatment plant may have had.

Recommendation 11

To EW and TCDC: EW and TCDC work together and with the community to develop an ongoing water quality monitoring programme so empirical data are available about changes and trends in the harbour's water quality.

Explanatory note
The Commissioner considers a sustained improvement in water quality needs an integrated whole-catchment-based response to water quality problems. The community plan provides the vehicle by which the community can be involved in such an initiative.

Empirical data on changes and trends in water quality are also needed.

Finding

Parties disagreed about the appropriate method to assess water quality in the harbour.

Recommendation 12

To EW and TCDC: EW and TCDC meet with Clean Water Whangamata and the Public Health Unit of Health Waikato to discuss concerns about water quality testing. The conclusions from such a meeting would then be fed back into the community planning process and used to implement water quality testing and monitoring programmes.

Finding

Past and proposed physical changes to the harbour's structure will have long-term, adverse environmental effects on the harbour and the coastal processes that shape it.

Recommendation 13

To TCDC: TCDC continues to work with EW and the University of Waikato to ensure sufficient baseline research is done to enable an effective assessment of the effects of past and proposed changes to the harbour's structure.

Finding

In Whangamata, as in other similar resort areas, local authorities face the difficulty of providing the infrastructure to adequately meet the needs of a seasonally fluctuating population. In Whangamata, the water supply and wastewater treatment systems are under particular pressure.

Recommendation 14

To TCDC: TCDC, when making infrastructure decisions considers:

- involving the community in all phases of a system's design, build, and operation
- designing the system for the long term not just to cover immediate problems
- designing the system for local conditions
- ensuring that the community has a comprehensive understanding of the impact of local environmental and social conditions on the options being considered
- giving additional weight to managing the demand on systems (especially peak demand) using educative, regulatory, and economic measures; not just by increasing system capacity
- ensuring robust performance standards and appropriate financial incentives or penalties are built into performance contracts with infrastructural developers and operators if these functions are contracted out.

Recommendation 15

To EW: EW works openly with TCDC, the Whangamata Community Board, and the community, to the extent possible without compromising its position as a consent authority, to ensure the upgraded wastewater treatment plant is designed, built, and operated to meet resource consent conditions for the consent's duration and beyond.

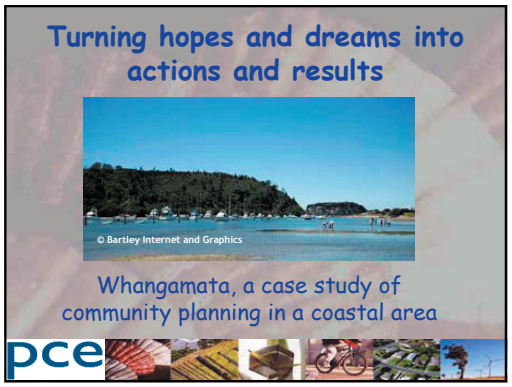
Explanatory note

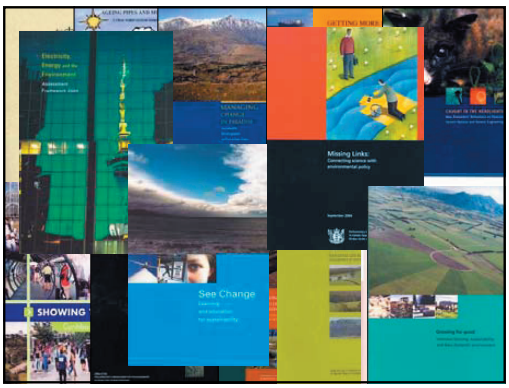
The Commissioner endorses TCDC's actions to progress the upgrade of Whangamata's wastewater treatment plant.

The Commissioner advocates using the community consultation process, as used in the community plan's development (that is, a process of participatory appraisal), as a constructive way to engage the community on this matter.

Appendix B: Turning hopes and dreams into actions and results

Notes of the presentation given by Dr J Morgan Williams, Parliamentary Commissioner for the Environment, on the investigation carried out under the Environment Act 1986 into the process used for preparing the Whangamata Community Plan.





A very special place!

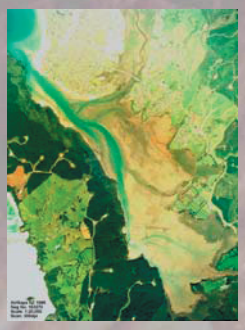
Courtesy of Environment Waikato

Whangamata Estuary

Our approach; **how** the PCE assesses environmental concerns

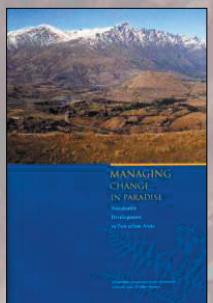
- Consider the **importance** of a concern (in this case harbour water quality and performance of waste water systems)
- Look at it in a **wider context** (impacts on the coastal environment that arises from ongoing development)
- Develop an investigation approach that help **address wider system issues**

The needs….



- Complex environmental problems require
  - sustained and integrated programmes (that address all the needs & pressures)
  - the involvement and support of all parts of the community – thru robust participation & planning processes

Role of Community Participation…



- In Managing Change in Paradise: Sustainable Development in Peri-urban Areas (PCE, 2001) advocated the development, by communities, of strategic plans
- Whangamata's community plan represents an opportunity for the PCE to assess the effectiveness of such a process

What the PCE did…

Interviewed a range of organisations, groups and individuals involved in the plan process and discussed the:

- Issues that instigated the development of the Plan – mangroves, sewerage systems, water qualities, etc (the specific concerns)
- The process used to develop the Plan
- The progress in its implementation (as of August 2004)

The Plan: what the PCE found…

- It was generally successful in involving the community and promoting dialogue, despite strong feelings
- There were unrealistic expectations about what the Plan could achieve and by when; capacity & commitment issues.

The plan……

Development; key recommendations

- Early in the process there should be clarification of:
  - the purpose
  - potential constraints (capacity, legal, financial, lack of trust between parties, input from other agencies etc.)
  - available mechanisms for implementation
- Provide information on other related environmental programmes, which may impact on the Plan – e.g. LG initiatives - RMA Plans, LTCCPs, Iwi Plans, DoC strategies

The plan….

Implementation and maintenance; as of August 2004

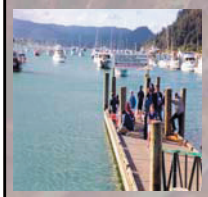
- Many actions are reported as having been initiated or completed
- However, many of the more challenging actions have not yet been implemented – esp. those that relate to water quality
- Information gaps need addressing

The plan…..

Implementation and maintenance; key recommendations

- The relationship between the LTCCP and Community Plans needs to be clarified
- All the participants need to maintain commitment to the implementation of the Plan
- The Plan needs an effective champion, a 'keeper of the long view'
- Adequate resources are required for the Plan's implementation and ongoing development

Environment & infrastructure: what the PCE found….

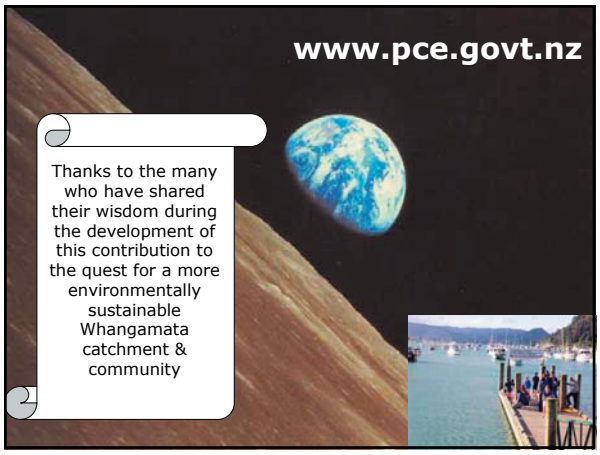


- Water quality in the harbour is degraded
- Further water quality testing is recommended with the involvement of the community
- Sustained water quality improvement requires an integrated whole of catchment response addressing all contaminate sources
- The Plan provides a vehicle by which the community can be involved in this process.

Environment & infrastructure…

- Whangamata and other resort areas must provide infrastructure for a seasonally fluctuating population
- Need to:
  - Design for the long term
  - Design for local conditions
  - Involve the community at all stages of design
  - Incorporate demand management into the design of systems
  - Ensure performance through standards and incentives


Beyond the words….
1. Support this workshop to discuss
• further implementation and development of Whangamata's Community Plan
• The usefulness to communities with similar concerns of:
✓ Community participation
✓ Development of strategic plans
✓ Whole of catchment integrated management
2. PCE focused follow-up review of the Plan's implementation (how successful in improving environmental outcomes?)
pce


www.pce.govt.nz
Thanks to the many who have shared their wisdom during the development of this contribution to the quest for a more environmentally sustainable Whangamata catchment & community

Appendix C: Integrated catchment management

Notes of the presentation given by Marjorie van Roon, Centre for Urban Ecosystem Sustainability, Department of Planning, The University of Auckland, outlining a framework for coastal management on the Coromandel Peninsula.

Integrated Catchment Management: a framework for Coastal Management on Coromandel Peninsula

Marjorie van Roon
Centre for Urban Ecosystem Sustainability
Planning Department, University of Auckland

In April 2004 TCDC ran a TOUR AND RETREAT on Mercury Bay

Peninsula-wide Environmental Issues discussed at the Mercury Bay workshop were:

- Maintaining and enhancing the Peninsula's natural environment
- Managing the impact of natural hazards on the district and its communities
- District's biodiversity is going backwards?
- Moving to "Loving the Coromandel" - environmental action plans?
- What is appropriate development?
- What form of 'urban' development do we want?
  - Ambience within our 'urban' environments

We might address some of these Peninsula-wide issues by looking in particular at :

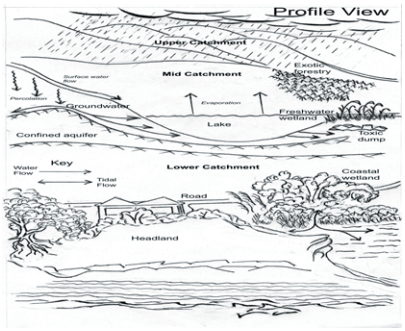
Integrated Catchment Management (ICM)

Using catchment boundaries for both human and ecological management purposes provides for integration and reduces complexity. Many of the problems facing Coromandel Peninsula residents are the result of water cycle processes in catchments e.g. flooding, sewage or sediment runoff to harbours, mangrove proliferation.

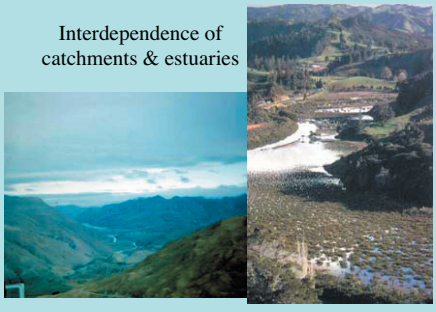
Secondarily look at adoption of:

'Low Impact Design and Development' in both urban (LIUDD) and rural-residential (LIRRDD) settings - using a catchment framework.

WATER CYCLE



Interdependence of catchments & estuaries



Coromandel township catchment

In the old parts of Coromandel streets are narrower and more natural

There are no curbs and verges naturally absorb stormwater

New parts of Coromandel have curbs, stormwater pipes and sometimes - wet carpets on the drive

The retirement village is built on the floodplain

The site of the sewage treatment plant gets flooded

Development of Catchment Management Plans
Phase one: identifying the issues

Catchment management plans may be presented as regional plans or structure plans under the RMA or alternatively held & used informally by the community. The following process could be carried out either by or with the resident community of the catchment.

- Define your catchment boundary.
- Describe the natural characteristics & human modifications of your catchment e.g. hydrology, soils, biology, habitats, water quality, areas of cultural or spiritual value, land uses, water uses, resource consents, reserves, bush covenants, water supply & sewage systems.
- Identify the conflicts and impairments, which limit both human uses and ecosystem function within your catchment e.g. conflicts between activities that compete for a single resource like stream water. There are also likely to be impairments (e.g. stream pollution by cattle) which prevent a desired level of use of a resource (e.g. high cattle stocking rate on land) or attainment of a healthy ecosystem condition or recreational quality.
- Identify the causes of these conflicts and impairments. This enables you to:
- Describe the problems/ issues that you wish to address in your Catchment Management Plan and what you are trying to achieve by solving these problems

Development of Catchment Management Plans
Phase two: getting action

- Describe possible solutions to the problems/issues.
- Identify what constraints limit actions to resolve problems/issues eg. cost, time, difficulty, lack of community support etc.
- Create a list of actions, which you recommend be carried out within your catchment.
- Prioritise the recommended actions – which actions are most practical and productive, and can be initiated immediately? Which give the best returns for their cost and effort?
- Recommend suitable indicators to monitor to demonstrate whether your actions produced the results you are seeking to achieve for the resource.
- Monitoring results feed back into future updates of your Catchment Management Plan.

Whangamata's catchment management planning

- Whangamata Community Plan identified issues
- Primary issues that are all driven by catchment water cycle processes: harbour modification, harbour sedimentation & mangrove proliferation, farm runoff, sewage effluent runoff, potential for forest felling effects.
- All of these issues need to be addressed at source using a catchment management model.

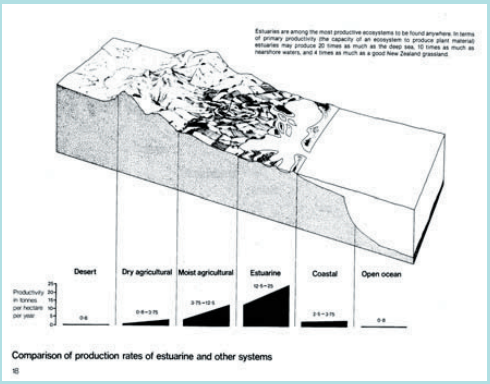
Some other achievements & anticipated actions by Whangamata community

- Water quality tested & reported - primary sources of contaminants creating problems in harbour known by subcatchments.
- Action on these issues already targeted.
- Sewage treatment upgrade - resource consent 2006
- Riparian planting in pastoral Wentworth catchment.
- Recognition that in long-term mangrove spread needs to be controlled through catchment & harbour management not removal.

Mangroves

- Keystone native species of productive estuarine ecosystem: provide nutrients & habitat for fish & food of fish.
- Mangroves produce 6 - 8 tonnes/ha/year organic matter*
- Trap sediments from the land that otherwise deposit in channels
- Community 'tug of war' between mangrove protection (for productivity) & destruction (for beaches)
- Perceived problem not solved by treating the symptoms in harbours rather than catchment causes -erosion & loss of fresh water wetlands in lower catchment areas.
- Sedimentation key driver of mangrove spread by raising seabed & changing harbour sands to muds.

*Saenger & Snedaker, 1993; Park. S., 2004 -Aspects of mangrove distribution & abundance in Tauranga Harbour. Env.BoP publication. P11.



Comparison of production rates of estuarine and other systems

Ecosystem products/services valued

- Estuaries @ NZ$40,026/ha/year
- Open Marine @NZ$423/ha/year
- Agricultural @ NZ$1029/ha/year

- Values from Patterson & Cole (1997) "Valuation of N.Z. Biodiversity" Massey University

Possible support for good work to date in Whangamata through:

- Preventing (or reversing) changes to the harbour that reduce tidal exchange volume
- Preventing loss of forest in the catchment at the end of forest rotation, and investigating the feasibility of harvesting techniques that minimise clear felling.
- Learning from other locations with similar problems
  **changes to pastoral practices in Raglan/Whaingaroa*
  **sustainable forestry practices - Tane's Tree Trust*
  **marinas built in locations where little reclamation or dredging is necessary - Bayswater Marina*
- Peak holiday population to pay part-cost of sewage treatment & water supply - through water charges?
- Low Impact Design and Development uptake.

User pays for holiday makers

- Sewage treatment, water supply & road costs greatly increased by 10X increase in holiday population.
- User pays necessary; need to capture increase in population in private houses, motels & campgrounds.
- Consider collection through metered water supply. Flat charge for water use 46 weeks of year, ??X water charge for holiday period - use $s for water, sewage and road upgrades.

Low Impact Design and Development: why do we need it for our coastal catchments?

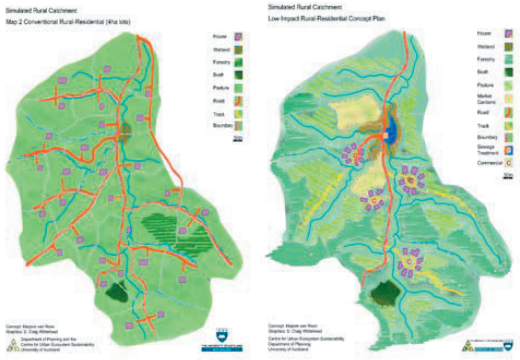
- Disruption of the water cycle
- Damage to soils
- Flooding and pollution of waterways by stormwater contaminants
- Water shortages and/or high costs of delivering reticulated water supply
- Pollution from sewage effluents & costs of sewage servicing
- Loss of biodiversity and landscape quality
- High levels of consumption of water, energy & materials
- Need for sustainability of our cities, towns & periurban areas.

What is LIUDD and how can it help Coromandel Peninsula settlements?

- An integrated urban design & development process at neighbourhood-to-catchment scales
- focused primarily on integrated land & water use
- aims to avoid adverse effects of conventional urban & rural-residential development
- protects aquatic & terrestrial ecological integrity while allowing urbanisation at all densities
- May incorporate water recycling facilitated by the efficient interfacing of urban water supply, wastewater treatment and stormwater drainage systems

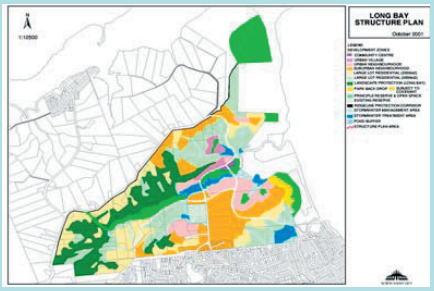
LIDD should begin at rural -residential stage of subdivision using the catchment as a design & management unit

- Landscape often degraded by pastoral use.
- In the past there has been no improvement in ecosystems & landscapes from rural to rural-residential
- Don't lose the opportunity to protect ecosystems typically further damaged by geometric 4ha carve-up
- Good design at RR stage reduces likelihood of landscape & ecological destruction at transition to urban
- This is an opportunity to improve the quality of rural-residential lifestyle & environment



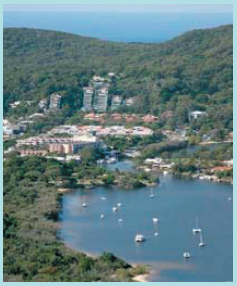
Map 1 shows a traditional or conventional way of rural-residential subdivision into 4 ha blocks. This subdivision shows little consideration for the topography, streams, wetlands & bush remnants. The number of roads is greatly increased to service the many houses. The construction of roads and houses involves earthworks sometimes in unsuitable steep or streamside locations with soil washing off into streams, lakes or harbours. Steep hillsides, highly visible ridgelines, wetlands, streams & bush receive little protection.
Map 2 shows the catchment as it could be subdivided - shaped to fit the topography. The stream corridor is protected & replanted to filter out sediment & contaminants that would otherwise flow into the stream during rainfall periods. The stream corridor might be made wide enough to accommodate paths for bicycles, horses and pedestrians. Wetlands & existing areas of bush would be protected & possibly extended & restored. Ideally steep land, headlands and ridgelines would be used for sustainable forms of forestry rather than for pasture, cropping or housing thereby protecting them from erosion & preserving rural views. Rural blocks for horticulture, pasture or additional forestry could occupy the less-steep land between the steep forestry blocks & stream corridors. Provided they are not part of the flood plain, these might be the least-impact areas for later urban intensification if deemed desirable. If houses are clustered fewer access roads are needed, sewage & water servicing is easier. Stormwater would be treated in rain gardens or swales instead of being piped to waterways. Residents might own single or multiple lots in the catchment. House clusters located at the intersection of several converging agricultural blocks would provide direct access for residents to adjacent blocks.

LIUDD example of good practice: Long Bay, North Shore City



Noosa 2003

(Source: Thames Coromandel District Council 2004)

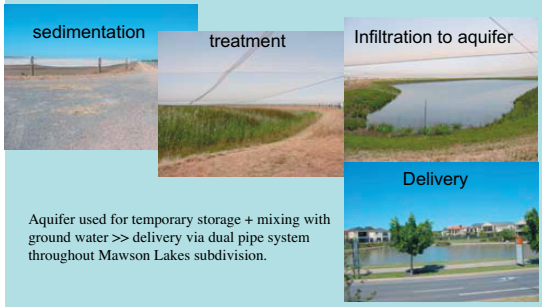


Example of good design: 3 waters management - Aurora, Melbourne

- Expected population 25,000
- Stormwater >>biofiltration strips
- Sewage >>onsite plant with effluent recycled for secondary dual water supply -Class A water. No effluent contribution to Port Phillip Bay
- Rainwater from roofs to hot water systems
- 70% reduction in potable water demand
- Other features include energy efficient construction, public transport, cycleways, habitat protection & repair

Techniques to reduce stormwater or sewage contaminants in waterways & reduce demand for potable water Parafields and Mawson Lakes, Adelaide

Stormwater collected from large residential catchment is treated in 3 ponds



Aquifer used for temporary storage + mixing with ground water >> delivery via dual pipe system throughout Mawson Lakes subdivision.

LIUDD Challenge

- New Developments: To ensure, that when a catchment is developed, aquatic & terrestrial ecosystem health improves regardless of population density
- Old Urban Areas: To refurbish existing urban areas over a long time period during redevelopment of individual lots & infrastructure replacement or upgrading, to ensure a gradual transition towards ecological functionality and sustainability

What can LIUDD & LIRRDD do for the Peninsula

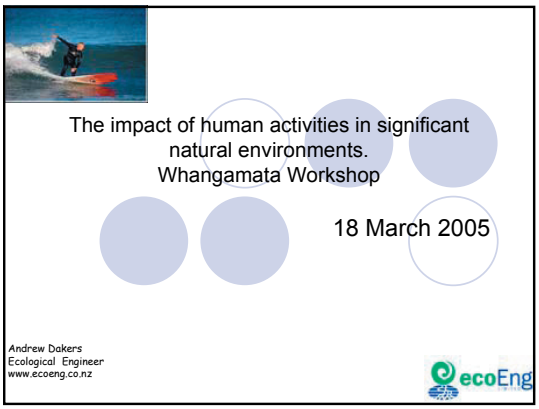
- Provide an alternative approach to coastal development
- Reduce sewage & stormwater contaminants in streams, groundwater and harbours
- Make efficient use of available water supply resources
- Improve amenity, biodiversity and natural character of the coastline
- Restore degraded pastoral landscapes during rural-residential development

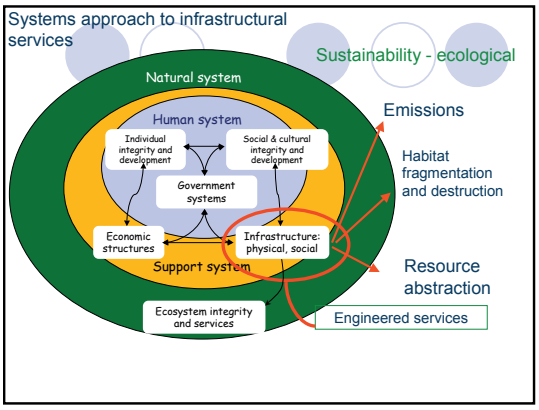
For the long-term on the Peninsula

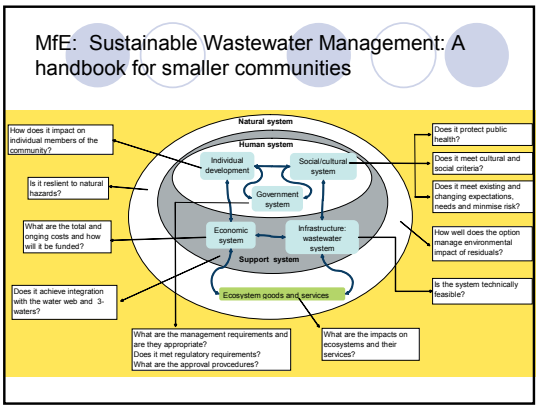
- Ensure that decisions on the location of all new uses consider catchment dynamics
- Use opportunities provided by infrastructure upgrading or neighbourhood revitalisation to optimise catchment processes (relocate or redesign)
- Ensure forest continues to dominate catchment land use.
- Take advantage of Low Impact Design and Development lessons from elsewhere

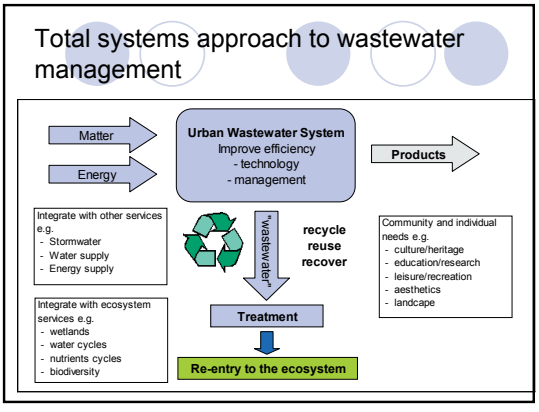
Appendix D: The impact of human activities in significant natural environments

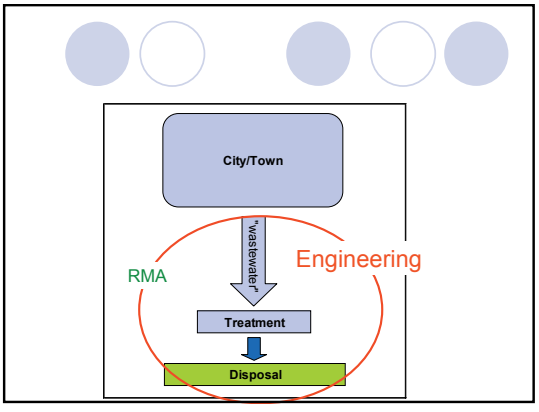
Notes of the presentation given by Andrew Dakers, Ecological and Agricultural Engineering Consultant.











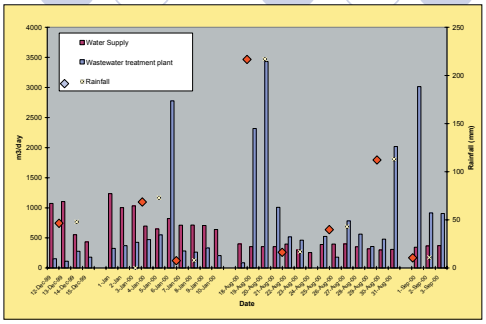
Recent research - Sustainability in tourism infrastructural issues

- Efficient use of resources e.g. water, nutrients, energy, mineral and biological resources
- Respect for local ecosystem – care with emissions and habitat fragmentation.
- Levels of implementation – infrastructure design planning, design and management
- User - demand management:
  - Providing the incentives
  - Sending the appropriate signals

3 small towns: snapshot studies

- Akaroa, Hanmer and Kaikoura…..

Akaroa – effect of rainfall in causing stormwater infiltration

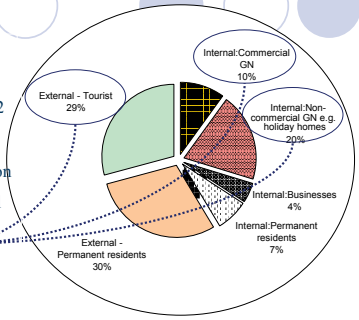


Akaroa: Peak sector water demand

Averaged monthly water demand

Aug 99 to Aug 02 mean monthly guest nights water consumption

- average annual tourist demand is 8.6%



Heavy water users and wastewater producers

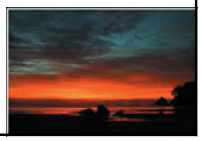
Public toilets	Kaikoura m3/day	Hanmer m3/day
Mean	16.31	15.40
SD	2.06	8.76

Café	Kaikoura m3/day	Hanmer m3/day
Mean	1.13	0.81
SD	0.19	0.22

Café with public urinal attached	m3/day
Mean	12.20
SD	1.98

Risk assessment – systematic approach involving the community

Likelihood	Consequences				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	Undesirable	Unacceptable	Unacceptable
Likely	Low	Medium	Undesirable	Undesirable	Unacceptable
Possible	Low	Low	Medium	Undesirable	Undesirable
Unlikely	Very low	Low	Low	Medium	Undesirable
Rare	Very low	Very low	Low	Medium	Medium



Risk assessment – systematic approach involving the community

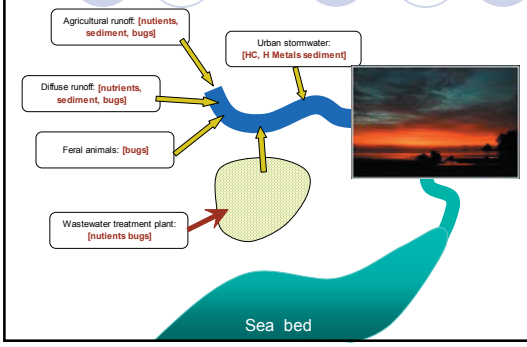
Description of the risks	Assessment of the risks	Risk grade
Contamination of ground water used as drinking water	• Likelihood is almost certain. • Consequence is major.	Unacceptable
Contamination of rainwater used as drinking water	• Likelihood is almost certain. • Consequence is major.	Unacceptable
Contamination of water delivered to the community and used for drinking water	• Likelihood is possible. • Consequence is major.	Undesirable
Not enough water available	• Likelihood is unlikely. • Consequence is major.	Medium
Inadequate water available for fire fighting	• Likelihood is unlikely. • Consequence is major.	Medium
On-site wastewater system: public health risk (excluding risks to bore water supplies)	• Likelihood is possible. • Consequence is moderate.	Medium
On-site wastewater system detrimental impact on local ecosystem.	• Likelihood is unlikely. • Consequence is moderate.	Low

How are human activities impacting on the Whangamata ecosystem?

The hydrological catchment for the Whanhgamata Harbour
- Natural features
- "Engineered" features

- Emissions
- Habitat fragmentation/destruction
- Resource abstraction

A complex interconnected system



Vant (2001)

Table 1: Land-cover in the catchment of Whangamata Harbour in 1996. Areas in km^2. Source: Terralink (1996).

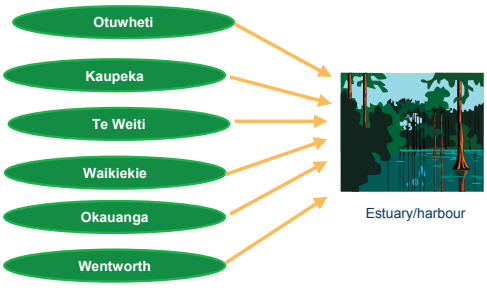
Sub-catchment	Indigenous forest and shrubland	Planted forest	Pasture	Other*	Total
Wentworth	16.37	1.84	4.90	0.67	23.8
Otuwheti	0.81	7.18	0.80	–	8.8
Waikiekie	1.77	3.49	0.60	0.09	5.9
Te Weiti	0.26	1.31	0.33	<0.01	1.9
Okauanga	0.25	0.14	0.49	–	0.9
Kaupeka	–	0.78	<0.01	–	0.8
Un-monitored	0.68	4.42	1.56	0.52	7.2
Total	**20.1**	**19.2**	**8.7**	**1.3**	**49.3**

*urban areas and inland water

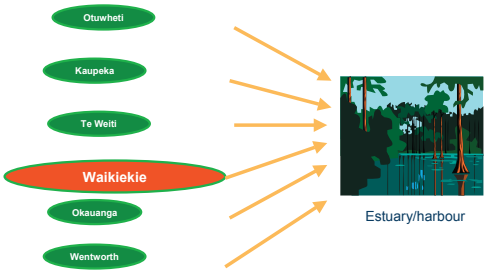
Key issues

- Whangamata – catchment draining to a ecological and culturally sensitive marine ecosystem.
- Seasonal peak – 4500 people increasing to 50,000 in the summer.
- Recognition of the interests of tangata whenua
- Wastewater treatment plant and irrigation – capacity and performance.
- Stormwater management – quantity and quality.
- Diffuse run-off: agriculture, forestry, urban stormwater.
- Local Government capacity.
- Method of monitoring.
- Appropriate community process in decision making.
- Changing town character – retirees and absentee ratepayers.
- Ensuring continuing effectiveness of the community plan.

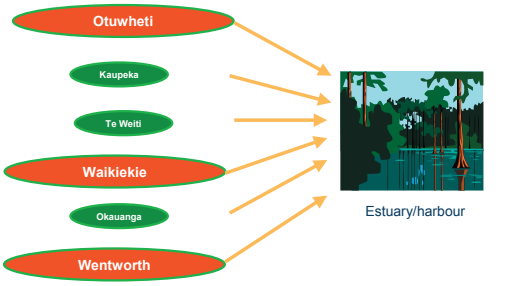
Catchments



Nitrates



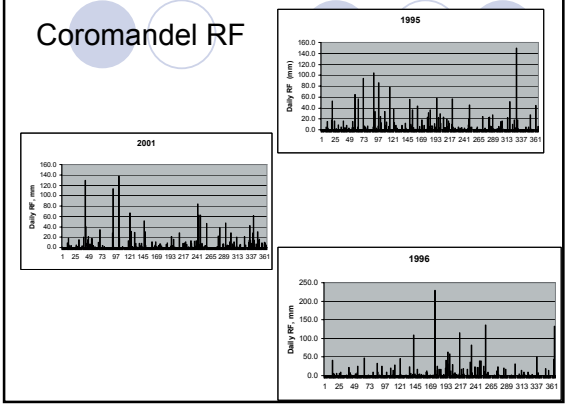
Bacteria



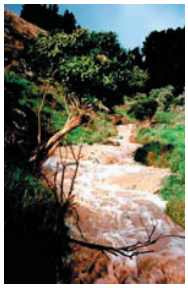
Key findings (EW, Vant 2000 and 2001 reports

- Wentworth sub-catchment main source of contaminants to the harbour.
- Waikiekie sub-catchment disproportionately high contributor of bugs and nitrates.
- Significant first-flush contaminant loads
- Unexplained peaks from smaller catchments – feral animals?
- Stormwater?
- Report suggests that the largely pastoral area downstream in the Wentworth sub-catchment contributed most of the turbidity observed at the lower end of the river, and at times contributed much of the loads of the other contaminants.

Coromandel RF



Highflow stormwater events carry debris and sediment

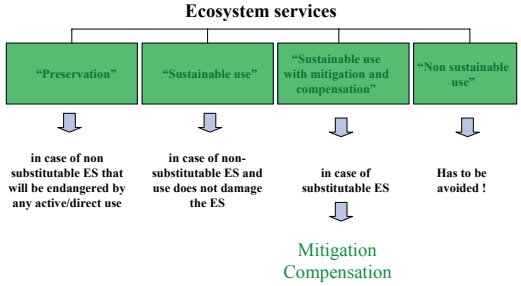


Various control techniques, urban and rural:

- Sedimentation basins, traps and filters – large ponds, wetlands.
- Permeable swales
- Debris traps
- Riparian management

Ecosystem services management

- **How do we choose the right approach ?**



Ecosystem services management

- Procedure for "Sustainability Use and "Sustainable use with mitigation and compensation"
  - Identify ecosystem services
  - Identify impact of use (link to integrated assessment)
  - Identify possible mitigation or compensation strategies
  - Build model to assess strategies (link to integrated modeling)
  - Implementation
  - Identify indicators for impact and success - monitoring plan (Integrated assessment)
  - Adaptive management
- Mitigation means: Impact on ES should be minimized
- Compensation means: Substitution of ES that are lost (and cannot be compensated)

Asking the key questions

How to ensure effective communication and understanding between technical people and local people – marry local knowledge with technical thinkers and innovation
What are the current risks? What are the future risks? Assess likelihood and consequences.
What are the mitigation options – engineering and management?
What are some useful tools – ICM, stakeholder platforms, tourism toolkit…….
Can the **problem** be turned in a resource and/or opportunity.

Asking the key questions

Has a there been a systematic assessment of the benefits of demand management options?
Are funding and charging structures appropriate? Are their better options?