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Biosecurity: improving detection by enlisting community detectives
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Progress Report
Summary
This progress report presents preliminary findings on the first of three 'science cafes'. The goal of the cafe was to engage community experts in discussions about volunteer biosecurity detection and monitoring (aka 'community detectives'). Findings suggest that government officers, scientists, retirees, tradespeople, and representatives from conservation, Landcare and wildlife groups are interested, enthusiastic, knowledgeable and confident about biosecurity monitoring and detection. A significant opportunity to develop a community detectives network to capitalise on this research now exists.

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Biosecurity: Improving detection by enlisting community detectives:
The Cairns Cafe Report

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Progress Report

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Disclaimer

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Executive Summary

Science cafes engage

The cafe was very well attended, with much interest and enthusiasm exhibited by participants throughout the proceedings and in the follow-up interviews. Individuals who lived locally were particularly attracted to attend. This suggests the science cafe was a potentially useful means of engagement.

Weedy concerns

Participants had a long list of weed, and to a lesser extent, pest and disease concerns regarded as being of particular threat to agricultural and conservation environments.

Knowledgeable and confident

Participants assessed themselves as knowledgeable and confident to detect and report identified biosecurity concerns.

Community endorsement

Participants appeared enthusiastic about the idea of becoming a community detective and were keen that some volunteer detection activity might be generated from this work.

Action not talk

Participants were more interested in how to involve the community in volunteer monitoring than debating whether or not it was an appropriate community role.

Some participants indicated that they expected the project would establish a community detectives network. Acting now to capitalise on this opportunity would be ideal in terms of managing community expectations.

Significant contribution

In the current context of decreasing resources for biosecurity surveillance and increasing risks of biosecurity incursions, volunteer biosecurity detection and monitoring is well placed to make a significant contribution to Australian agriculture and environment portfolios.

Motivating factors

The potential to reduce personal disadvantage, along with a sense of ownership of the volunteer process, taking pride in knowing and reading the landscape, and assisting in protecting and conserving the natural beauty of the landscape were all mentioned as key motivators for volunteering.

Response time for potential incursions	Perceived slow or poor government response to reports of possible biosecurity threats was mentioned as a source of discouragement for volunteers.

Background and project aims

The Community Detectives project examines the potential for 'science cafes' to engage community experts in discussions about biosecurity detection and monitoring. In particular, the project is interested in gauging responses to the proposition of volunteer biosecurity detection ('community detectives'), and the compilation of views on how this task might be undertaken and coordinated. Biosecurity concerns are confined to those that are both detectable and considered to be of interest to this selected community, focusing on pests, weeds and diseases and their present and potential impacts on agricultural, conservation and urban environments in Australia. A 'community detective' is defined as a person who engages in any investigative activities concerned with biosecurity, encompassing research, communication and detection and reporting of pests, weeds and diseases. It includes individuals who are professionally interested and voluntarily engaged in biosecurity. Targeted community experts include farmers, scientists, retirees, naturalists, government officers, bushwalkers, and members of volunteer, conservation, Landcare, gardening and wildlife groups. A more detailed description and rationale behind the project is provided in Annex A.

The aims of the project are to:

1. explore the potential for 'science cafes to engage community experts in discussions about biosecurity detection;
2. identify potential biosecurity volunteers (aka 'community detectives');
3. identify how a community detective network might be implemented.

The project sits within a broader goal of increasing detection of biosecurity threats. The project represents an initial step toward this goal however it does not aim to create a community detectives program within this project's reporting period. Rather, the project focuses on exploring engagement in biosecurity detection and planning how this activity might be potentially undertaken.

This report presents some preliminary findings on the first science cafe held in Cairns in May of this year. As there are three such planned cafes, this summary of findings constitutes a progress report thus far and is not representative of the planned final report at the termination of the project. Results presented here are specific to the participants and the setting and are more suggestive than conclusive as is appropriate at this early stage in the project's life. Targeted 'community 'experts' included government officers, scientists, retirees, tradespeople, and several individuals belonging to conservation, Landcare, or wildlife groups. Biosecurity is defined as the protection of agricultural, conservation, urban and other environments in Australia from the negative effects of pests, weeds and diseases.

The report firstly presents a brief outline of the methods, to then provide an overview of the cafe proceedings, followed by a presentation of the key findings. Findings are organised under a set of questions, drawn from a wider set of project research questions. Annexes A-I present the data and more detailed information about the project rationale, methods and the participants.

The key questions are:

1. Are science cafes potentially useful in engaging community experts in discussions about biosecurity detection?

2. What are cafe participants' key biosecurity concerns and how do they regard their capacity to detect and report these concerns?

3. Is volunteer biosecurity monitoring an appropriate role for community experts, and if so who might be interested in becoming a community detective?

4. What are some motivations for and barriers to volunteering as a community detective?

5. How might a community detectives network be implemented?

Methods

Data collection methods included participant observation of the cafe, a pre-cafe survey and post-cafe individual interviews (see Annex A for a description of each of these). Survey data was entered into a spreadsheet and graphics generated. Audio recordings were made as well as notes taken of the cafe and the post-cafe interviews. Audio recordings and notes were subsequently reviewed and further notes made. Findings were then synthesised from all these sources of information. Cited quotes are taken verbatim from the recordings. As agreed with cafe participants, personal details of participants remain confidential (excepting speakers and the facilitator who gave permission to advertise their names on the cafe invitation, see Annex H). A number of opinion polls were also held during the cafe proceedings using 'Keepad Interactive Turningpoint' software (www.keepad.com). This product (herein called 'Turningpoint') combines individual electronic keypads with a centralised electronic display enabling instant surveys or polls to be undertaken. These questions were intended as a means to engage the audience as well as to assess participant response. Several focus groups were planned to be held following the cafe however these did not eventuate due to insufficient registration of interest. Instead, seven individual interviews in the three days following the cafe were conducted (see Annex B for a list of interviewees' organisational affiliation). A semi-structured interview format was used covering all five research questions listed above.

Introducing the Cairns cafe

The cafe was held at the Cairns Yacht Club, Cairns on the 20th May, 2008 from 7:00 to 9:30 pm. The event was termed a 'biosecurity forum' rather than a 'science cafe' as the term 'science' was considered too narrow to adequately communicate the topic and the term 'cafe' too urban for the regional setting. The event is referred to as a cafe through-out the report however to avoid confusion. The Cairns Yacht Club was selected as it provided an ideal informal, relaxed and convivial setting. The regional location and timing of the cafe was selected to coincide with the 16th Australian Weeds Conference (www.16awc.com.au), providing an opportune pool of potential participants and speakers from academic and government sectors. Cairns also represented a good starting location for several other reasons. The region is relatively vulnerable to biosecurity threats as a consequence of a several factors, notably as a major trading port, representing a potential entry point for range of weeds, pests and diseases, the presence of a number of important agricultural industries (e.g. sugarcane, bananas), and the presence of two high profile large conservation areas, the Wet Tropics World Heritage Area and the Great Barrier Reef Marine Park. There is also much community interest and activity in biosecurity monitoring.

Four speakers presented at the cafe, with proceedings directed by a local facilitator. Speakers and the facilitator were selected on the basis of their area of expertise, the organisation they represented (representing both government and community organisations) and their reputation as entertaining speakers. All potential speakers approached accepted the invitation to present.

Recruitment method

Contact details of the targeted community 'experts' drawn from academic, government, private and community organisations in the region were researched using the internet. Several existing lists of organisations and groups provided useful starting points (e.g the Terrain Natural Resource Management stakeholder list). In total 98 organisations/groups were contacted a month before the cafe, via email where possible, otherwise by post (see Annex C). A covering letter together with an invitation to the cafe and a project summary (see Annex H) was emailed or posted to the primary contact person. In all cases, the letter asked if the contact person would distribute the invitation to other interested colleagues or members within their group. It also called for individuals to RSVP via email or by telephone.

A week before the cafe some telephone follow-up calls was made, particularly targeting community groups as many of the RSVPs were from government people. In total twenty-one organisations were contacted by telephone, with seven people agreeing to attend the event via this means of contact as a consequence.

The cafe was also advertised on the Weeds Conference website, and the Australian Centre of Excellence for Risk Analysis (ACERA) website. A brief announcement promoting the event was also made during the Weeds conference proceedings and copies of the invitation were made available in the reception hall.

The media was used to advertise the cafe, with a media release being sent out to a range of radio, television and newspaper organisations. An article was published by the 'Cairns Sun' newspaper several days before the event, and a write-up published by the 'Cairns Post' newspaper a week following the event (Annex I).

It is not possible to calculate the response rate as the invitation was distributed more widely than our initial contact list (as requested, see above) and was also publicly advertised (see above). Presentation of the contact list, number of telephone contacts made and RSVP count (see below) are presented to provide an indication of the likely response only.

Overview of proceedings

Thirty-five RSVPs were received, however more than 60 people attended the cafe. Upon arrival at the cafe, attendees were invited to complete the pre-cafe survey and register their interest in participating in a follow-up survey. 54 people filled out the survey and 53 people agreed to participate in a follow-up (see Annex D for pre-survey and Annex E for detailed results. Note only a sub-set of the pre-survey results are discussed in the text with a more comprehensive analysis of results to be presented in the final report). An introduction outlining the aims of the evening and the wider project opened the cafe, followed by five minute talks by each of the invited speakers, with 15 minutes allocated after each talk for questions and debate. Each talk was preceded and followed by a Turningpoint question that related to the topic of each talk. Forty-five keypads were available for use (see Annex F for results) with between 41 and 45 responses recorded for each question. A general question ('how pumped up are you about biosecurity?') was also asked at the open and repeated at the close of the cafe. Several popular trivia questions were also asked during the

introduction to enable participants to become familiar with the use of the software and to 'break the ice' (questions not presented here). Speakers presented a biosecurity topic of their choice, and were asked to broadly cover its background, detection, monitoring and reporting. Topics included Tramp ants, biofuels and their weed potential, garden plant escapees and an overview of the Victorian Weed Spotters program (see Annex G for speaker details and a brief summary of each talk). A break was held half-way through the evening, with the second half devoted to an open discussion about volunteer biosecurity detection. The evening closed with a brief wrap-up and presentation of the results of the Turningpoint questions.

The individual interviews following the cafe were held with a range of participants and provided a rich set of personal insights and suggestions for communicating biosecurity, community engagement, motivations for and barriers to involvement.

Summary of key findings

1. **Are science cafes useful in engaging community experts in discussions about biosecurity detection?**

The cafe was well attended, with much interest and enthusiasm exhibited by participants throughout the proceedings and in the follow-up interviews. 54 out of 60 or more participants filled out the pre-survey with 53 agreeing to participate in the follow-up survey. All talks generated a range of questions and comments, with the second half of the evening producing a lively and instructive discussion about volunteer biosecurity monitoring. Between 41 and 45 keypads were used for the before and after polls for each talk suggesting that the audience was listening and engaged with the topics presented. All of these aspects suggest that the event was a useful means of engaging participants.

The cafe mainly attracted professionals employed in biosecurity (45 out of 54 participants or 83%, Annex E, Fig 5d), most likely drawn from the Weeds Conference. The majority of the attendees lived locally (39 out of 54 or 72%, see Annex E, Fig 5f), suggesting that the cafe particularly attracted locals out of a broader national conference attendee set. Other participants included several retired people, representatives of non-government organisations, one farmer and one student. A particularly enthusiastic participant reported attending as a result of reading about the cafe in the *Cairns Sun* newspaper. The good turn-out, in particular the excellent local representation was remarked on by several participants and is a good indicator of the high level of community engagement achieved.

2. **What are cafe participants' key biosecurity concerns and how do they regard their capacity to detect and report these concerns?**

The main pest, weed and disease concerns listed in the pre-survey represent macro-level concerns (e.g. 'the increasing homogenisation of ecosystems, biodiversity around the world, especially in our country' or 'partnerships of councils, government departments and non-government organisations in weed management') as well as species-level concerns about specific pests, weeds and diseases (see Annex E Table 1). Many more weeds were listed than pest or disease concerns, reflecting the large number of participants drawn from the Weeds conference. Both potential as well as existing concerns were listed. No attempt has been made to rank concerns as requested of participants in the pre-survey or analyse this data in more detail at this stage, this will be undertaken for the final report.

All topics presented by the speakers appeared to interest and be of concern to participants. The Turningpoint questions suggest that the audience were largely sympathetic to the messages of the talks, with participants exhibiting a greater degree of respective concern, recognition or interest after hearing each talk.

Participants regarded nature conservation and food and agriculture as the most important domains for their biosecurity concerns (Annex E, Fig 1a & 2d). One participant was particularly concerned about wildlife diseases and noted that wildlife issues are typically ranked below production and economic interests, with significantly less government interest and funding available in this domain.

Participants regarded themselves as being both knowledgeable and confident in detecting their listed concerns as well as having reasonable knowledge of the reporting process (Annex E, Fig 2a-c). Slightly greater knowledge and confidence was attributed to higher ranked concerns (Annex E, Fig 2a-c).

This high level of knowledge and confidence likely reflects the wide-ranging and well-subscribed involvement in biosecurity activities by participants (Annex E, Fig 3b-c). It was also reflected in the type and nature of questions asked during the cafe and during the individual interviews, with many questions and comments being of a scientific or a technical nature.

There was also a great deal of experience among participants in engaging the public, and initiating and implementing volunteering in natural resource management. Several people spoke of their skills, experience and initiatives in this area. Some examples include applications seeking council permission to remove weeds or revegetate on private and public land, making submissions to public government processes, holding tree planting days, or setting up websites about local environmental concerns. One participant had established a community owned frog hospital.

3. Is volunteer biosecurity monitoring an appropriate role for community experts, and if so who might be interested in becoming a community detective?

The question of whether biosecurity monitoring was considered an appropriate role for volunteers was posed during the cafe proceedings. Subsequent discussions suggested that participants were more interested in discussing how to involve the community in volunteer monitoring than debating whether or not it was an appropriate community role. This suggests that participants took community participation in volunteer biosecurity monitoring as a given. Individual interviews suggest that this view was common to both biosecurity professionals as well as other cafe participants. Participants appeared very enthusiastic about the idea of a community detective and were keen that some volunteer detection activity might be generated from this work. If anything, participants appeared a little puzzled why the project was not immediately concerned with initiating volunteer activity with a number of participants indicating that they had came along with the hope that the project was going to establish a community detectives network. Notions of individual responsibility, collective stewardship, and appreciation of the unique Cape York landscape were all evoked as reasons underpinning this view that vounteer biosecurity detection and monitoring was a highly appropriate community activity. Several remarks were also made about the extent that government requires community engagement as a fundamental part of any biosecurity program.

A general view expressed was that everyone had a role to play in biosecurity detection, however it was most efficient to target the twenty percent of the community that typically do eighty percent of the work (the '20/80' rule). 'Go for the community champions' and 'it's about quality not quantity' were some general sentiments echoed in this regard. A local government officer remarked that his departmentl has been extremely grateful for this 20% of the community who had participated in reporting and monitoring during the recent fruit fly outbreaks in the Cairns region. Several participants noted that this (Community Detectives) project was focused on the right target audience, though the 'experts' present were certainly not representative of the wider community. 'We are all community' also appeared to be a common sentiment expressed. It was noted that professionals were often in their jobs because they were passionate about them, often engaging in volunteer work outside of their professional duties. Similar sentiments were expressed by the speakers especially when they spoke of their personal commitment to biosecurity and their volunteer work to promote it.

One participant remarked on the unique role that a community detective might provide linking scientists, government and the wider community. In the absence of such a person, the participant noted that neither community representatives nor government officers would know whom to contact outside their respective circles.

People who spend a lot of outdoors in their profession were seen as a potentially competent and interested stream of potential community detectives. This is explored in more detail under a later heading.

Children were also flagged as being an important and very enthusiastic potential source of community detectives with several success stories shared about volunteer activities involving children.

Survey results support this general enthusiasm and interest expressed for potentially becoming a community detective, where 44% (23 out of 52 respondents) indicated they were likely or most likely willing to become a biosecurity monitoring volunteer (Annex E, Fig. 4c). A show of hands indicating potential interest in becoming a community detective at the close of the cafe indicated that around 30% of the room was interested in this potential activity.

4. What are some motivations for and barriers to volunteering as a community detective?

The potential to reduce personal disadvantage was mentioned several times as a key motivator for volunteering. In the Cairns region, people were particularly likely to become involved and report biosecurity threats in situations where lifestyles were significantly threatened, lifestyle being described as a key attraction for wanting to live in the region.

A sense of ownership and making people feel they count were also flagged as important motivators. One participant described how one local volunteer program has given farmers a sense of ownership for sections of the river that ran through their properties, and encouraged farmers to document and share any changes they have noticed as well undertaking restoration activities.

Having a sense of pride in knowing and 'reading' the landscape and recognising changes to it was also mentioned as a motivating factor. Protecting and conserving the natural beauty of the landscape was important to individuals. Several participants

remarking that these values underpinned their desire to go and remove weeds from their properties or neighbouring bushland and forest on the weekend.

Home and property ownership was also mentioned as being a good indicator of likely interest in volunteering. An example was given where a community organisation has undertaken a letterbox drop advertising an upcoming tree planting activity and it was noted that renters showed significantly less interest than home owners.
Information and learning events such weed identification days where viewed as being very popular as community motivators. It was felt that people were more motivated when they felt they got 'something back' (such as learning new skills) in return for their efforts.

Apathy and to a lesser extent lack of knowledge were both mentioned as being likely barriers to volunteering. With respect to knowledge, one participant questioned whether lack of knowledge was indeed a barrier, by remarking that despite the extensive public education and awareness campaign associated with the recent outbreak of Electric ants in the Cairns region none of the residents from the 170 properties infested with electric ants registered a complaint.

Another barrier to volunteering was a perceived slow or poor government response to reports of possible biosecurity threats by the community. This typically led people to feel discouraged or put off. Several participants recounted instances where they felt they had been 'fobbed off' by government agencies when making contact to either report a possible concern or seek information. Conversely, a local government officer reported that the acquisition of a database in their local office enabled all community reports to be easily recorded and followed-up, resulting in an overall increase in community enthusiasm and interest.

5. How might a community detectives network be implemented?

A number of suggestions were made about how a community detectives network might be implemented. "It's just like anything else you need to get done" declared one participant. "You've got to get the people together who might be interested, you might have to work like hell to make it all happen, you've got to find people who will initially work really really hard (though normally you have to do all the work yourself before things gets going)". It was stressed that rather than setting up a new group, it would be better to work to integrate a community detectives network with existing community groups who had overlapping or complementary interests. This suggestion relates to the 20/80 rule described above, where there is typically a limited pool of potential volunteers existing in any one region, with most of these people already stretched to the limit in terms of having any extra time to join a new group. Seeking to widen the horizons of existing groups was therefore suggested as a more efficient and likely more effective means of recruiting community detectives. It was also suggested that it was important to arrange outreach and extension visits rather than expecting community groups to come into a central office facility. Seeking permission to attend regular meetings or special events of groups was suggested as an appropriate initial means of contact. Offering to assist members on the basis of their individual interests was seen as even better way to generate community interest in a community detective network. For example, one participant suggested providing pest control advice for gardening groups as a means of reaching out to prospective volunteers.

Holding an information stall at local community fairs (e.g gardening fairs) or trade shows was seen as a useful means to promote the idea of a community detective. Having a memorable logo as well as colourful promotional material were also seen

as useful ways to create an association in people's minds to start building a community detectives network profile.

Developing a website, having a newsletter, and holding training days were all seen as vital and useful aspects to successful engagement. It was stressed that volunteers like to have regular activities and feedback to keep enthusiasm alive. Setting up a virtual group or a 'blog' were also both useful suggestions.
Being willing to step away once a network has started was also stressed, this faciitating community ownership. 'You can't afford to be precious' was some advice given. Building a strong core group was seen as essential to this initial process. Being strategic was also advised – getting the 'right' people on side was seen as very important. Being flexible and opportunistic in relation to interesting and involving people was also stressed.

People who spend a lot of time outdoors in their profession were flagged by several participants as representing a potentially competent and interested stream of community detectives, as previously introduced. For example, a pest management consultant outlined some ideas for how to get pest managers and other tradespeople (e.g. electricity lines-people, grasscutters, gardeners, roadworkers) involved. This included information sessions that outlined the potential for being a community detective during the course of everyday duties associated with their job, training to learn about some new biosecurity concerns and the creation of a newsletter to document and share activities, keeping enthusiasm alive. He foresaw much potential interest and enthusiasm and expressed a desire to get some of these ideas applied given the opportunity. He stressed that being a community detective didn't necessarily require a formal program and that it could emerge of its own accord with some initial input.

Key Outcomes:

In summary, these initial findings suggest:

- The cafe appeared useful as a means of engaging participants;
- Participants considered volunteer biosecurity detection an appropriate community role and were very enthusiastic, knowledgeable and well equipped for this potential undertaking;
- Participants had a long list of pest, weed and diseases regarded as being of particular concern to agricultural and conservation environments;
- Participants are especially motivated to volunteer in situations where they are personally affected and there is ready and reliable government support and infrastructure;
- Acting now to capitalise on this enthusiasm and interest about the idea of becoming a community detective would be ideal in terms of managing community expectations.

Annex A

ACERA Pre-proposal

1. Project Title: Biosecurity: improving detection by enlisting community detectives

2. Theme: Surveillance & monitoring; communication & decision-making

3. Background / Rationale

Biosecurity threats constitute a major risk to Australian animal, human and plant populations. Primary industry trade protection is central to Australia's sustainability. Foot and mouth disease if it entered Australia has been estimated to cost $5.8 billion if treated in the same way as the UK (Prowse, personal communication 2007). The cost to human and animal health of newly emerging zoonosis diseases (affecting both humans and animals) is multi-faceted and increasing. Plant health is similarly adversely affected by biosecurity threats both in terms of loss of production and conservation values.

How that risk is perceived varies according to a wide range of social factors and is shaped by multiple interests with competing values and expertise in diverse social and cultural contexts. Increasingly, biosecurity threats can be posed as social issues requiring effective community engagement to gather evidence, communicate across diverse networks, pose critical questions of worth/value and inform scientific thinking on entry and spread of pests and diseases.

Emerging science studies literature shows that community sources of expertise (also known as mavens or science connoisseurs) are important facilitators of scientific knowledge and play key risk communication roles. Within biosecurity policy contexts, early detection of biosecurity threats can minimise risks. Enlisting the support of more community detectives with expertise in passive surveillance will help those with responsibility for animal and plant health. In addition, facilitating voluntary surveillance may develop biosecurity capacity and lead to finer appreciations of novel pest/disease pathways.

There is mounting evidence of the effectiveness of these voluntary monitoring efforts within a variety of natural resource management contexts in Australia (think of - care groups and – watch groups such as Landcare and Waterwatch) and overseas. In the USA, there is a long history of water quality monitoring which has spawned a variety of similar groups (bycatch monitoring, bacteria monitoring and fish/bird monitoring). Locally there are programmes and policies beginning to target individuals within biosecurity contexts (eg Weed Warriors) which deserve closer examination with a view to collaboration. Current government investment into community engagement within a biosecurity context includes the national animal and plant pest awareness and reporting programmes, weed and invertebrate mapping exercises, and a programme entitled 'Defeating the Weeds Menace'. Certainly there is an increasing dependence upon community based surveillance and an expectation by governments that this kind of surveillance will be used as a major tool to help define plant and animal health status as well a serving as a major component in pest detection and national emergency responses. There is currently a wide range of

activities, agencies and organisations to which this research will be linked and collaborations developed which are detailed further below.

All of this engagement activity hinges upon effective dialogic communication. Deliberative Public Engagement (DPE) is an emergent and effective method of communicating science and policy development. DPE implies a shift in focus from one-way processes (such as public consultation) to policy-making processes that rely upon dialogue – a two-way or *n*-way exchange of views, concerns and knowledge – between experts, policy-makers, the public and other stakeholders. Thus, DPE is increasingly advocated as route to *better* policy and to a science that has *greater* social value and a broader democratic imperative (Demos 2004; 2005; Rowe and Frewer 2005; Miller 2001; Wellcome Trust 2000). Communicating risk relies upon developing trust, and reducing stigma and uncertainty. There is ample evidence that remote communication campaigns through multi-media channels will not work in isolation from more personal, direct and targeted communication methods. Hence there is a need for deliberative public engagement to communicate biosecurity.

4. Research proposal

This project experiments with deliberative public engagement methods (science forums) to identify potential biosecurity volunteers (aka community detectives) and encourage the establishment of community detective networks across Australia. Through strengthening surveillance *and* risk perception/communication, the entire basis for community engagement in biosecurity and risk management of biosecurity is improved.

RESEARCH GOALS AND OBJECTIVES

The goals and objectives of this research are to:

- review and analyse the literature/programmes on public engagement and scientific connoisseurship, including lay and amateur science
- identify community biosecurity detectives (science connoisseurs)
- promote biosecurity risk detection and shared surveillance in specific biosecurity contexts through these community detectives
- provide opportunities for exchange between expert and lay constructions of pest/disease pathways
- pilot and evaluate public engagement methods for improving biosecurity risk perception and communication.

Research questions include:

- How do community biosecurity detectives rate/judge/assess biosecurity risk compared with competing risk frames?
- Which audiences know/recognise biosecurity threats?
- Which audiences detect/report biosecurity threats?
- Who is enlisted as authoritative, credible biosecurity expertise?
- Who is trusted as community facilitators of biosecurity knowledge?
- Are science forums an appropriate form of deliberative public engagement regarding biosecurity issues?
- Is it possible to identify community detectives through a combination of science forums and focus groups?
- What is an appropriate model to support community detective networks across Australia?

- What motivates community detectives to get involved and stay involved in biosecurity risk prevention?
- What kind of (scientific) expertise works best for community detection of biosecurity risk?

RESEARCH BENEFITS AND OUTCOMES

Anticipated outcomes of this research include more detection of biosecurity threats, more reports of biosecurity incursions, more debate about novel pest/disease pathways and significantly more effective biosecurity communication campaigns. This research project aims to inform policy by identifying key social factors affecting the ways biosecurity risk is perceived, detected, reported and communicated in Australia.

5. Methods

The project will answer these questions using multiple social science methods and stages; a literature review, participant observation of science forums, focus groups with key informants and pre/post surveys. These are detailed further below.

1) Literature review.

A wide range of previous social research is relevant to this proposal. Both academic and grey literature will be reviewed including:

1. Scientific connoisseurship – informing the mediation of scientific expertise in society, science connoisseurs may contribute to local biosecurity debates via raising questions of value, worth and interest in passive surveillance (Healey 2004)
2. Professional and lay expertise – defining and examining science boundaries, expertise, tacit and experiential knowledge in the context of biosecurity (Epstein 1995, Fischer 2000, Gregory and Miller 1998, Healy 1999)
3. Risk communication and risk perception – in light of new theories of the role of affect and older work examining trust, stigma and uncertainty in the context of biosecurity (Adam et al. 2000, Bickerstaff and Walker 2002, Fiorino 1989, Food Ethics Council 2004, Gouldson 2004)
4. Surveillance and monitoring – from the sociology of science literature (Poten 1992), there may well be value in a broader examination of these terms relevant to biosecurity (Mehta 2004, Pilarski et al. 2004)
5. (Environmental) volunteerism – in light of motivation to protect places and species and in connection with place attachment (Alexandra et al. 1996, Ely 1992, Engel and Voshell 2002, Gouveia et al. 2004, Hartman 1997, Mackney and Spring 2001, Vogel and Wynne 2003)
6. Community engagement and deliberative democracy – to understand the nature of dialogic processes in the public understanding of science (Gouldson 2004, McGlynn et al. 2004, Owens 2000, Yosie and Herbst 1998)
7. Environmental citizenship – to recognise and question individual rights and responsibilities in relation to biosecurity (Dobson 2004, Du Plessis 2003, Elam and Bertilsson 2003, Ellis and Waterton 2004)
8. Biosecurity – social science studies in the context of biosecurity (Maller et al. 2007).

2) Science forums

Science forums offer an informal participatory mechanism for discussion of biosecurity issues in society. They are usually held in a cafe, club or pub on a mid-week night thereby allowing relaxed and informal discussion following a short presentation from a research scientist. Their success lies in the charisma of the presenter, the tone of the presentation (no IT) and the level of interaction from the audience. Up to three science forums will be conducted on topics relating to specific pests and diseases (eg equine influenza, fire ants, avian influenza, citrus canker, foot and mouth disease, impact of climate change upon, effect of water shortage upon, all to be negotiated with DAFF PIAPH). Both peri-urban and rural locations will be selected and key speakers will be approached by the Project Advisory Committee.

The research team will use participant observation methods to observe the science forum and the interaction between speaker/s and audience. Participant observation research offers a rich description of behaviours, situations and events. Participant observation may involve informal interviews, direct observation, group participation, photographs, checklists, collective discussions, analyses of documents and life-histories. Interested community members will be approached following the forum to participate in a focus group discussion of the potential for community-based biosecurity detection.

3) Focus groups

A series of up to three focus groups will be conducted with targeted participants from the science forums (eg master gardeners, sunrise or niche producers, buyers/sellers at farmers' markets, field naturalists, rural merchants, organic growers, retired scientists, hobby farmers, specific industry representatives - bees, pigs, poultry, horticulture). Focus groups allow social scientists to study people in a more natural setting than a one-to-one structured interview. In combination with participant observation they can be used for gaining access to various cultural and social groups and raising issues for exploration in an informal setting.

4) Pre/post surveys

Brief surveys of participants attending the science forums will be distributed to examine the effect of these public engagement methods on their experiences and understandings of biosecurity risk perception and communication. Survey methods are useful here because they provide the fundamental connection between participant observation of the science forums and mathematical expression of the effect of the science forums on participants.

COLLABORATION

The research team will specifically collaborate with the 'Stakeholder analysis and mapping' research team (Gilmour, Beilin, Conkey) focusing on peri-urban biosecurity. One of the proposed focus groups could be held in Yass, either before or following the stakeholder identification process to compare public engagement methods in enlisting community detectives in biosecurity surveillance. Meetings before, during and after the parallel research projects would usefully contribute to better policy outcomes, co-authored papers in academic journals and more robust research processes.

There is a wide range of activities, agencies and organisations to which this research will refer and from which potential collaborations may develop. Linkages include:

- CRC National Plant Biosecurity project on use of communities in early detection of plant pests
- CRC Australian Weed Management weed spotters network to better utilise a targeted community groups to monitor and report weed incursions
- DEW/DAFF weed communication and awareness programme under Defeating the Weed Menace initiative
- Australian Land and Water Audit NRM community engagement
- Plant Health Australia plant pest awareness and reporting programme and industry biosecurity planning
- Northern Australian Quarantine Strategy/AQIS awareness programmes
- Various State and Territory pest awareness and reporting programmes with linkages through Australian Weeds Committee and Plant Health Committee

In addition there is a great deal of international interest in the R&D of community based programmes and specific linkages will be established with the US, NZ and Canada through multi-lateral arrangements operated through PIAPH/DAFF.

RESEARCH USE

The research could be applied in both government and non-government (community) contexts as well as used to inform theoretical developments within the social and risk sciences. Potential users may include:

- DAFF divisions and agencies responsible for biosecurity (AQIS, PIAPH, BA);
- Other Australian Government agencies wishing to trial the methods (DTRE)
- University personnel interested in risk perception, communication, biosecurity, volunteering, surveillance;
- Community groups interested in forming community detective networks (eg Master Gardeners, Birds Australia).

OUTPUTS AND COMMUNICATION

1) Up-to-date literature review on risk communication and lay versus professional expertise
2) Summary of public engagement pilots (science forums)
3) Summary of focus groups detailing volunteer motivation & surveillance
4) Australian network of community biosecurity detectives
5) Draft and final reports
6) Paper/s submitted to academic journal
7) Conference papers and presentations as appropriate

Annex B list of organisation names of individuals participating in individual interviews

Biosecurity Queensland, Department of Primary Industries and Fisheries
Cairns Port Authority, Cairns
Conservation Volunteers Australia
Decline Reversal Project Inc
Local Catchment Management Association/Landcare
Private Environmental Consultant
Private Pest Management Consultant

Annex C List of organisations contacted to interest in attending cafe

Organisation/Agency name	
Aboriginal Rainforest Council	Fungimap
Agforce Far North Queensland	Great Barrier Reef Marine Park Authority
Atherton Shire Council	Greening Australia Queensland Inc
Australasian Mycological Society	Growcom
Australian Conservation Foundation	Growcom Innisfail
Australian Forest Growers	Herbert River Improvement Trust
Australian Forest Growers	Hinchinbrook Fishcare Group Inc
Australian Nurseries Online	Hinchinbrook Local Marine Advisory Committee
Australian Quarantine and Inspection Service	Hinchinbrook Shire Council
Babinda District Cane Growers Org Ltd	Innisfail and Tablelands 4WDC
Bajinjilla Aboriginal Corporation	Invasive Species Council
Banana Growers Queensland Ltd	Johnstone River Catchment Management Association Inc
Barron River Integrated Catchment Management Association	Johnstone Shire Council
Batreach	Kuranda EnviroCare Inc
Biosecurity Queensland, Department of Primary Industries and Fisheries	Malanda and Upper Johnstone Catchment Landcare Association Inc
Biosecurity Queensland, Regional Office, Cairns	Malanda Chamber of Commerce Inc
Biosecurity, QLD, Longreach	Mareeba Shire Council
Biotropica Inc	Mission Beach Marine Advisory Committee
Birds Australia North Queensland	Mitchell River Watershed Management Group
Burdekin District 4WD Club	Mossman Agricultural Services Ltd
Bureau of Sugar Experiment Stations (BSES)	Mt Garnet District Landcare Group Inc
Cairns and Far North Environment Centre	Mulgrave Landcare and Catchment Group
Cairns Bushwalkers Club Inc	Network for Sustainable and Diversified Ariculture
Cairns Regional Council	Northern Australian Quarantine Service
Cairns Rifle Club	North Johnstone and Lake Eacham Landcare Group
Cairns River Improvement Trust	Organic Producers Association of Far North Queensland Inc
Cairns Urban Landcare Inc	Organic Producers Association of Queensland

Annex C List of organisations contacted to interest in attending cafe (continued)

Organisation/Agency name (continued)	
Canegrowers Innisfail	Pacific Coast Eco Banana Growers
Canegrowers Mulgrave	Pacific Coast Eco Papaw
Canegrowers Tully District	Private Forestry North Queensland Association Inc
Cardwell Shire Catchment Management Association	Queensland Bushwalking Club Inc
Cardwell Shire Council	Queensland Council of Garden Clubs
Cardwell Shire River Improvement Trust	Queensland Mycological Society
Commonwealth Department of Agriculture, Fisheries, and Forestry	Rare Fruits Council of Australia
Community for Coastal and Cassowary Conservation Inc	RSPCA
Conservation Volunteers Australia	Sporting Shooters Association of Australia (Brisbane) Inc
Cooperative Research Centre for Australian Weed Management Regional Coordinators	Terrain Natural Resource Management
Cooperative Research Centre for Australian Weed Management Weed Spotters Program	Tree Kangaroo and Mammal Group Inc
CSIRO Sustainable Ecosystems, Atherton	Treeforce Association Inc
Daintree Cassowary Care Group Inc	Trees for the Evelyn and Atherton Tablelands
Douglas Shire Council	Upper Herbert Catchment Coordinating Committee
Dulabed Tableland Aboriginal Corporation	Wanyurr-Majay Aboriginal Inc
Eacham Shire Council	Waterwatch Australia
Earthwatch	Wet Tropics Management Authority
Emerald 4WD Club	Wildcare
Far North Queensland Local Government Pest Plan Advisory Committee. Cairns Regional Council	Wilderness Society Cairns
Far North Queensland Lychee Growers Association Inc	Wujal Wujal Council
Far North Queensland Wildlife Rescue Association	
Four wheel drivers Cairns	
Frog Decline Reversal Project Inc	

Annex D pre-cafe survey

COMMUNITY DETECTIVES SURVEY

This survey aims to identify your concerns about and experience with biosecurity.

The survey will take approximately 5-10 minutes to complete and is anonymous. Answers to these questions will remain confidential and data will not be used for any other purpose. We greatly appreciate your help and time taken to fill out the survey.

We also invite you to participate in a follow-up survey in the near future. The purpose of the follow-up survey is to help us assess the influence of tonight's Biosecurity Forum.

For the purposes of this survey we are defining biosecurity as the impact of pests, weeds and diseases on the economy, environment and human health.

Although we recognise that there are other important definitions of biosecurity we ask that you think of biosecurity in the above terms throughout this survey. The biosecurity forum and the focus groups will provide an opportunity to discuss and debate meanings of biosecurity.

There are three sections of this survey.

First of all, please answer some questions about biosecurity.

I. BIOSECURITY AND YOU

1. In which domain do your biosecurity concerns mainly lie? Tick as many as apply.

- ☐ Don't have any concerns
- ☐ Food and agriculture
- ☐ Nature conservation
- ☐ Human health
- ☐ Bioterrorism
- ☐ Other (please specify)

_____

_____

2. **Where do you mainly get information about biosecurity?** Tick as many as apply.

- ☐ Don't get any biosecurity information
- ☐ Newspapers and magazines
- ☐ Radio or Television
- ☐ Internet
- ☐ Community groups
- ☐ Government publications such as pamphlets
- ☐ Government extension workers or inspectors
- ☐ Nurseries or farming suppliers
- ☐ Private consultants (e.g. vets, agronomists)
- ☐ Family/friends/neighbours
- ☐ Other (please specify)

_____

3. **Please indicate how motivated you are to know more about biosecurity.** Tick one.

(1)	(2)	(3)	(4)	(5)
No motivation	Very little motivation	Some motivation	Quite a lot of motivation	A great deal of motivation

4. **Please list your main pest, weed and disease concerns.** Place the number 1 alongside the concern which you consider most important, the number 2 alongside the next most important, etc.

   If you have no concerns please go to question 13.

_____

_____

_____

_____

_____

QUESTIONS 5 to 8 relate to your *most important* pest, weed or disease concern given in *question 4.*

5. Please indicate on the scale below how you would rate your *general knowledge* of your *most important* concern. Tick one.

(1)	(2)	(3)	(4)	(5)
No knowledge	Very little knowledge	Some knowledge	Quite a lot of knowledge	A great deal of knowledge

6. Please rate your *confidence* in identifying your *most important* concern. Tick one.

(1)	(2)	(3)	(4)	(5)
No confidence	Very little confidence	Some confidence	Quite a lot of confidence	A great deal of confidence

7. Please rate your *knowledge of the reporting process* for your *most important* concern. Tick one.

(1)	(2)	(3)	(4)	(5)
No knowledge	Very little knowledge	Some knowledge	Quite a lot of knowledge	A great deal of knowledge

8. Please indicate which of the environments below you believe are at risk from your *most important* concern. Tick as many as apply.

- ☐ Unsure
- ☐ Urban parks and gardens
- ☐ Built-up urban areas
- ☐ Home
- ☐ Office
- ☐ Land used for agriculture
- ☐ Natural bushland and forest
- ☐ Production forests (native and plantation)
- ☐ Coast and beaches
- ☐ Lakes, rivers and dams
- ☐ Other (please specify)

_____

_____

QUESTIONS 9 to 12 relate to your *least important* pest, weed or disease concern given in *question 4.*

9. Please indicate on the scale below how you would rate your *general knowledge* of your *least important* concern. Tick one.

(1)	(2)	(3)	(4)	(5)

No knowledge	Very little knowledge	Some knowledge	Quite a lot of knowledge	A great deal of knowledge

10. Please rate your *confidence* in identifying your *least important* concern. Tick one.

(1)	(2)	(3)	(4)	(5)
No confidence	Very little confidence	Some confidence	Quite a lot of confidence	A great deal of confidence

11. Please rate your *knowledge* of the reporting process for your *least important* concern. Tick one.

(1)	(2)	(3)	(4)	(5)
No knowledge	Very little knowledge	Some knowledge	Quite a lot of knowledge	A great deal of knowledge

12. Please indicate which of the environments below you believe are at risk from your *least important* concern. Tick as many as apply.

- ☐ Unsure
- ☐ Urban parks and gardens
- ☐ Built-up urban areas
- ☐ Home
- ☐ Office
- ☐ Land used for agriculture
- ☐ Natural bushland and forest
- ☐ Production forests (native and plantation)
- ☐ Coast and beaches
- ☐ Lakes, rivers and dams
- ☐ Other (please specify)

_____

_____

The next section focuses on your experience with biosecurity monitoring.

II. BIOSECURITY MONITORING

13. Please indicate how many hours you spend outdoors in an average week? Tick one.

- ☐ 10 hours or less
- ☐ More than 10 and up to 25 hours
- ☐ More than 25 and up to 40 hours
- ☐ More than 40 and up to 60 hours
- ☐ 60 or more hours

14. **Please indicate where you spend the majority of this outdoor time.** Tick as many as apply.

- ☐ Urban parks and gardens
- ☐ Built-up urban areas
- ☐ Land used for agriculture
- ☐ Natural bushland and forest
- ☐ Production forests (native and plantation)
- ☐ Coast and beaches
- ☐ Lakes, rivers and dams
- ☐ Other (please specify)

_____

15. **Please indicate if you have you ever been involved in any the following biosecurity activities.** Tick as many as apply.

- ☐ Research
- ☐ Policy
- ☐ Looking (surveillance)
- ☐ Finding (detection)
- ☐ Reporting
- ☐ Prevention
- ☐ Management
- ☐ None of these

16. **If you have been involved in any of the above, please indicate the capacity in which you were primarily involved.** Tick as many as apply.

☐ Professional ☐ Voluntary ☐ Other (please specify)

_____

17. **If you have been involved in looking and finding, in which location were these activities primarily carried out?** Tick as many as apply.

- ☐ Urban parks and gardens
- ☐ Built-up urban areas
- ☐ Home
- ☐ Office
- ☐ Land used for agriculture
- ☐ Natural bushland and forest
- ☐ Production forests (native and plantation)
- ☐ Coast and beaches
- ☐ Lakes, rivers and dams
- ☐ Other (please specify)

_____

18. Would you consider becoming a biosecurity monitoring volunteer in the future? Tick one.

(1)	(2)	(3)	(4)	(5)
Most unlikely	Unlikely	Neither likely nor unlikely	Likely	Most likely

Lastly we would like to know about you. Please remember this data will be kept secure and confidential.

III. BACKGROUND QUESTIONS

19. What is your age?

☐ Less than 30 ☐ Between 30 and 50 ☐ Older than 50

20. What is your gender?

☐ Female ☐ Male

21. What is your highest level of education?

☐ Primary school
☐ Secondary school
☐ Tertiary education
☐ Postgraduate

22. What is your occupation? _____

23. Where do you live?

☐ City or town
☐ Semi-rural
☐ Rural area

24. What is your postcode?

_____

25. How long have you been living in the region that includes your postcode?

☐ Less than 1 year
☐ Greater than 1 year less than 5 years
☐ Greater than 5 years less than 10 years
☐ Greater than 10 years less than 20 years
☐ More than 20 years

26. Please indicate below if you are a member of a community group whose interests include biosecurity issues? Tick as many as apply.

☐ No, not a member of any such community group

Yes, I have current membership of these groups (tick as many as apply)

☐ Agriculture
☐ Conservation
☐ Gardening
☐ Horticulture
☐ Recreational/sport
☐ Naturalist
☐ Fishing
☐ Forestry
☐ Other (please specify)

_____

_____

27. Please add anything else below that you would like to mention about biosecurity or this survey.

Thank you for being part of the Community Detectives survey. Please put your completed survey in the labelled box provided.

If you are willing to participate in a follow-up survey please write your contact details on the tear off slip below and put it in the labelled box provided.

If you have any questions in relation to the survey or the project don't hesitate to contact us.

Contacts:

Dr Jacqueline de Chazal	02 6125 5008	jacqueline.dechazal@anu.edu.au
Dr Anna Carr	02 6272 4929	Anna.Carr@brs.gov.au

CONTACT DETAILS: These contact details will remain confidential and will only be used by the Community Detectives Project to contact you about your potential participation in the follow-up survey.

First name:_____

Last name:_____

Postal Address:_____

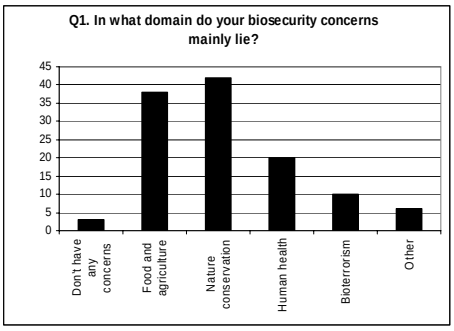
Daytime phone:_____

Mobile:_____

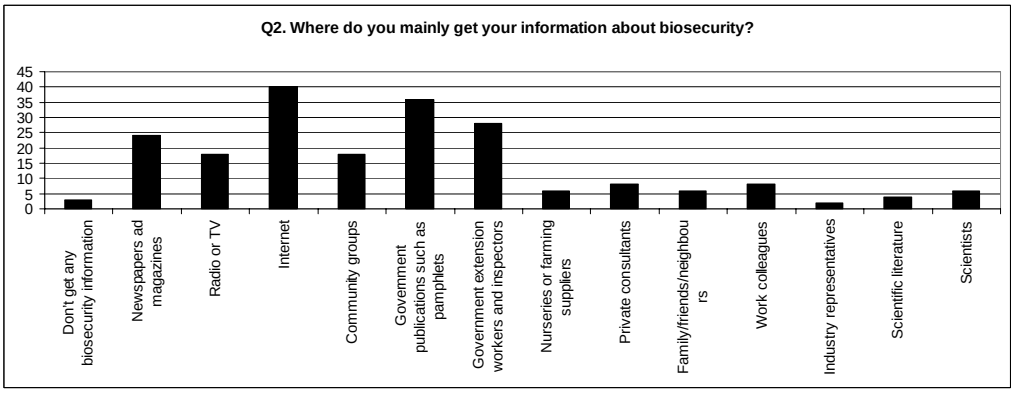
Email address:_____

Annex E Results from pre-survey ordered by question number. Results are presented as figures or as a table (Q 4). For figures, the Y axis represents either number of responses ("responses") for questions permitting multiple responses, otherwise number of respondents ("respondents") for questions permitting a single response. Figure titles don't always repeat survey presentation of questions with several modified here for more concise presentation. n=54 for all results unless otherwise indicated. Responses for the "other, please specify" category for questions are not presented here.

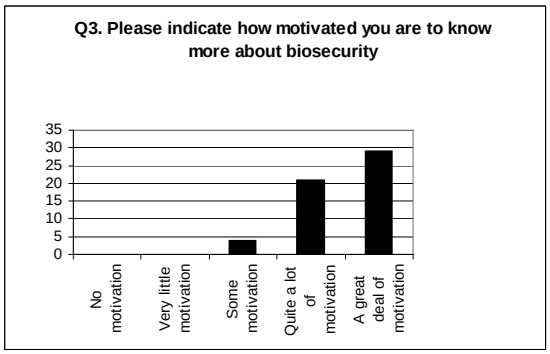
a.



b.



c.



Responses

Respondents

Response categories

Figure 1a-c. a. Q1. In what domain do your biosecurity concerns mainly lie? b. Q2. Where do you mainly get your information about biosecurity? c. Please indicate how motivated you are to know more about biosecurity?

Table 1. List of main pest, weed and disease concerns listed by participants. Note that this list is not complete as yet and has also not been sorted by highest or lowest ranked concern as requested of participants in the pre-survey.

Weeds	Pests	Diseases
African tulip (*Spathodea campanulata*)	Aquatic pests	Animal diseases
Athel Pine (*Tamarix aphylla*)	Cats	Biotoxins esp soil pathogens
Bellyache bush (*Jatropha gossypiifolia*)	Drywood termites	Blue tongue disease
Biofuel crop weeds	Feral cats	Diseases of wildlife
Bridal creeper (*Asparagus asparagoides*)	Feral pigs	Foot and mouth disease (*Aphtae epizooticae*)
Cabomba spp.	Foxes	Human diseases
Camphor laurel (*Cinnamomum camphora*)	Freshwater pests	Introduction of zoonoses and other wildlife diseases
Citrus greening (*Al lang cenobium*)	Imported timber pests	Wildlife diseases
Common Broom (*Cytisus scoparious*)	Papaya fruit fly and other exotic flies	Zoonotics
Common Hackberry (*Celtis occidentalis*)	Parasites in imported food	
Common privet (*Ligustrum spp*)	Pigs and associated diseases	
Declared weeds e.g. Trumpet tree (*Cecropia peltasta)*, *Thunbergia laurifolia)*	Rabbits	
Desert ash (*Fraxinus angustifolia*)	Red-banded mango caterpillars (*Deanolis sublimblais)*	
Exotic plant species	Sugar cane moth borers (*Lepidoptera* spp.)	
Fish (Tilapia spp.)	Tramps ants including Fire ants and electric ants	
Gamba Grass (*Andropogon gayanus*)		
Gorse (*Ulex europaeus*)		
Hygrophila costata		
Hymenachne amplexicaulis		
Lantana camara		
Miconia spp. Limnocharis flava, Feral Pigs, Dogs		
Mimosa pigra		
Mother-of-million (*Bryophyllum spp*.)		
Mud Plantain (*Heteranthera reniformis*)		

Table 1. (continued) List of main pest, weed and disease concerns listed by participants. Note that this list is not complete as yet and has also not been sorted by highest or lowest ranked concern as requested of participants in the pre-survey.

Weeds	Pests	Diseases
Non-declared environmental weeds		
Olives (*Olea europaea*)		
Panama Rubber Tree (*Castilla elastica*)		
Parkinsonia aculeata		
Parthenium hysterophrous		
Plant ‘sleeper’ ‘sneaker’ and ‘territorial’ weeds		
Prickly Acacia (*Acacia nilotica*)		
Riparian weeds		
Salvinia spp.		
Siam weed Chromoleana odorata		
Singapore daisy (*Sphagneticola trilobata*)		
Thunbergia spp.		
Urban Weeds		
Yellow water Lily (*Nuphar lutea*)		

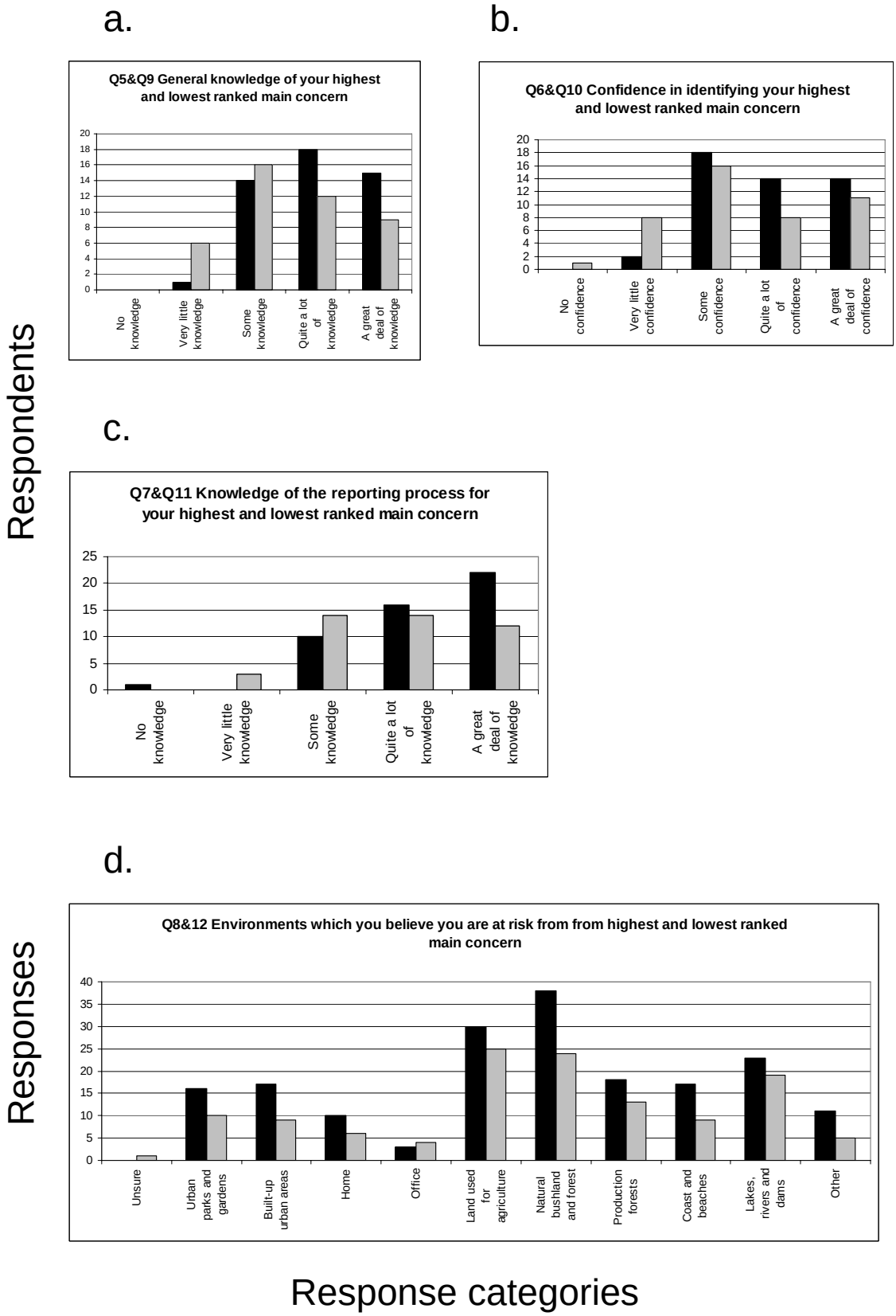
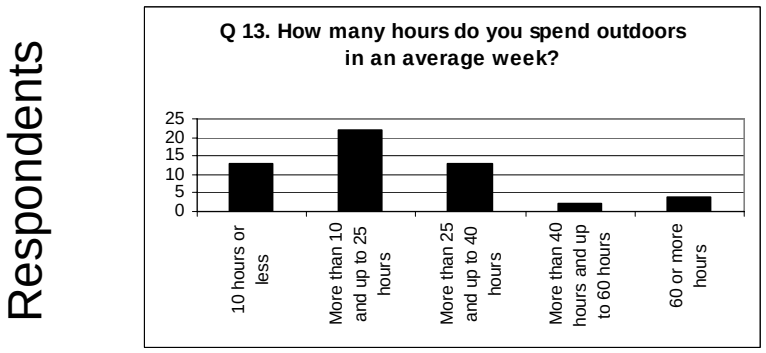
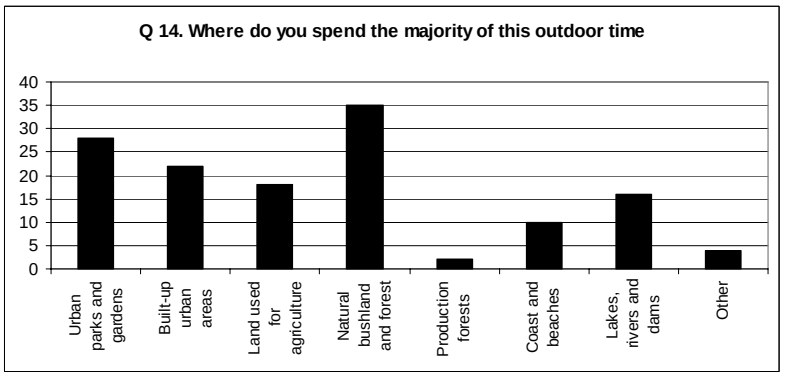


Figure 2a-d. See overleaf for details on figure layout. a. Q5&9 General knowledge of your highest and lowest ranked concern (questions are combined for ease of comparison). b. Q6&10 Confidence in identifying your highest and lowest ranked main concern. c. Q7&10 Knowledge of the reporting process for your highest and lowest ranked main concern. d. Q8&12 Environments which you believe were at risk from your highest and lowest ranked concern. Black=highest ranked main concern, n=48. Grey=lowest ranked main concern, n=45.

a.



b.



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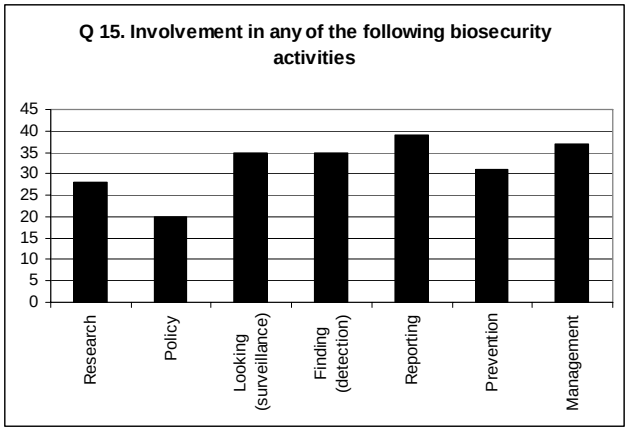


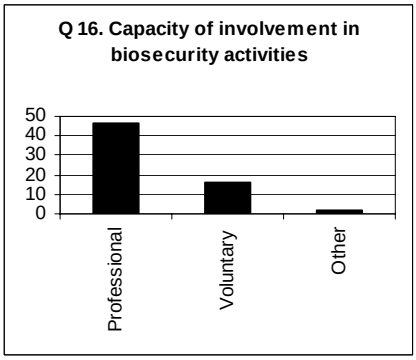
Respondents

Responses

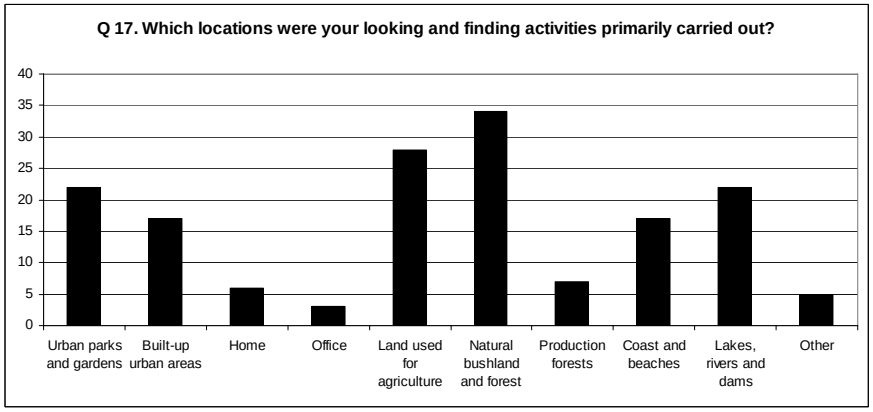
Response categories

Figure 3 a-c. See page 33 for details on figure layout. a. Q13 How many hours do you spend outdoors in an average week? b. Q 14 Where do you spend the majority of this outdoor time? c. Q 15 Involvement in any of the following biosecurity activities.

a.



b.



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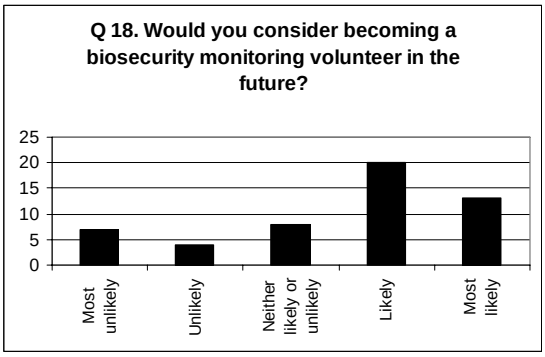


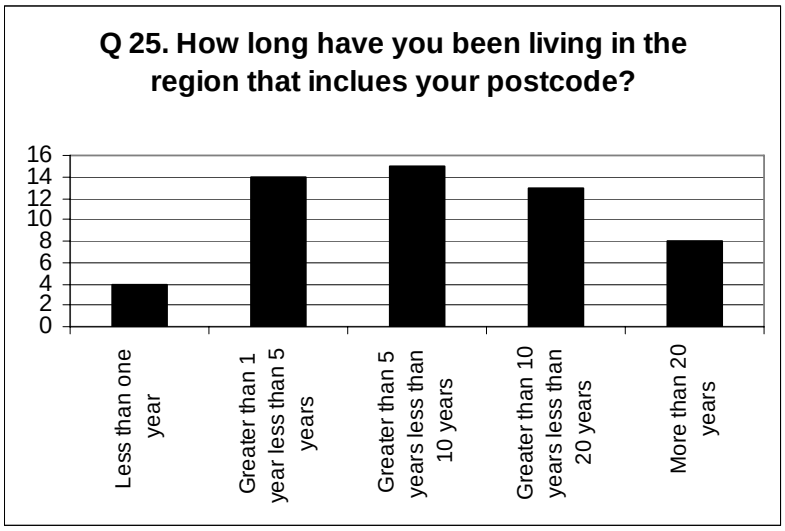
Responses

Respondents

Response categories

Figure 4a-c. See page 33 for details on figure layout. a. Capacity of involvement in biosecurity activities. b. Q17 Which locations were your looking and finding activities primarily carried out? c. Would you consider becoming a biosecurity monitoring volunteer in the future?

a.



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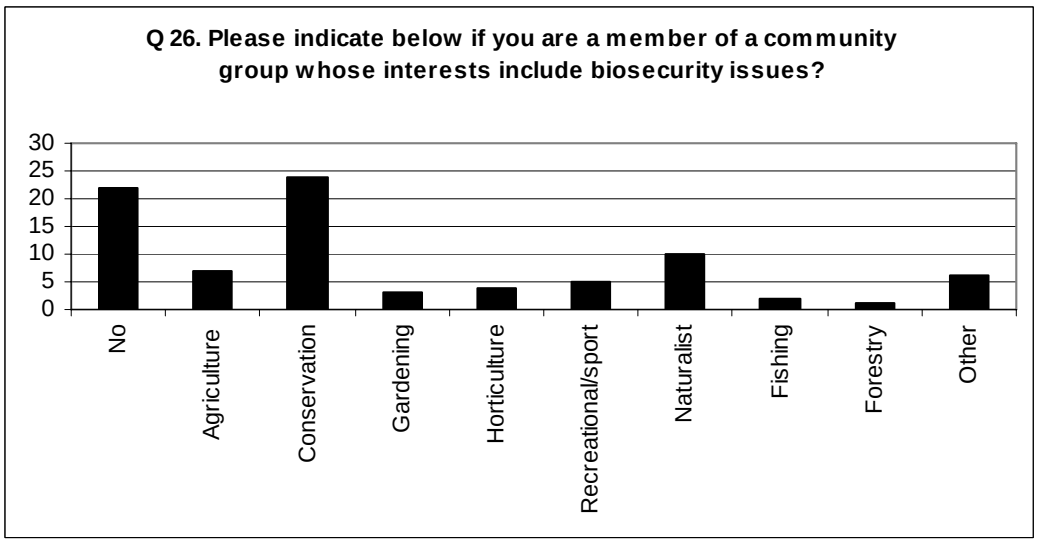


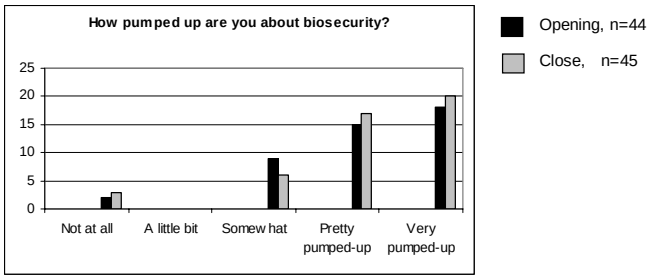
Responses

Response categories

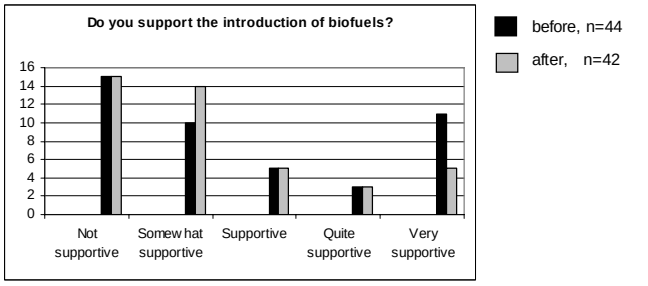
Figure 5a-b. Q25. See page 33 for details on figure layout. a. How long have you been living in the region that includes your postcode? b. Q26. Please indicate below if you are a member of a community group whose interests include biosecurity issues?

ANNEX F Turningpoint questions in order of presentation during the cafe proceedings.

a.



b.



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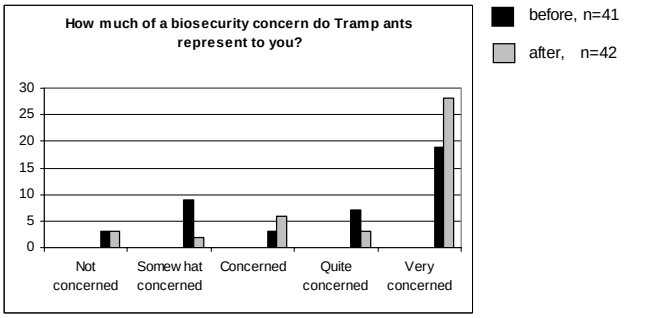

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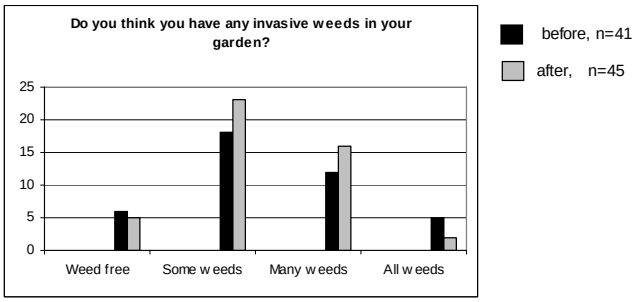

e.

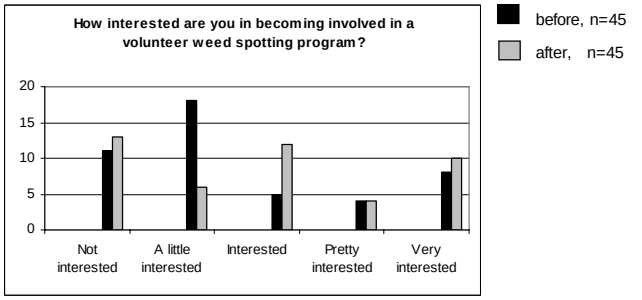

Figure 6a-e. a. Question posed at open and close of evening.' b. Question asked before and after talk by speaker no. 1. c. Question posed before and after speaker no. 2. d. Question posed after speaker no. 3. e. Question posed before and after speaker no. 4. 'Before' and 'after' refer to responses before and after each talk. 'Opening' and 'close' refer to responses at the open and at the close of the evening.

Annex G Summary of speakers talks in order of appearance at the cafe **(including a list of organisations represented by the facilitator and the speakers)**

Faciliator: Representative from the Far North Queensland Regional Organisation of Councils (initially listed on invitation as a speaker, see Annex H).

Speaker no. 1 Representative from Queensland Parks and Wildlife

The first speaker talked about the proposed use of *Jatropha curcas* for biofuel production in Australia. According to the speaker, biofuel proponents, in their enthusiasm to promote large scale production of the plant as an energy alternative to fossil fuels, have overlooked the potential weed risks of the plant. A native of Central America, this plant is already a declared weed in Western Australia and Northern Territory. The plant is also a close relative of the more widespread weed *Jatropha gossypifolia* (Bellyache bush) currently subject to a range of biocontrol programs. His key message was to learn from repeated plant introduction mistakes made in Australia over the last 200 years. He advocated thorough researching of any potential introduction, including extensive trailing and examination of possible costs as well as benefits. He also encouraged people to do their own research to find out the whole story before being convinced or otherwise about the merits of any proposed activity. He also spoke of his own personal passion and commitment to minimising the spread of weeds through working as a weeding volunteer in a range of settings. He emphasised how everyone from scientists, community groups can make a difference when it comes to weeds.

Speaker No. 2 Representative from Queensland Department of Primary Industries and Fisheries

The second speaker talked about how government response to community reporting of Tramp ants, in particular fire ants and crazy ants has changed over the last 15-20 years. She compared a case of an individual reporting unusual behaviour of ants to a university department in the early 1990s where the university was content to attribute this to the drought rather than representing a potential biosecurity risk. This was in contrast to how seriously the Cairns office of Biosecurity Queensland had taken the recent reporting of crazy ants being potentially present in the Cairns region. She concluded by emphasising the increasing role that volunteer monitoring plays in government biosecurity monitoring. This speaker also spoke of her personal commitment and concern to 'ridding' the country of bisoecurity concerns such as Tramp ants.

Speaker No. 3 Representative from Conservation Volunteers Australia

The third speaker spoke of his own personal story describing how he became interested and committed to minimising the spread of weeds. Through not wearing shoes as a child he became very motivated to remove all of the bindii (*Soliva pterosperma*) present in his street. He also spoke of how he was one of the first people to be registered as a full-time volunteer 'weed hunter' as part of the Centrelink volunteers program. He then moved on to talk about how most people are unaware that they have potential escapee weeds in their garden. He spoke of different types of weeds, such as 'look-a-likes', and 'sleeper' weeds. He also emphasised how extreme events can exacerbate weed spread such as witnessed after Cyclone Larry. He also highlighted the special and important role that children can play in undertaking volunteer 'weed hunting'.

Speaker No. 4 Representative from the Victorian Department of Primary Industries Weed Spotters Program

The last speaker also spoke of their personal interest in keeping her part of the world 'weed-free'. She described how the Weed Spotter network had been launched in 2006 from an initial program beginning in 2002. The program focuses on serious (declared) weeds in Victoria and new and emerging weed entry from other states. It was an evolving program with a number of officers locating in different parts of Victoria. She spoke of some of the barriers to volunteering such as a general lack of knowledge of weeds among volunteers, where many had never heard or seen of several targeted weeds. She commented that volunteers particularly enjoyed the weed identification training sessions the program regularly held.

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1 May 2008

Dear Sir/Madam

The Australian National University in collaboration with the Bureau of Rural Sciences are conducting a research project called 'Community Detectives'. This project is looking at ways of increasing participation in community detection and monitoring of biosecurity threats.

As part of this work we are holding a series of 'biosecurity forums' modelled on the highly successful science cafés as used widely in Europe. These informal lively meetings encourage everyone to participate and include short talks by one or more experts followed by open-floor questions, discussions and debate.

We are inviting a range of individuals and/or members of local community groups with knowledge of and experience in the detection and monitoring of pests, weeds and diseases. These include farmers, scientists, retirees, naturalists, government officers, bushwalkers, and members of volunteer, conservation, Landcare, gardening and wildlife groups.

We are holding our first biosecurity forum on the 20th May at the Cairns Yacht Club, Cairns, Queensland.

We are therefore writing to see if you and colleagues/members of your group might be interested in attending. We would be delighted if this was the case. A project summary as well as an invitation to attend the biosecurity forum are enclosed.

The invitation asks to RSVP by Friday 16th May should you wish to attend. We would also be grateful if you were to forward it to anyone else you think might be interested in attending.

Please don't hesitate to contact us if you want to know more about the project or the biosecurity forum.

We hope to see you there!

Sincerely and best wishes

Jacqui de Chazal

Dr Jacqueline de Chazal

NATIONAL CENTRE FOR EPIDEMIOLOGY & POPULATION HEALTH

THE AUSTRALIAN NATIONAL UNIVERSITY

TALKING ANTS & WALKING WEEDS

Protecting Australia's biosecurity with Community Detectives

Please come along and be part of a lively, interesting and entertaining set of conversations on this important topic.

When: Tuesday 20 May, 7pm to 9:30pm
Where: Function Room, Cairns Yacht Club, No. 4 Wharf Street, Cairns

RSVP by Friday 16 May 2008 should you wish to attend.

Biosecurity threats in the form of pests, weeds and diseases represent major risks to agricultural and other landscapes in Australia. Having many eyes and ears work together on this complements existing biosecurity measures and fosters local stewardship.

This informal café style event is part of a research project called Community Detectives. This project is about how to get more people interested in protecting Australian livelihoods and landscapes.

We invite everyone to come and have a say on community-based monitoring of pests, weeds and diseases. The evening will include short talks by Marion Lawie, Biosecurity Queensland Control Centre, Department of Primary Industries and Fisheries about Tramp ants; Kirby Doak, Far North Queensland Regional Organisation of Councils about Fireweed; John Clarkson, Queensland Parks and Wildlife about Jatropha and other biofuels; and Gary Johnston, Conservation Volunteers Australia about garden plant escapees.

Speakers will provide some background on the discovery and subsequent spread of these animals and plants and talk about how to recognise and report them as potential biosecurity threats. Interruptions will be welcomed, with plenty of time available for open-floor questions, comments, discussion and debate.

We are inviting a range of individuals and/or members of local community groups with knowledge of and experience in reading the landscape. These include farmers, scientists, retirees, naturalists, government officers, bushwalkers, and members of volunteer conservation, Landcare, gardening and wildlife groups.

Attendees will be invited to participate in a survey about their interests in and concerns about biosecurity, to be filled in upon arrival. We will also approach people to participate in several focus groups. The focus groups will be held at the Yacht Club at lunchtime and in the evening of Wednesday 21 May; and in the morning of Thursday 22 May.

Please don't hesitate to contact us if you would like more information about Community Detectives, we would love to tell you more about it.

MAC0804028

Contacts:

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acera
Australian Centre of Excellence for Risk Analysis

NATIONAL CENTRE FOR EPIDEMIOLOGY & POPULATION HEALTH

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COMMUNITY DETECTIVES PROJECT

Current and emerging pests and diseases constitute major biosecurity risks to agricultural and other landscapes in Australia. Once in Australia, early and widespread detection helps minimise spread and advance control efforts. Enlisting the support of 'community detectives' with experience in the diversity of Australian landscapes will greatly assist meeting these goals. Having many eyes and ears working together on this will complement existing biosecurity detection measures and foster local stewardship. Getting the attention of experienced community detectives is at the core of this project.

The National Centre for Epidemiology and Population Health (NCEPH) at The Australian National University will conduct the Community Detectives research project with support from the Bureau of Rural Sciences and funding from the Australian Centre for Excellence in Risk Analysis.

Key goals

Ultimate goal: increased community detection, monitoring and surveillance of biosecurity

Intermediate goal: network of community detectives for biosecurity

Project goal: explore the use of 'biosecurity forums' to engage community detectives

Some starting questions

- In what ways might community detectives work towards biosecurity?
- What kind of people might act as community detectives? What expertise is needed to detect threats to biosecurity?
- How and to whom will community detectives report biosecurity issues? How can they support existing biosecurity reporting processes?
- How do we best proceed with biosecurity detection at different scales, across different landscapes, cultures and industries?

Researchers will answer these questions based on an innovative public engagement approach termed 'science cafés' in combination with focus groups and tailored surveys. Science cafés (biosecurity forums) are informal friendly meetings, typically held in a bar or café, featuring expert short talks followed by open-floor questions, discussion and debate. We hope to interest a wide range of potential community detectives such as rural producers, retirees, scientists and volunteers in selected locations around Australia. We envisage that many potential community detectives will also belong to naturalist, gardening, Landcare and wildlife groups.

MAC0804017

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edited by caitriona murtagh murtaghc@tcp.newsltd.com.au

Biosecurity mission kicks off in Far North

Taking action: Dr Jacqueline de Chazal.

THE Far North was the first stop for researchers from the south gauging community interest in an innovative approach to weed-watching.

The team of scientists from the Australian National University stopped off in Cairns this month, to host a public meeting where they asked how interested the community was in taking part in a "Community Detectives" biosecurity project.

Biologist and sociologist Dr Jacqueline de Chazal said there was already substantial community interest in biosecurity in Cairns.

"The region is relatively vulnerable to a range of biosecurity threats," she said. "Cairns is a major trading port and it's an entry point for a range of weeds and diseases.

"The tropical climate is good for pests and diseases. There's important agriculture like sugar cane.

"And it's the gateway to the Great Barrier reef marine park and the Wet Tropics."

The researchers wanted to find out what role the community was interested in taking in biosecurity.

Using game-show style keypads, meeting attendees keyed their responses to a variety of biosecurity questions.

"We had around 30 per cent saying they would be interested in joining a volunteer weed spotting program," Dr de Chazal said.

"At the end of the meeting we asked how many people were interested in becoming a community detective and it was about a third of the room."

The drive toward community involvement came not just from the scale of the pest problem, Dr de Chazal said.

"It's certainly that the government can't be everywhere, but it's a wider stewardship and about taking responsibility and seeing themselves as stewards of the landscape – everyone taking responsibility."

Wheels in motion for an eco office

FROM inner city office space to energy efficient eco-haven: the Great Barrier Reef Marine Park Authority has transformed its Cairns headquarters.

Staff in the Orchid Plaza office have dotted recycling bins around the space, tinted the windows, ditched 20-odd fluoro tubes, and fitted timers to the photocopier and urn, slashing energy use and waste.

They've even squeezed in a worm farm to recycle scraps and organic waste, GBRMPA's senior regional liaison officer John Rainbird told *The Cairns Post*.

"We've just tucked it outside the kitchen door and the worms are very happy so far," he said.

The office, whose mandate is to protect the reef, is putting its best eco-foot forward in a bid to encourage the public to adopt similar measures.

"The message we're putting out to people is we need to use our resources in a more sustainable way," Mr Rainbird said.

"That all feeds back to the reef. And climate change is an issue that requires us all to do our bit."

So far, the energy-efforts had been "simple and straight forward", he said.

"There are things which we can do as an office that will help.

"If we all do them, it will add up to making a significant contribution."

Next step in the office's green push is purchase of a shared bicycle.

"It's an option for anyone who wants to go to the post office or shoot down to council for meetings," he said.

"Having a bike broadens the possibilities. You can get out in the fresh air and save fuel as well."

Re: cycle: Doon McColl takes the Great Barrier Reef Marine Park Authority office bike for a spin. Picture: CHRIS SCOTT

GREEN TIPS

Higher learning

TWO green-theme seminars are lined up at James Cook University in the coming weeks. On Wednesday, Department of Primary Industries regional planning manager Robin Clark will talk about the FNQ2025 Draft Regional Plan. On June 18, researchers Nicky and Les Moore will discuss the future of coastal cassowary populations. Both events start at 6pm in the Crowther Lecture Theatre at JCU's Smithfield Campus.

Buck the trend

TREEFORCE is calling on the community to prove statistics about declining volunteer numbers wrong. The tree planting organisation would like to hear from anyone who can help out with revegetation work at Lower Freshwater Rd. Plantings are held on Sundays from 7.30am. Phone 4053 7314 or 0435 016 906 for more information.

Time to meet

THE Cairns and Far North Environment Centre will hold a general meeting on June 26. The meeting will be at CAFNEC headquarters in Cominos House, at the corner of Little and Greenslopes streets from 8.30pm.

Trees for planet

PLANET Ark wants to hear from schools, community organisations and individuals keen to get involved in National Tree Day on July 27 or Schools Tree Day on July 25. Visit treeday.planetark.com or call 1300 885 000.

Fridge freebies

THE Australian Conservation Foundation is offering freebie climate change kits from its website. Visit www.acfonline.org.au, click the Free Climate Change Kit button and fill in your details. They'll post you a special pack with a climate change fridge magnet and brochures packed with energy saving advice.

Reef scientist receives coral dollars boost

REEF scientist Prof Ove Hoegh-Guldberg has scored a $2.65 million funding boost for research into the impact of climate change on coral.

Prof Hoegh-Guldberg, who is director of the University of Queensland's Centre for Marine Studies, was this month appointed the 2008 Premier's Smart State Fellow.

His fellowship program will receive $1.25 million from the Queensland Government and is also co-sponsored by the Great Barrier Reef Foundation to the tune of $1.45 million.

Research undertaken during the Fellowship will draw together a team of scientists to integrate existing knowledge about climate change and its impact on the Great Barrier Reef, conduct vital new research to fill knowledge gaps and translate that knowledge into targeted actions to minimise impacts.

Great Barrier Reef Foundation managing director Judy Stewart said although climate change was a threat, much that could be done to help the reef withstand pressure.

"By drawing on the combined resources of science, government, industry and the community, we can help find and fund solutions to preserve the Great Barrier Reef," she said.

"This fellowship is an excellent example of that collaboration."

Study notes: Reef scientist Prof Ove Hoegh-Guldberg has gained extra funds.

Report aims to empower people

THE Australian Conservation Foundation has launched its Cultural and Conservation Economy report for northern Australia.

The report looks at ways of protecting the environment and creating ways for indigenous people to participate in sustainable economic development.

It identifies employment and business opportunities for indigenous people in land and sea management, conservation, tourism and grazing in regional northern Australia.

And it recommends that sustainable solutions for maintaining country and culture in indigenous communities must empower local people to engage in economic development.

Suggested measures included conservation tax breaks, dedicated funding for land and sea management across the North and expansion of Indigenous Protected Areas.

MEDIA MONITORS

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your letter

Our readers have their say on a particular topic with this letter of the week ...

PROTECTING OUR LIVELIHOODS

WOULD you be interested in becoming a Community Detective and helping protect Australia's biosecurity against pests, weeds and disease?

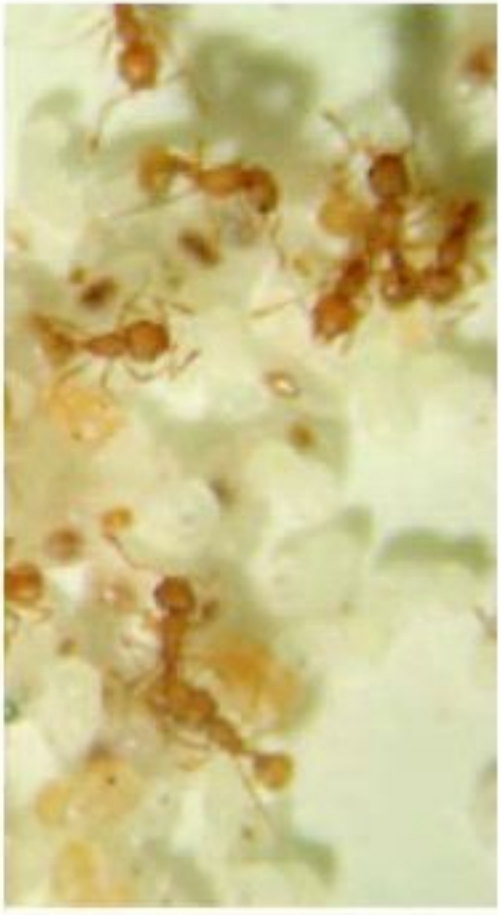
On Tuesday, May 20, The Australian National University will be hosting a public biosecurity forum as part of their Community Detectives Project.

The project aims to get more people interested and involved in protecting Australian livelihoods and landscapes, with the forum hoping to particularly attract farmers, scientists, retirees, naturalists, government officers, bushwalkers, and members of volunteer, conservation, gardening and wildlife groups.

This informal, lively event is open to everyone and encourages participation by all. It will feature a range of experts talking about their experiences in the detection and monitoring of biosecurity threats – things like electric and yellow crazy ants, the Asian honey bee and plant diseases. It will be interspersed with open-floor questions, discussions and debate.

The forum is in the Function Room, Cairns Yacht Club, Wharf St, on May 20 from 7pm-9.30pm. To find out more or to RSVP contact Dr Jacqueline de Chazal on (02) 6125 5008 or Jacqueline.dechazal@anu.edu.au

MARTYN PEARCE
OFFICE OF THE VICE-CHANCELLOR
THE AUSTRALIAN NATIONAL UNIVERSITY



BORDER PROTECTION: Help to stop the spread of pests, such as electric ants, by becoming a Community Detective.