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A GUIDE TO FACILITATING VIRTUAL WORKSHOPS

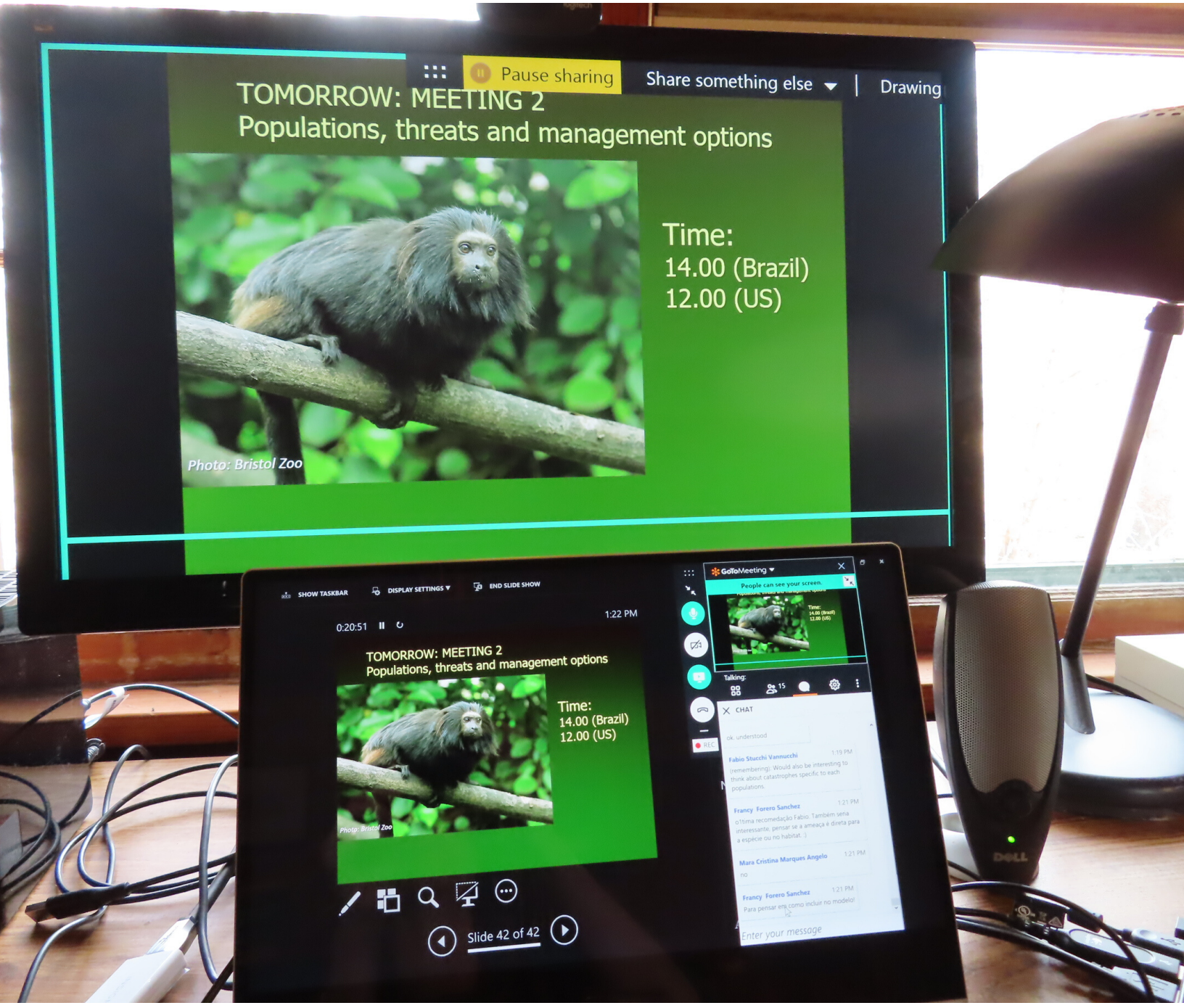

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Table of Contents

Introduction 1

Advantages and disadvantages 2

Choosing the right tools 4

Designing a virtual workshop 5

Preparing participants 7

Facilitating live sessions 8

Driving off-line activities 10

Commonly used software applications 11

Building on shared experiences 12

Further reading 12

Appendix I: 2009 Case Study – The Mala Project 13

Introduction

Web-based tools allow people from distant locations to meet in real time, sharing sound and vision, without the cost, time, carbon emissions and preparation involved in physical travel. These web-based environments are continually advancing, becoming more reliable, more sophisticated and more life-like. Already, many businesses and universities have embraced these technologies to enable remote collaboration between colleagues, and between students and their tutors. In the field of conservation planning, where funds are often scarce and stakeholders and experts widely dispersed, the potential benefits of this approach are clear and right now, as many of us are confined to our homes in the midst of the COVID-19 pandemic, virtual tools are the only means through which we can pursue our work.

In 2009, and with the many potential benefits in mind, completed its first virtual planning workshop, in which participants from three countries and four time zones met and collaborated across the web, to assist planning efforts for the Australian desert-living marsupial, the mala (*Lagorchestes hirsutus*). In a post-workshop anonymous survey, participants described the experience as positive: respondents felt part of a collaborative effort; found the environment better than expected; and judged the planning outcomes to be as good or better, than those expected from a face-to-face workshop (see Appendix I for a summary, or visit the project web-site). Since that time, CPSG has continued to experiment with virtual tools and has applied them to a range of projects, learning some important lessons in the process.

The purpose of this Guide is to:

- provide information about some well-tested tools that can be used to run virtual workshops;
- provide guidance on how to set up and facilitate a virtual workshop;
- discuss some of the challenges inherent in virtual collaboration and offer suggestions for how to avoid or manage these.

We hope this Guide will encourage and enable conservation planners to take a leap into the virtual workshop environment and, after a period of familiarization, confidently assimilate it into everyday planning work.

Advantages and disadvantages

There are generally two components to virtual workshops: an on-line component comprising ‘live sessions’, where participants meet in real time, sharing audio and often video; and an off-line component, where participants contribute asynchronously, sharing or editing on-line documents and completing other designated tasks. Here we discuss some of the main advantages and disadvantages of completing CPSG-style planning this way, compared to working primarily in a face-to-face workshop environment.

Strengths

Reduced cost and carbon

Virtual workshops are less expensive in terms of “consumables” than an equivalent face-to-face meeting. No travel or catering costs are incurred and there are no labour costs associated with venue organisation and logistics. Carbon emissions associated with travel and hotels are removed entirely.

Flexible scheduling

The length of uninterrupted time required for a face-to-face workshop makes it difficult to secure all required stakeholders. Virtual meetings can be split into smaller chunks and scheduled around daily duties and other events. For example, it can be possible to secure attendance from colleagues simultaneously attending another event or conference. Also, re-scheduling at short notice can be much less onerous!

Potential for additional collaborators

Face-to-face workshops are often limited either by cost or by the size of the venue, to around 40 participants. Though live virtual sessions may also have an upper limit, there is no limit to the number of collaborators able to input to the off-line components of virtual workshops, provided that a suitable web environment is provided for that purpose and appropriately moderated. Fully harnessed, this can become a powerful source of extra information and advice during workshops.

Time

The extended period over which virtual workshops can be carried out can allow for more thoughtful deliberation and fact-checking by participants and, as a result, can result in higher quality inputs.

Challenges

Time and space

Designing and delivering a process for a virtual workshop can take longer. More regular progress summaries are often needed to keep everyone moving forward together, and this is especially important where gaps between live sessions are longer. Overall, each workshop component may take significantly longer, not least of all to allow time for technical glitches and increased communication difficulties. Further to this, the physical space available in a workshop venue, which allows participants to display and work collaboratively on many different pieces of information at once, is hard to replicate virtually. Breaking tasks down into smaller pieces is a good workaround but again takes longer. Finally, extra time is needed to drive and moderate off-line discussions in between the live sessions.

Creating a level playing field

Discomfort with the technology can inhibit participation. Inevitably, some people are more comfortable with the technology than others. Careful selection of tools and pre-workshop training and testing can overcome some of this. Language barriers can be a challenge in any workshop, but this is especially acute in virtual workshops unless sufficient support can be provided.

Visual cues

Though good video connections are now available in applications used for this purpose, the behavioural cues that we take for granted in face-to-face workshops are less easily discerned via webcam, and this can be disorientating for facilitators and participants, especially when people are meeting for the first time at the workshop.

Promoting quality social interaction

Social interaction helps establish trust and build relationships. In a face-to-face meeting, social interaction arises organically around other primary imperatives – eating, drinking, travelling from A to B. There is no natural substitute for this in the virtual environment.

Sustaining energy

The positive energy generated by face-to-face workshops is important. It helps sustain commitment throughout the workshop, secure support for the outcomes and create a general sense of benevolence towards the project. This energy is probably created through a combination of factors, including the immersive experience associated with a three-to-four-day off-site workshop, the pressure maintained by facilitators to keep working groups on-time and on-task and the intense social interaction during outside working hours. We have seen glimpses of this energy during virtual workshops, and there is scope for building on this, but it is harder to create and sustain. Be prepared for this and take notes on anything that works well!

Choosing the right tools

Many tools now support virtual collaboration. Bear in mind that you may need more than one tool to support both on-line and off-line components of the workshop. Points to consider when choosing are:

What's your budget? Tools vary in cost but many are free or have free versions with reduced capabilities. It may be best to stick with these until an application emerges that is clearly worth the investment.

How willing/able will participants be to download software? Some computer systems – especially in bigger organisations – will not allow individual users to download software without some process of product vetting. Where this is likely to be a problem it may be simpler to opt for a tool that does not require user downloads.

What kind of interaction are you looking for? Tools vary in their capabilities. It is worth thinking carefully about the kind of interaction you need before trawling for options. Do you just need to share a screen so that others can watch as you talk? Or do others need to input visually? To what extent do you need to record the interaction? Are you looking for somewhere that will also store project-related materials? Do you want people to interact off-line as well as during live sessions? The answers to these questions and others will help guide tool selection.

How much facilitation will be required? The absence of visual cues presents a challenge for facilitators. The impact of this can be reduced with webcam, with 'chat' messaging facilities and with tools that allow participants some rudimentary gestures such as hand-raising or other signalling options, so that they can communicate even when the webcam is switched off or audio is nor working well.

Does the size/complexity of the project warrant the amount of training required? There are trade-offs between how much a tool can do and the duration of set-up and familiarisation. For a one-off workshop with participants who are new to the virtual environment it is probably best to go with something simple and intuitive.

Designing a virtual workshop

In designing a virtual workshop all the usual principles and steps apply, but there are a few additional things to think about and prepare for.

Timing

Face-to-face workshops usually occupy one or solid blocks of time, typically 1-4 days. When organising a virtual workshop you may choose a similar, intensive time-scale or, alternatively, you may choose to break the workshop down into a series of smaller time units, spread over several days, weeks or even months. There are pros and cons to shorter versus longer time frames and it is worth discussing these with the organising team before deciding on a schedule.

Pacing the live sessions

As described previously, virtual workshops are likely to involve a lot of off-line, asynchronous activity as participants collaboratively edit documents, prepare materials and complete other designated tasks. This off-line work will be punctuated with on-line or 'live' sessions where participants meet in real time. Though you may want to schedule regular live sessions to sustain momentum and keep everyone connected, it can also be useful to think through which pieces of work can most readily be done off-line, and which pieces will benefit most from the real time interaction. This will help you to determine the likely number and timing of live sessions. However, note that, as for face-to-face workshops, anything you decide at the start needs to stay flexible. You may need to add extra live sessions as things progress.

Live sessions

CPSG workshops are always individually tailored to the needs of the participants and the issue at hand. In addition to this, virtual workshops need to be tailored to the challenges and strengths of that environment. Working on-line can require more concentration because of the reduction in visual cues – careful listening is essential, and tiring. The following pointers may be useful:

- **Help everyone to arrive fully-equipped**. Think about what participants need to have read before any 'live' sessions and circulate them beforehand.
- **Engage a co-facilitator** and consider alternating responsibility for facilitation with that of supporting participants, making sure they are engaged and not experiencing technical difficulties.
- Limit virtual sessions to **a couple of hours before taking a break.**
- **Don't be too ambitious** - consider tackling just one or two topics or issues per session.
- Structure the session so that you walk participants through the conversation that you want to have with them. **Remove from the session structure anything superfluous** to this.

- **Keep presentations short** - ideally no more than 10-15 minutes before breaking for discussion with the group. If more information needs to be imparted before work can be done, provide this as off-line, pre-session reading.
- **Design for maximum engagement**. Live sessions are where the most energy is created – they should be lively and promote continual interaction. Encourage participants to provide input on-screen as well as verbally – virtual multi-user whiteboards and screen-sharing tools are useful for this.
- Allow enough time at the start for **a progress review** to help keep each session connected to what has come before.
- Allow enough time at the end to **review tasks** that need to be completed before the next 'live' session.
- Try to run at least one or two (brief) **post session surveys** to get a sense of how people are finding the tools and whether they are participating as fully as they would like.

Off-line sessions

Much of the work is likely to be done off-line. Setting up a virtual space just for the workshop and associated materials can be helpful in maintaining the sense of community and continuity with the on-line work, especially if that space is customised for the project. A simple way to do this is through a dedicated web-site (see example: http://sites.google.com/site/cbsgaustralasiamalapilot/home) but there are many other tools in frequent use that provide easily accessible and searchable storage for the latest versions of relevant documents, presentations, workshop information, scheduling and, importantly, the current task list!

Preparing participants

In a web-based workshop environment participants are more isolated than usual. There are few body language cues to guide proceedings and individuals may occasionally disappear from the workshop where internet and/or phone connectivity is unreliable. This is particularly disorientating to people who are new to the group or to the technology. It is vital that the tools work on the day and that as far as possible, all participants are comfortable using them. The following steps should help with this:

- In advance of the workshop, ask all participants to access the on-line tool and make sure that it is working for them. In some tools it is possible to create a specific area for this where participants can go to “play” with the available features. Set specific tasks to encourage exploration;
- For any participants experiencing problems, set up a one-to-one session to test their system and fix any glitches;
- Make sure participants have working head-phones. Using headphones (rather than computer speakers) can help avoid sound feedback problems. Also, it is a good idea to encourage participants to mute microphones when they are not speaking. A noisy background makes it difficult to hear other users.
- Where it is an option in your chosen application, it can be valuable for remote participants to click the “Stepped away from the meeting” button if they need to leave the meeting for a short period. This lets the facilitator know that the participant won’t be providing feedback during that period, and they also won’t ask them to contribute during that time. If you have that facility and plan to use it, make sure that participants are aware of it in advance of the first meeting;
- Similarly, the hand-raising option, where available, is good at helping remote participants to avoid speaking over each other. It also helps the facilitator to “queue” comments from workshop participants based on the order that they ask to speak. Again, if you have this facility and plan on using it, make sure that participants are aware of it in advance.
- Before the meeting, exchange phone numbers with participants so that you can stay in touch if the internet connection is lost.
- After each live session, check in with participants about their experience and record any technical problems so that they can be fixed before the next session.

Facilitating live sessions

The following are facilitator tips for anticipating and avoiding common problems.

A back-up facilitator is essential – Internet and phone connections are never infallible. When a facilitator becomes disconnected unexpectedly it can cause disorientation and loss of momentum within the group. Before any live session it is essential to identify and prepare at least one back-up facilitator to take over in the event of a connection failure.

Check-in regularly with participants – In the absence of visual aids it is essential to check-in regularly with participants to ensure that they are a) still connected to the workshop and b) comfortably engaged with the proceedings. In several applications this can be achieved by asking participants to confirm their status by raising a virtual hand. In other applications another signal may be needed and this should be determined before the workshop.

Establish a back-stage chat facility – It can be useful for facilitators and organisers to communicate with each other during the session without interrupting workshop flow. This can be achieved by setting up a special group within the "chat" facility - most environments will have one.

Modify the CPSG Working Agreement – It can be useful to add extra points to the standard CPSG Working Agreement to take account of the novel environment. For example:

- **Complete all online pre-meeting tasks ahead of the call**
- **Show up on time, on the phone and online**
- **Use headphones and mute your mic when not in use**
- **Use the tools to let us know how you are doing**
- **Close other applications, stay focused and avoid distractions during the meeting**
- **Complete post call surveys**
- **Communicate early and often**

Begin with a 'round-the-table' – This allows everyone to get into the swing of using the virtual tools and is also a sound-check to make sure everyone's mics and headphones are working.

Include a progress review – The extended periods with no direct contact make it especially important to remind participants of what has been achieved and to reassure everyone involved that progress is being made. The report should be brief – details can be provided elsewhere.

End with post-session tasks – Most of the work is done in between live sessions but there is motivational value in assigning and agreeing tasks with all participants present. Make sure that everyone leaves the live session with a clear idea of what they need to do before the next link-up.

Post-session discussion – Allocate 10-15 minutes immediately after each session to stay on-line and discuss the events with the other facilitators/organisers. The feedback from this will inform the design or modification of the next live session.

Fix technical problems – This is not always possible but all efforts should be made to ensure that participants do not experience the same technical glitches repeatedly.

Closing - Where possible, end longer sessions with something memorable such as a brief video of something relevant but fun.

Driving off-line activities

What happens in between live sessions – or “asynchronously” – is a strong determinant of workshop success. This is where much of the work gets done! Having a central site or area on the web where all workshop information, materials and documents are stored and accessible to participants can help with this, but actively encouraging and supporting the off-line work is critical. Assigning tasks at the end of each live session and providing regular reminders is important, and the following have also been helpful in moving things forward: ·

- posting a list of actions on the off-line forum, site or area, complete with deadlines and a statement on progress, to keep everyone up-to-date;
- regularly emailing those with assigned tasks to see if they need help;
- reporting on and celebrating work done, at the start of each live session.

Commonly used software applications

The following table lists some of the most popular and versatile virtual workshop applications, with their main similarities and differences. There are many more out there but these are a great place to start. Table 1 provides a list of commonly used tools for 'live' sessions, where participants are collaborating in real time, sharing audio and video links. Table 2 provides a list of tools commonly used to support off-line collaboration among colleagues or workshop participants, by supporting access to shared documents or collaborative editing of shared materials.

Table 1. Tools for 'live' sessions

Tool	Real-time sharing?	At least 40 participants?	Shows participants?	Raise hand?	White board?	Screenshare?	Chat?	Breakout rooms	Materials capture?	Note-taking?
GoToMeeting	Y	Y	Y	N	Y	Y	Y	Y	audio/video recording, slide to PDF	Y
Zoom	Y	Y	Y	Y	Y	Y	Y	Y	audio/video recording	N
Webex	Y	Y	Y	Y	Y	Y	Y	Y	audio/video recording	N
Adobe Connect	Y	Y	Y	N	Y	Y	Y	Y	audio/video recording	Y
Google Hangouts Meet	Y	Y	Y	N	N	Y	Y	N	audio/video recording	N
Microsoft Teams	Y	Y	Y	N	N	Y	Y	N	audio/video recording	Y (<20 participants)

Table 2. Tools for off-line sessions

Tool	File Sharing?	Live collaboration?	Interface
Dropbox	Y	N	File folders
Google Docs & Sheets	Y	Y	Searchable file folders
Google Sites	Y	N	Website

Building on shared experiences

There is still much to be learned about the potential of these tools and how to get the best from them, but the way forward is to test them out on real situations and to document and learn from the outcomes. Hopefully this document will encourage CPSG workshop organisers to take that leap.

To speed up group-learning, we encourage CPSGers to write-up their virtual project experiences and to share them with the wider group. Updates of this document will include additional case-studies drawn from these experiences.

Further reading

Creative and ideas for working in the virtual environment and for designing and facilitating group tasks
https://fullcirc.com/

Slightly out of date now but still good – a comprehensive, organised list of virtual applications
https://online-collaboration-tools.zeef.com/robin.good

A webinar on creating remote workshops tailor made for the conservation community.
http://www.impactbydesigninc.org/create-great-remote-workshops.

Appendix I: 2009 Case Study – The Mala Project

Introduction

A virtual CPSG workshop was carried out in 2009, in which participants from three countries and four time zones met and collaborated using only virtual tools. Based on a series of anonymous surveys the experience of workshop participants was positive. Respondents felt part of a collaborative effort, found the environment better than expected and judged the planning outcomes to be as good or better, than those expected from a face-to-face workshop. The following content reflects the experience gained from the workshop pilot described above, which addressed conservation planning questions for mala (*Lagorchestes hirsutus*), an Australian desert-living marsupial. A full (virtual) report on workshop activities and outcomes is available at: http://sites.google.com/site/cbsgaustralasiamalapilot/home

Background to the Mala Pilot

The collapse of populations of mala or rufous hare-wallaby (*Lagorchestes hirsutus*) in the first half of the 1900s was associated with the arrival of European settlers. In 1991 the last wild population was wiped out by a wildfire.

A number of animals remained in managed facilities which have since expanded to include six separate predator-proof locations across three Australian States and Territories.
In 2009, CPSG Australasia was approached by the Alice Springs Desert Park to assist conservation planning efforts for the species. The first stage of this planning required a review of a 2004 PVA model built for one of the remaining populations – that held at Watarrka paddock in the Northern Territory. The intention was to use the resulting model as a basis for planning and ongoing adaptive management of mala at that and other locations, and for integrated management of all as a meta-population. With the support of the Alice Springs Desert Park and workshop participants the pilot project was carried out as an experiment in the use of web-based tools.

Workshop Goals

The workshop had a dual function – to review/refine the 2004 mala model and to test the utility of a virtual workshop environment. Different goals were associated with each of these functions and these were as follows:

Content Goals:

1) To review and refine a population simulation model that would enable managers to test the likely impacts of different management strategies on long-term genetic and demographic performance of remaining mala populations.

2) To identify the conditions that would lead to the following population targets being met, over a 100 year period, for the population held at Watarrka:

   - positive stochastic growth (r>0)
   - probability of extinction below 5% (PE<0.05)
   - gene diversity at or above 90% wild source (GD≥0.90)

Process Goals:

These goals related to evaluating the virtual environment as a platform for PVA-style collaboration

- to build a virtual team
- to collaborate on developing a population model
- to agree and test at least three management scenarios
- to build a report on the results collaboratively
- to evaluate this use of the virtual environment

Workshop process

A Project Team was assembled comprising six subject matter experts and three dedicated CPSG participants including a facilitator and modeller. This Team was required to participate throughout the workshop period. Additional collaborators were also identified and included valuable subject matter contributors and important stakeholders in the second phase of the project.

The workshop used two different web-based environments - VYEW and Google Sites.

VYEW enabled the Project Team to meet in real time, sharing audio* and screen. It was most useful for:

- giving presentations
- brainstorming
- reviewing progress

Four live or “synchronous” sessions were scheduled, approximately one week apart, as the core of the workshop process.

Tasks designed to move the project forward were agreed and delegated at the end of each live VYEW session and were completed by Project Team members in advance of the next. Details of these tasks and their progress were posted on a dedicated web-site built through Google Sites. This site - the Mala Site - was most useful for:

- hosting information, briefing materials and references
- on-line, asynchronous discussion
- documenting progress
- collaborative report building

During and between live sessions, the behaviour of participants was guided by the standard CPSG Working Agreement and an additional list of agreed Project Team responsibilities (see "Facilitating Live Sessions", in this report).

A brief survey, focusing on perceptions of progress and the quality of experience provided, was conducted after each live session. Surveys were anonymous. A compilation of responses is available on the Mala Site (go to the Home Page, Evaluation and Feedback).

*Note that the audio facility in VYEW proved too unreliable and was instead achieved using standard teleconferencing.

Outcomes

The following table summarizes survey responses relating to workshop goals.

	Achieved	Comment
CONTENT GOALS		
Review and refine the 2004 population model	★★★	This was achieved to the satisfaction of all participants.
Identify the conditions for success	★★	Work pertaining to genetic targets was deferred pending the results of molecular work (currently underway).
PROCESS GOALS		
Build a virtual team	★★★	This was a regular theme of post-session surveys and responses were consistently positive with participants feeling strongly that they were part of a collaboration.
Collaborate on developing a population model	★★★	Respondents felt that they had collaborated well.
Agree and test at least three management scenarios	★★	Respondents felt that this was achieved, though quantifying the scenarios proposed proved challenging.
Build a report on the results collaboratively	★	Not fully tested. Material was contributed to the Mala Site by both participants and collaborators but most of the report was produced by the modeller. This is usually the case for PVA-style workshops and a face-to-face meeting would have had the same result.
Evaluate this use of the virtual environment	★★★	All respondents considered that this had been achieved.

Summary

This pilot project was considered a success and gave us confidence to move forward with other virtual PVA projects. Further tests are needed to establish whether these tools can provide a suitable environment for other elements of a typical species conservation planning project.