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# **Future of Pest Management**

## **Improving collective action and building behaviours for future success**

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**Working Paper 4**

**Final report of Workstream F Working Group**

**Compiled by Wren Green**

**February 2010**

## **I Purpose**

This paper identifies both broad and specific initiatives that would improve collective action in pest management at national, regional and local levels. It proposes changes at each of these levels to achieve more effective collective action and support behaviours for future success in pest management. It is a working paper of the Future of Pest Management project which was charged with identifying proposed improvements to pest management systems in New Zealand to fit them for the challenges of the next twenty five years. This paper is one input into the preparation of a national plan of action which will set out the proposals for improvement.

The New Zealand Biosecurity Central Regional Forum (BCR) commissioned MAF Biosecurity to manage the work on behalf of the BCR. The paper collects together the analysis of a cross sectoral working group. It does not represent the formal policy views of any of the agencies, research organisations nor sectors involved.

## **II Summary of proposals**

The working group has recommended that:

- a) Establishing and maintaining strong relationships between and within different levels of the system is central to the future success of collective action for pest management. Noting that strong relationships are characterised by a high level of trust, cooperation and commitment between the parties.
- b) That national and regional levels of government involved in pest management report annually on the effectiveness of their engagement with organisations, Maori and industry in pest management initiatives.
- c) Further work is undertaken to develop relevant measures for reporting on the benefits and effectiveness of agency engagements.
- d) Further coordination is developed between agencies managing funds that support pest management, through an inter-agency working group, so as to (a) assist organisations; (b) make the funding more effective.
- e) The Government Industry Agreement concept would be an appropriate way to involve industry in pest management and coordination between the GIA and FOPM projects should be established.

- f) Regional forums play a key networking role in sustaining and improving collective actions by organisations and that all regional councils be encouraged to establish and sustain such forums in their regions.
- g) Regional coordinators provide expertise that helps to sustain groups and relationships between organisations within regions. Given the benefits of this role the objective of establishing regional coordinators in all regions in a cost-effective way is supported.
- h) Funding criteria for relevant funds be amended to allow grants to include a level of administrative support to organisations.
- i) The mandate of the 'toolbox manager' proposed in work stream F is extended to include the provision of information for the public, landowners and organisations beyond a focus on physical tools and to include tools specifically related to collective action aspects of pest management.

### III Discussion

#### Background

*“Public awareness and behaviour, participation and support [are] fundamental to effective pest management. Ultimately, central and local government [are] accountable to national and local communities.”*

In addition to this recent statement<sup>1</sup> there are other acknowledgements of the importance of support by New Zealand society for successful pest management, whether individually or through diverse organisations and collective action. References to engaging public support can be found in the Biosecurity Strategy, Biodiversity Strategy and in more detail in the aforementioned BCR paper (Appendix 1). The importance of public engagement and involvement also feature in reports concerning implementation of the Biosecurity Science Strategy and the report for this Project providing tangata whenua input.<sup>2</sup> Lead agencies such as MAFBNZ and DOC repeatedly emphasise that they cannot manage pests alone, that partnerships with industry, local government and others are essential for pest management. The current initiative to establish a Government-Industry Agreement (GIA) is an example of MAFBNZ seeking to engage major productive sectors to improve readiness and response.

Aside from government, non-governmental initiatives in pest control (both of species and at places) are many and varied. They range from local volunteer

<sup>1</sup> Paper to, and accepted by the Biosecurity Central Regional Government Forum (25/5/09) on the pest management 'outcomes, roles and accountabilities' framework.

<sup>2</sup> Tangata whenua focus group terms of reference: key issues for the future of pest management. Steven Wilson, Maximize Consultancy. September 2009.

groups, to iwi organisations, farmer groups, or sophisticated industry-coordinated programmes. Organisations such as Weedbusters and NZ Landcare Trust (amongst others) operate locally and regionally, while regional councils and other agencies of government contribute, to varying degrees, to many of these initiatives, via financial support, information or other assistance. Much of this activity is local, unrecorded, and therefore under-reported. What is not measured is often not noticed, nor do we adequately know the effectiveness and value of these initiatives.

Drivers for engaging in pest management vary from the utilitarian and purely economic, to those centered on pride in a local place, national identity, or a growing desire to protect threatened wildlife and native plants from predators or diseases. Tangata whenua have growing interests in economic aspects of pest management (e.g. with expanding forestry and agricultural resources) as well as long-standing cultural commitments to protect taonga species and places.

In summary, pest management is a complex adaptive system whose players have a myriad of motivations and incentives, as well as different amounts of power and influence. Cooperation is not guaranteed and cannot be assumed. In addition, the pest management problems and associated risks are rarely constant for long. Since change and uncertainty are 'normal', pest management needs to be adaptable and it is therefore critical to ensure that its systems are always open to adaptation and learning.

This paper identifies broad initiatives that can strengthen and sustain collective action. While some agencies are already well engaged the need is for a more consistent and effective response throughout the country. The paper also proposes specific options for improving the effectiveness of new or existing tools to enable 'clubs' to be more effective in their pest management roles.

### **Future State references to collective action**

Working Paper 1 (Consolidated context for work streams, 4 February 2010) details five goals (in Figure 4), supported by 33 objectives. Two goals explicitly address collective action or public engagement in biosecurity:

- *B. New Zealanders are active, informed and supportive participants in the biosecurity system.* (It is strongly recommended that this be amended to read: "New Zealanders are active, informed, supportive *and supported*<sup>3</sup> participants in the biosecurity system.")
- *C. Pest management participants have strong relationships and work together effectively where this is needed to best achieve outcomes.*
  - i. Strong relationships are established and maintained.

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<sup>3</sup> Adding "and supported" recognises the responsibility of government agencies to provide information and other assistance to improve the understanding and support by the public for pest management.

- ii. A culture of trust and cooperation supports collective action.
- iii. Effort is coordinated and duplication is avoided.
- iv. Pest management participants share perspectives and expertise.
- v. People have access to information they need to be successful in pest management.

The other goals also include several objectives that refer to collective action or behavioural change. These include:

- Collective action is led by those affected. (Goal A)
- Maori are engaged in a meaningful way. (A)
- Decisions are made by those best placed to do so. (D)
- Decision making includes those who are affected. (D)
- The system supports continuous improvement, learning and innovation. (E)
- The system is flexible and responsive. (E)

### **What Chief Executives have agreed to date**

BCR has agreed in principle to the pest management 'outcomes, roles and accountabilities' framework that includes the goals and objectives relating to collective actions that are detailed above. It has also agreed with the broad directions emerging in the Project (paper of 11/11/09), including:

- Maintaining stakeholders' and iwi commitment to being involved in pest management.
- Providing for more collaborative partnerships and collective action that deliver "New Zealand Inc" outcomes.
- Developing a pest management system that builds trust and shared commitment to success.

### **What is the issue?**

Probably more so than other work streams the issues concerning collective action and how to improve it involve a broad mix of agency-level changes as well as specific, concrete initiatives. If specific initiatives are successful they are likely to be built on a good understanding of the underlying social processes and how they work.<sup>4</sup> This 'substrate' of social processes influences the larger environment within which Stream B 'roles and accountabilities' will operate. Building behaviours for future success should start by identifying and using collaborative approaches that increase commitment and avoid building opposition and

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<sup>4</sup> Supporting collective action in pest management – aims and frameworks. W. Allen and C. Horn. 2009. Landcare Research Contract Report: LC0910/031

resentment. The scale and costs of government intervention in pest management are sufficient incentives to justify resources that effectively engage the public.

The reports by Enfocus and LECG identified problems and barriers to collective action in an economic context such as free rider behaviour, insufficient incentives to explore collective (club) actions, as well as legislative shortcomings that were felt to account for the limited use made of the Biosecurity Act (BSA) by clubs. The working group identified wider issues such as the shortcomings in how agencies manage relationships, consultation and engagement practices that diminish trust and support. The working group discussed how to improve the social processes and reduce the barriers to collective action that operate not only at the club level, but also at agency levels, both regionally and nationally. Members were also keen to identify how to sustain effective groups into the future and what actions may assist this. Issues and solutions were analysed at three levels or scales, namely:

- central government/policy/strategy
- regional/sectoral/operational
- publics/landowners.

Since the term ‘clubs’ applies to organisations that vary widely with respect to their power, responsibilities and effectiveness,<sup>5</sup> problems and solutions relating to clubs can also be addressed within these three levels. Primary industry clubs are a specific group of clubs whose positive commitment to pest management is critical to biosecurity objectives.

### **Level 1: Central government/policy/strategy**

#### *Issues at the centre*

The Work Stream B paper identifies issues related to lack of accountability, few mandatory roles and responsibilities based on a presumption “that those with an interest to act will do so, and therefore there is no need to require action by any particular individual.” In developing the concept of a ‘gatekeeper role’ (proposed to be MAF) to “resolve uncertainty in pest management responsibilities” (p7) the Stream B paper explores implementation options for the gatekeeper role. Improving roles and accountabilities are key issues, as are the associated governance arrangements that go with them.

The literature on trends in governance indicates that it is important to develop and invest in governance arrangements that can meet the following challenges: ensure accountability and legitimacy; match governance to the appropriate

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<sup>5</sup> ‘Clubs’ include national sectoral organisations (e.g. Animal Health Board, forestry or kiwifruit industries), farmer self-help possum control groups, or a local group clearing weeds from a public reserve. Clubs can be voluntary or highly structured and funded, with widely different objectives and values.

scales; be adaptive, flexible and encourage learning.<sup>6</sup> The proposal in the Stream B paper that the gatekeeper role could be undertaken inclusively through a committee structure is consistent with the finding that “*environmental governance should involve forms of group decision making that accommodate diverse views, that networks and hybrid partnerships among state and non-state actors are needed, that shared learning is critical, and that governance should provide opportunities for adaptability and positive transformation.*”<sup>7</sup> The importance of accountability and its relationship to legitimacy in governance is elaborated in Appendix 2.

The same considerations about governance are relevant to the proposal from Work stream E for the proposed toolbox. The challenge for FOPM is not only to set up new structures and roles but to recognise that new governance arrangements require a change in thinking about who does what, along with the implications for relationships and how best to make them work.

### *Governance opportunities*

The proposed gatekeeper role and integrated toolbox provide the opportunity to set up governance models that explicitly include features that will support collective action. A key factor underlying relationships and successful collective action is trust between players. Inclusive governance models requiring joint decision-making that are open to, and encourage, new ideas from outside as well as inside, contribute to the building of trust. Proposals to concentrate new responsibilities within one agency need to recognise the associated risks of aggregating power and reducing equity in relationships with stakeholders. These can be addressed by appropriate governance models.

### *Agency-related issues*

Members of the working group identified the following issues at the central government level that reduce the effectiveness of collective action. Some of these issues may also arise at the regional level of government.

- The importance of investing in relationships and engagement is often undervalued, in part because there are no accountability measures to assess their effectiveness. This can also apply to particular obligations on the Crown as Treaty partner with respect to relationships and engagement with Maori.
- Relationships are often left ‘on hold’ between consultations, rather than being actively maintained.

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<sup>6</sup> From Government to Governance: A State-of-the-Art Review of Environmental Governance. Final Report. 2009. Rob de Loë Consulting Services, Guelph, Ontario, Canada.

<sup>7</sup> Ibid

- Poor consultation and engagement practices are more common than some agencies recognise. Consultations are often led by people without expertise in social processes. If well established relationships are not already in place, then future efforts at collaboration can be at risk from poor consultation.
- Access to tools (including information, project management skills and technical expertise) can be difficult and deters people from collective action, even when they would benefit from it.
- Institutional cultures can create perverse incentives that discourage flexibility, or efforts to “learn the way” through complex social-pest problems. This can also apply to efforts to build good relationships between agencies as well as externally of government to clubs.
- Despite efforts at cooperation, institutional structures and inflexible behaviours can make it difficult to work across ‘silos’ or use participatory, learning approaches.
- Funding streams for organisations from government are not well aligned with the scales relating to time and place requirements of pest problems.

In summary, the working group noted that a challenge for central government agencies is to question how their own institutional behaviours, structures and values are acting to strengthen or undermine collective action. In particular, collective action depends on developing trust through relationships, engagement and cooperation between central agencies, regional government and non-governmental players. Proposals for new good neighbour obligations on the Crown are likely to impose new demands on the relationships between agencies, regional government and landowners.

These points might be regarded as the “soft” aspects of improving collective action, yet they can be hard to acknowledge within organisations unless there are incentives in place to do so along with the strong leadership that is necessary to sustain organisational change.

#### *Engaging industry at a national level*

In September 2009, the Minister of Biosecurity announced a range of measures to boost biosecurity readiness and strengthen partnerships with industry. The Government-Industry Agreement concept seeks to formalise joint decision-making and cost sharing between MAFBNZ and primary industry bodies. The intent is to negotiate agreements with industry bodies (clubs) that have the mandate to represent primary producer interests. The current focus is on health and disease issues relating to plant and animal sectors with an initial focus on readiness for risk organisms that are not presently in New Zealand.

The publication<sup>8</sup> outlining the concept also states: “*Endemic [established] pests and diseases may be able to be covered under GIA in the future.*” Currently under discussion are the pros and cons of an earlier extension of GIA to include pest management, i.e. to cover post-border operations as well as pre-border. Given that NPMSs have not been the tool of choice for industries for pest management, the GIA concept may well meet this need at the national level.

This proposed extension to include pest management is a sensible and logical extension of GIA functions. The question of ‘when’ is a matter for relevant parties to assess recognising that the GIA project is relatively new; tools and processes are still under development. Maximizing these synergies between the FOPM and GIA projects would suggest the need for an oversight role at an appropriate level within MAFBNZ. However, some industries may choose to manage their pests within their own club context without government assistance; some do so now quite effectively.

Since the GIA relies on industry clubs agreeing to opt in voluntarily, the concept is not going to capture industries that refuse to manage their impacts as an exacerbator. This has not been considered by the working group, but other discussions suggest that an appropriate mechanism if government needs to compel an industry club to manage pests is probably via a pest management strategy. At the national level a Crown agency might need to be designated as the management agency, as well as proposing the strategy and managing its implementation. This is a consideration for Work Stream D to address.

### *Initiatives for central government*

#### *1. Reporting on engagement*

It is proposed that government agencies (central and regional) with pest management roles report annually on the effectiveness of their engagement with community, iwi, and industry organisations in relation to pest management initiatives. This would include measures (to be developed)<sup>9</sup> on how well agencies are engaging with communities and the benefits of that engagement. Such reports would be proxies for assessing the strength, value and effectiveness of key relationships between agencies and stakeholders, as well as with Maori as Treaty partners. A formal reporting requirement provides useful trend data and helps make relationship building part of institutional behaviour.

#### *2. Coordination of funding mechanisms*

There are several separate funds managed by different central government agencies (particularly DOC and MAF) that can be used for individual or collective actions in pest management. There are wide differences in the size of grants and requirements for use of these funds and none are solely designed for pest management objectives. To improve their effectiveness for achieving pest

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<sup>8</sup> Government-Industry Agreements. MAF Biosecurity New Zealand. December 2009.

<sup>9</sup> Refer to Appendix 3 for how engagement might be measured and reported.

outcomes and better facilitating collective actions, it is proposed that a small inter-agency working group be established to identify how existing cooperation between funding streams could be improved. The rationale for greater cooperation is: reducing duplication in reporting processes; streamlining application requirements; tying funding options more closely with the realities of pest management; making it easier to fund large projects from multiple sources of funds. (Note the link to Initiative 3 on page 11.)

### *3. Linking GIA and pest management*

The option of expanding the scope of the Government Industry Agreement work to include pest management should be kept under review at an appropriate level within MAFBNZ. The GIA concept appears to be the logical way of increasing the effectiveness and involvement of industry clubs at the national level in pest management.

## **Level 2: regional/sectoral/operational**

### *Issues at the regional level – community organisations*

In recent years there has been a dramatic increase in the number of people and groups actively engaged in biodiversity, restoration and pest management initiatives.<sup>10</sup> These collective actions have been assisted by funding (e.g. Biodiversity Condition Fund, Nga Whenua Rahui), coordinated programmes (e.g. Weedbusters) and regional government support. However, a number of barriers have been identified that are deterring people and undermining existing initiatives that are contributing to collective action. These include: limited expertise in project management, monitoring and training; shortage of information and advice; high dependence on voluntary work; high transaction costs for grant applications and administration; difficulties sharing skills and knowledge between projects, and insufficient engagement with government agencies. Free rider behaviour by group members can also discourage ongoing involvement. What has been common to successful approaches, however, is an underpinning of activities such as sharing information and social learning through various forms of collaboration.<sup>11</sup>

The barriers are compounded by a mismatch at two levels of funding options for groups. First, government funding is often for start-up activities (seed money), not ongoing management, and is therefore not necessarily aligned with the length of time required to achieve pest management objectives. Secondly, most (but not all) funds specifically exclude payments for administrative tasks, which is

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<sup>10</sup> Turning the Tide? A review of the first five years of the New Zealand Biodiversity Strategy. The synthesis report. W. Green and B. Clarkson. November 2005.

<sup>11</sup> Supporting collective action in pest management – aims and frameworks. W. Allen and C. Horn. 2009. Landcare Research Contract Report: LC0910/031

one of the core requirements, including meeting accountabilities, for received funds.

Groups have identified this list of issues as significant barriers to achieving the objectives (listed earlier from Working Paper 1) under the heading: *Pest management participants have strong relationships and work together effectively where this is needed to best achieve outcomes.*

### *Initiatives to address community barriers*

#### *1. Regional forums*

It is recommended that all regional councils be encouraged to assist collective actions by actively promoting and supporting *regional forums*.<sup>12</sup> Although several councils presently support forums others do not, or else their earlier initiatives have lost momentum. These forums have become a key network involving agencies (central and regional), iwi and community groups.<sup>13</sup> They are cost-effective opportunities to share ideas, knowledge and research findings, to reduce duplication, facilitate training opportunities and build relationships. From the experience of community and regional organisations they are the most cost-effective mechanism currently available to sustain and improve collective action at that level.

The Local Government Act provides councils with a process to follow when embarking on activities that are not their statutory responsibilities, but choose to undertake. A forum would fall into this category. If regional forums are recognised as being inherently cooperative and beneficial to all parties the urge to 'legislate' for their establishment could be avoided.

#### *2. Regional coordinators*

It is recommended that positions of regional coordinators are established in all regions in a cost-effective way. (Some already exist with split funding arrangements.) Regional coordinators are providing professional expertise in establishing collective actions, building and helping to sustain effective engagement and relationships across and between organisations. This social role is analogous to providing technical expertise in pest management methods. Coordinators help participants to work together effectively and coordinate their efforts.

#### *3. Amendments to grant funding criteria*

It is recommended that the funding criteria for certain funds, such as Biodiversity Condition fund and relevant MAF funds, be amended to allow a percentage of

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<sup>12</sup> Examples of existing forums are ones discussing: biodiversity issues, biosecurity, pest management, restoration projects, rabbit control and coastal care groups.

<sup>13</sup> Central agencies are essential participants in regional forums for these reasons – building and sustaining relationships, providing the link between regional and national issues, receiving and giving feedback on research, information and best practice topics.

the grant to be used for administrative support. This would require further analysis of needs and should be part of the brief of the proposed inter-agency working group to improve the coordination of funding mechanisms (see above). Support for administration would require evidence of the adequacy of the structure, management and effectiveness of the organisations eligible for this support. This support would remove one of the important barriers that presently leads to the breakdown of community actions, that of inadequate resourcing for often onerous administrative tasks and an over-reliance on volunteer input.

#### *Issues at the regional level - legislative*

The very limited use made of RPMSs except by regional councils was cited in the LECG and Enfocus reports as evidence that RPMSs are currently unsuitable for facilitating binding collective actions at regional level. This may be so, and the legislative shortcomings of the RPMS mechanism (cumbersome, expensive, inflexible, pest focused) have been identified and described elsewhere. However, working group members with regional expertise noted that many local pest problems are managed by individual or local groups of landowners without resorting to formal mechanisms. The extent to which these informal arrangements are effectively employed to address local or even regional problems is not known. Some group members questioned the evidence of need for greater use of mechanisms such as RPMSs citing other avenues for addressing regional issues.

#### **Managing rabbits in the Maniototo**

Concerned about a severe rabbit problem, Maniototo landholders got together and formed a pest advisory group. The outcome was a rating system to cover control costs (but not the one proposed by the regional council) and the formation in 1997 of the Maniototo Pest Management Ltd. The connections between farms meant that neighbours needed to cooperate to get effective rabbit control. Each of the 85 shareholders purchased shares (depending on property size) and pays an annual subscription. The company employs two permanent staff who are responsible for rabbit control over 250,000 hectares. The system has the confidence and therefore the full support of the community. It is run by locals, based on local knowledge and experience. Peer pressure from neighbours ensures that all landowners are involved. This is seen as essential to control rabbits across boundaries. The Company has regional council support and has developed a protocol for consultation with farmers, DOC, LINZ and forestry companies. Inspections of properties are made 6-monthly.

There are examples of clubs effectively organising to manage not only specific pest problems without using existing legislative tools, but also dealing internally with free rider issues (see box). However, notwithstanding the success of Maniototo Pest Management Ltd (due in part to its single pest, well-defined common interest aspects), the FOPM project provides the opportunity to rectify identified problems with existing legislative tools and improve their value for use by clubs.

#### *Changes to Biosecurity Act*

To better enable central and local government, as well as clubs, to use national and regional pest management strategies Work Stream D should look at options

for improving the match between these two main intervention tools and the tasks they seek to address. The Enfocus and LECG reports identify the need to:

- (a) reduce the lengthy, costly and onerous processes and obligations associated with preparing and administering NPMSs and RPMSs;
- (b) provide a distinction between what process obligations should be required of potential private sector users compared to regional councils which are already publicly accountable;
- (c) provide for greater flexibility to enable regional councils to respond more rapidly to new pest threats by changing a RPMS without undertaking a full review (as currently required);
- (d) be time and cost efficient to use (without duplicating processes already required by statute);
- (e) allow for organisations to bind each other, which extends the current focus which is about binding individuals;
- (f) expand the tools under the Biosecurity Act beyond the focus on pests to include management of sites and pathways.

Work stream members have identified another matter to improve the usefulness of the Biosecurity Act for clubs that should also be considered under Work Stream D.

- (g) make provision for more than one management agency to be able to implement a strategy. Section 84 only allows for one management agency which could be an organisation, but is usually the regional council given the suite of pests that are included. Allowing for more than one management agency provides flexibility and a potential role for a club.

Section 100 of the Biosecurity Act allows regional councils to “undertake small-scale management of unwanted organisms.” Councils have successfully used this provision to respond to pest issues that have arisen outside of an RPMS. However, there are barriers to using s100 that should be examined as to their value and need. Specifically: an organism must be declared unwanted before s100 action can be initiated; only regional councils have the mandate; there is a presumption for the need for Part 6 administrative powers. Should another party be made responsible for undertaking a small-scale management initiative that required funding, then striking a rate would need to go through the LTCCP Annual Plan process, i.e. public consultation over a 12-month timeframe. This is a Local Government Act requirement.

Addressing these issues should improve the incentives for clubs to use these strategies for national or regional objectives.

It would be appropriate for Work Stream D give these proposals further consideration.

### Level 3: Publics/landowners

An important theme running through the future state outcomes is the need for people to access the right information they need to successfully manage pests. While initiatives proposed under Level 2 (above) will benefit landowner clubs, there is also a need to improve the availability of relevant, useful information to the wider public as well as to clubs. Sometimes, adaptation for different cultural and ethnic audiences will be appropriate. Tangata whenua engagement is improved when pest management issues and practices are translated into te reo or more user-friendly media.

#### Effective communication with iwi

Following the discovery of a fan worm in the Auckland Viaduct Basin MAFBNZ sent an update to all interested parties, including Waikato-Tainui. They send clear and jargon-free updates after every major milestone in the detection and management programme. Waikato-Tainui condenses the information and sends it out to tribal practitioners. This enhances awareness and empowers tangata whenua to own the responsibility to take precautions and monitor their area. The key lessons are that (1) communicating with iwi/hapuu does not have to be hard; (2) communications are easier when relationships are established; (3) relationships need to be nurtured; (4) be aware of the limits of iwi/hapuu. Some iwi/hapuu lack the resources to get information out to their people. Support by agencies to develop this informational capacity could benefit both parties.

However, providing information is a necessary, but not sufficient action to achieve collective action and build public support to manage pests or places. *Behaviour change* mostly happens by 'doing', not reading. And 'doing' pest management often involves engagement of people and groups through the various mechanisms outlined in Level 2. A logical place for groups to access information on best practice and other pest management information would be through the tool box mechanism as proposed by Work Stream E. This would require a widening of the current brief that the toolbox only provides physical control and monitoring tools.

#### *Initiatives to assist publics, Maori and landowners*

It is recommended that a function of the 'toolbox manager' would be to provide a 'one-stop shop' for information for community and landowner groups, tangata whenua and iwi organisations that extends beyond information on physical control tools. This would include, for example, information about regional forums, on experts in technical and social disciplines, information on tools for evaluating the effectiveness of collective actions, best practice guides, etc.

## **Appendix 1. Previous recognition of the importance of public support and engagement in pest management**

### **1. Biosecurity Strategy**

Changing behaviours: That all New Zealanders, and our visitors, are encouraged to support and participate in our biosecurity. (Biosecurity Strategy, expectation 29)

Other Biosecurity Strategy references to the importance of public support are:

- Individual responsibility and contributions remain vital if we are to continue succeeding. This strategy aims to create a framework that actively encourages private individuals to play their part.
- Biosecurity is one of the most critical issues in the shaping of our country's future wellbeing, so the need for public support cannot be underestimated. The biosecurity agencies will operate more effectively if people support their goals (possibly through incentives...).

### **2. BCR Paper on pest management**

Agreed from the BCR paper on the pest management 'outcomes, roles and accountabilities' framework (25/5/09):

- A reason for government (central and/or regional) intervention in pest management includes facilitating responses by private individuals or specific groups of people.
  - Where a person or group lacks the inherent ability to be effective, government may intervene to remove barriers<sup>14</sup> in order to support good decision-making and facilitate action<sup>15</sup>.
  - Central or regional government may intervene where a party defaults on their responsibilities<sup>16</sup>.
- As part of the system outcomes on public participation – the public are active, informed and supportive participants in the biosecurity system.
  1. Awareness and behaviour – New Zealanders better understand biosecurity risks and change their behaviour to reduce those risks.

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<sup>14</sup> Barriers may include, for example: 'free rider' behaviour by group members; lack of access to the powers or tools required; capability, access to information, etc.

<sup>15</sup> Intervention will be at the request of most individual beneficiary, or members of the club (after a reasonable process of decision-making), and any significant costs covered by the individual/club.

<sup>16</sup> For example, by taking on the responsibility, or enforcing the responsibility.

2. Participation – increased participation by all New Zealanders in pest management activities.
3. Support – support, understanding and tolerance for pest management programmes and tools increase.

The version of “The Future State of Pest Management” (Working Paper 1) also makes clear the importance that needs to be attached to collective action, strong and effective relationships as part of the pest management system.

### **3. New Zealand Biodiversity Strategy**

There are similarities in the Biodiversity Strategy with its emphasis on supporting community-level actions, many of which involve pest control to achieve biosecurity outcomes.

For example of the three goals:

“Goal One: Community and individual action, responsibility and benefits

- Enhance community and individual understanding about biodiversity, and *inform, motivate and support widespread and coordinated community action* to conserve and sustainably use biodiversity; and
- Enable communities and individuals to equitably share responsibility for, and benefits from, conserving and sustainably using New Zealand’s biodiversity, including the benefits from the use of indigenous genetic resources.”

[italics added]

## **Appendix 2. Accountability and legitimacy in governance**

*“Accountability and legitimacy are core challenges in the transition from government to governance. Accountability is the acknowledgement and assumption of responsibility. Legitimacy is the approval of institutions or actors by those subject to its actions. Accountability and legitimacy of action may be defined in law. Increasingly, however, accountability and legitimacy in multi-actor and networked governance are outcomes of experience, history and trust among actors. Accountability, specifically, emerges from:*

- (1) clearly defined roles and responsibilities;*
- (2) the presence of consequences in regards to performance and effectiveness of roles and responsibilities;*
- (3) responsiveness to other actors;*
- (4) sets of checks and balances and transparency; and*
- (5) the free flow of information and open systems of communication.*

*In a formal governance arrangement, legitimacy emerges with the consent (often tacit) of those being ruled. However, in multi-actor or networked models of governance, where responsibility and accountability are dispersed among a variety of actors (local, regional, private, public), legitimacy may often be non-formal (i.e., not defined in law). Legitimacy achieved through relationships of trust and equity is recognized as valid and relevant in confronting environmental dilemmas.*

*The introduction of multiple actors in the governing process raises new issues with regards to accountability and legitimacy.”*

Extract from: From Government to Governance: A State-of-the-Art Review of Environmental Governance. Final Report. Rob de Loë Consulting Services, Guelph, Ontario, Canada. (page 21)  
May 22, 2009

### **Appendix 3. Option for measuring and reporting on agency engagement with community, iwi, and industry organisations**

Measurement and reporting of:

#### **1. How well agencies are engaging with communities**

##### Suggested measures

Quantitative:

- no of agency/community or agency/agency collaborative pest management projects.
- investment by agencies in collaborative project: money and other resources (e.g. staff support/FTE).

Qualitative:

- surveys of participants in collective action projects to measure quality of engagement.
- wider community survey to identify any barriers to collective action with agencies e.g. lack of awareness of assistance available, lack of access to information.

#### **2. Measuring the benefits of that engagement**

##### Suggested measures

Quantitative:

- return on investment for agencies input into collective action e.g. volunteer hours and sponsorship in a community project.
- benefits through outcomes for pest management.

Qualitative:

- community support and awareness of agency activities.
- strength of relationships built through collective action.

These measures could be reported as part of quadruple bottom line reporting.