

GUIDELINE FOR PROJECT MANAGERS

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PURPOSE

- These Guidelines are to be used by Project Managers conducting invasive species management projects based on the PII Project Process.
- The Guidelines describe project management skills and techniques needed to successfully run a project.

1. THE PROJECT MANAGER

1.1 THE ROLE

- As the person that leads the team, the project manager is the key role in the project team.
- The project manager is responsible for:
 - The overall success of the project
 - Finding the people to make up the project team
 - Managing the team
 - Health and safety of the team
 - Delegating tasks to team members
 - Giving the team direction
 - Making operational decisions and changes as necessary in the field
 - Deciding on priorities
 - Regulatory compliance
 - Budgeting
 - Managing the project through all Project Stages to completion
 - External communication
 - Stakeholder engagement
 - Planning and reporting on the project
- In the smallest projects, the team will be a one man band – the project manager will also be doing all of the work. In this case, remember that you will be playing different roles and understanding the role of the project manager is still important in planning and undertaking a successful project.

1.2 THE PERSON

- The role is very varied and requires a wide range of skills, including:
 - Broad experience in the conservation field and specific experience in invasive species management operations.
 - Ecological knowledge of the invasive target species and associated native species.

- An invasive species management ‘mind-set’ (a can-do attitude, motivated and dedicated to achieve the project’s goals and objectives, and an understanding that nothing less than 100% is acceptable for invasive species management purposes).
 - Good people skills, able to build and maintain positive productive working relationships with key stakeholders and staff.
 - Good communication: verbal and written.
 - Problem identification and solving.
 - Good negotiation skills, prepares cases thoroughly but is able to listen, consult and accept negative or alternative viewpoints constructively.
 - Ability to plan, prioritise, delegate appropriately, set timelines and work to deadlines.
 - Understanding of local environmental regulations.
 - Sensitive to and appreciative of local cultural perspectives
 - Knowledge of the project and its intended outcomes.
- An example Job Description for an invasive species Project Manager:

The appointee will be able to demonstrate knowledge, experience and competency in the following areas:

Essential Competencies	Behaviours
Technical knowledge and transfer skills	<ul style="list-style-type: none"> ● Able to clearly display wide and up-to-date technical knowledge and experience in the area of invasive species management theory and practice ● Understands and is able to manage project scope and scope change processes ● Understands and implements risk identification, analysis and control ● Ability and willingness to impart technical information and advice in a clear and concise manner
Communication Skills	<ul style="list-style-type: none"> ● Knows how to recognise and pitch material at the right level for different client groups ● Listens actively and constructively ● Presents information with logic and coherence, both written and oral ● Uses positive body language ● Negotiates appropriately depending on target audience
Relationship Skills	<ul style="list-style-type: none"> ● Builds and maintains positive productive working relationships with key stakeholders and staff ● Relates well to a large range of people ● Maintains a constructive and open approach when dealing with parties ● Constructively provides alternative or opposing views without creating unnecessary hostility
Negotiation Skills	<ul style="list-style-type: none"> ● Prepares cases thoroughly, convincingly and positively ● Consults in situations of conflict or differing agendas to reach agreed outcomes ● Addresses negative arguments calmly and intelligently ● Ensures parties are agreed on outcome ● An awareness of and knowledge of political implications

Contract/Project Management Skills	<ul style="list-style-type: none"> • Able to establish systems to adequately monitor progress with projects or contracts including financial aspects • Able to deal with performance issues with contractors • Able to identify and deal with risks • Demonstrates ability to plan realistically and update regularly
Planning and Organising Skills	<ul style="list-style-type: none"> • Balances competing demands • Delegates but remains appropriately involved • Demonstrates ability to be proactive in addressing issues • Assesses effectiveness of the work group • Co-ordinate others contributions advising on development of business plans, resources/budget allocation/management
Problem-solving Skills	<ul style="list-style-type: none"> • Balances competing demands of multiple projects and clients • Accurately defines the situation • Takes into account a range of factors when resolving issues • Uses appropriate framework to assess information • Understands the complexity of the problem and the impact of solutions on stakeholders • Ability to creatively plan and design tasks • Makes objective, well-reasoned decisions

2. MANAGING PEOPLE

- Handle problems and changes effectively. Request feedback from the team and incorporate their suggestions in your decisions. This input encourages them to value their role on the project team.
- Create and maintain a good working environment where identifying problems and solutions is a team task and not just the responsibility of the project manager.
- Keep the team motivated, focused and determined to succeed.
- A successful invasive species management project has to remove every last target individual if it is an eradication operation, or continue management to the agreed level if it is a control operation - but as numbers decrease, removal becomes more difficult. Progress can get harder as you near the end of the project and the team can get very dispirited. It is the role of the project manager to keep people's spirits up.
- Communication within the team is important - tell team members what is expected of them. When team members understand what is expected of them they feel encouraged to live up to expectations, feel ownership of their role and the project itself, and are more likely to be accountable when undertaking their tasks and solving issues.
- Sometimes, the scope of your project can change over time. Personnel may need to change as a result. The project manager needs to monitor the performance of the team as a whole, as well as that of individual team members, to maximise the chances of success. This may require bringing new team members in at certain points in the project timeline for specific needs, or moving members out of the team as needed. Personnel who are underperforming need to be either motivated to improve performance, or removed from the project team.

2.1 SELECTING THE PROJECT TEAM

- Consider two key questions:
 - What are the key planning issues and components of the project?
 - What sorts of skills do you require to address these issues?
- Here is an example of how you might work this out:

Category	Planning issues	Key skills, knowledge required
Environmental	What invasive species are present? What native species are present? What knowledge do you have about their impacts and abundance? What effects are invasive species having? (Consider social and economic effects as well as environmental)	Invasive species ecology and management Native species ecology and management Public health impacts
Social	Identifying stakeholders Organising community consultation and involvement Identifying and managing any opposition to the project	Local knowledge, mana/social standing Community liaison/involvement
Cultural	Resource ownership issues Gender or age issues Customs	Local knowledge, mana/social standing
Economic	Effects on livelihoods and businesses	Understanding of local economy, good relationships with local businesses
Technical	What invasive species management techniques are available? What effects will they have on non-target species? What are the risks and benefits? Is reinvasion an issue? What monitoring is required before, during and after?	Relevant invasive species management techniques Non-target identification and management Biosecurity management Monitoring systems
Financial and institutional	Who will fund and manage the project? Is there the capacity to do the project within your country or region? Do the benefits outweigh the costs?	Project management Cost-benefit analysis Financial management

- The project team will vary through the stages of the project: the needs of the feasibility study team are different to those of the operational team; one is a fact finding/research stage while the operation is about doing the work. Choose the people most suitable to the job in hand.
- Identify suitable independent technical advisors early in the feasibility study stage and try to use the same ones throughout the whole project. This will allow the independent technical advisor to build up an in-depth knowledge of the project and make their advice and reviews more useful.

- Understand the specific needs of the project. Every project is different and the makeup of a team needs to reflect the specific goals of the project. You may be tempted to use the same team for every project, but consider whether this is the most efficient use of skills and time for the people involved. Review the specific project tasks, and determine what specific backgrounds and skills are required. Then see whether you can use the same team or if you need new skills.
- Select team members to meet the needs of the project. Project team members should be the people that are the best suited and will get the job done. Review the specific needs of the project and select team members that meet project requirements. Place high priority on previous experience and on enthusiasm for the project.
- For example, not all team members may be suited to GPS work which requires experience in using GPS units and an understanding of how the data that is collected is used. Relatively few people have this sort of experience.
- All projects should have an identified and well-briefed 'understudy' to the Project Manager, who can take over from the Project Manager if necessary, in times of illness, injury, change of jobs, etc.
- Team members must understand they are part of a wider team, and must work harmoniously within it, even in often testing and remote conditions. Team dynamics need to be considered, ensuring motivation and support are high.
- In invasive species management operations, every team member must be fully committed to the operation – a mistake, careless action or failure to carry out work in accordance to operational requirements by any one person could easily result in failure of the entire project.
- It requires commitment from the whole team to achieve success in either an eradication or a control project. Those involved in the operation need to understand that both types of projects are quite different.
- Select the team very carefully, with at least 50% of all field staff having prior invasive species management experience if at all possible, so each 'novice' can be assigned to an experienced on-site 'mentor' or supervisor.
- Do everything possible to maintain positive morale. Ensure working conditions are as comfortable as possible and set an achievable work schedule according to the abilities of the slowest team members.
- Considerable fitness is required for many invasive species management operations – heavy loads are regularly lifted and/or often carried large distances. A high level of fitness in each team member will reduce the likelihood of mistakes being made through fatigue.
- Project managers need a very high level of skill in project management and organising logistics. Keeping teams in good morale and working effectively in remote locations for often extended periods is a major component of successful invasive species management operations.
- Understand the goals and expectations of your team. Make sure your team is clear about the objectives of the work by communicating clearly about their roles, responsibilities and deadlines. Do this regularly throughout the life of the project.
- Assess the strengths and weaknesses of each team member. Regularly evaluate the performance and ability of each team member to meet deadlines. Delegate work based on the skill and interest level of each person. It's important to ensure team members do not get overloaded or given tasks they do not have the skills to do (unless training is provided).
- Bring in new members to fill gaps and build capacity. If your team has no experience with management techniques for the target invasive species, for example, consider bringing in a technical adviser early on. This will

reduce the chances of making mistakes and give you the means to train your own people, leading to increased local capacity and experience.

- Have clear roles for each team member – people work better when they have a clear set of responsibilities.
- An example of how this might work for the feasibility study stage of an invasive species management project on a remote site:

Team member	Key work areas	Responsible for:
Project Manager	Manage project team Collate information	Writing the Feasibility Study Report
Specialist in management of the target species	Invasive species management and ecology	Summary of invasive species management methods available, preferred method and effects on native species Logistics required to support invasive species management operation Operational monitoring requirements
Biosecurity specialist	Biosecurity risk and management	Identifying pathways and biosecurity risks.
Community/social adviser Local community elder/cultural adviser	Community liaison and management	List of key community groups and issues and how to engage and work with them. Identification of any sensitive cultural or social issues
Ecologist with experience of the affected ecosystem	Native species management and ecology	What species are present? What monitoring is required? What effects are invasive species having on them and what are the benefits or risks of invasive species management?

- Prepare a skills register table with all the project staff identifying the different skills they have. By doing this you will identify what the capacity needs are for your team. Here is an example:

Staff Name	Staff 1	Staff 2	Staff 3
Project Role	Project Manager	Team leader	Technical advisor
Years of Experience	8	25	5
Highest Qualification			
SKILLS			
Research			
Planning			
Manage Resources			
Manage Finances			
Report			
Analyse			
Local Chiefly Title			
GIS			
People Management			
Office			
Advanced Plant ID			
Navigation			

GPS			
Site Recording			
Daily Records			
Planting			
Local language skills			
4 Wheel Driving			
Drivers License			
First Aid			
Tree Felling			
Chainsaw certificate			
Foliar spray Experience			
Foliar spray Certificate			
Cut Stump Application			
Herbicide Properties			
Site Searching			
Weed ID			
Hand Tools			
Health & Safety			
Employee Induction			

2.2 ROLE OF THE INDEPENDENT TECHNICAL ADVISOR

- Provides advice to project manager and reviews Feasibility Study Report.
- Remains independent from the project team; does not directly contribute to or complete work on the project.
- Provides advice and mentoring to the project manager and team.
- Acts as an independent check for key project documents, e.g. Feasibility Study Report, by completing document reviews.
- There may need to be more than one independent technical advisor to cover all aspects of a project.

2.3 REALISTIC TIMEFRAMES

- Consider each work area and what it will take to get the outputs. If you already have good information, such as the effects invasive species are having on native species, it will take less time to put this into a report than if you have to undertake monitoring or research.
- Community liaison, management and identifying stakeholders can be very time-consuming. People need time to understand the project, talk to their families and possibly have community meetings. You can't rush this but you can manage it by ensuring you have a team member who is well respected in the local community and can guide them in their discussions and decision making.
- Some of your team members may work in distant locations. Your invasive species management specialist may be in New Zealand and you will need to allow time for information to be passed back and forth, research to be done and final results to be sent back to you.

3. SETTING GOALS, OBJECTIVES AND OUTCOMES

- If a project is to be successful, as project manager you must clearly understand and communicate; why you are doing the project, what the project will achieve, the resulting benefits.
- In a funding application to an external organization you will need to define goals, objectives and outcomes to help the funders understand the project.

3.1 WHAT ARE THEY?

GOAL	A goal is a long term, general desired result.
OBJECTIVE	An objective is a specific achievement on the way to the goal. A goal can have several associated objectives.
OUTCOME	An outcome is a change resulting from the achievement of an objective. Achieving an objective can mean one or more outcomes are produced.

3.2 BEING SMART

- A useful acronym to remember when setting objective or outcomes is SMART
- SMART is a generic reminder used in all branches of project management
- SMART is a useful reminder for the key characteristics of a complete and well written objective:

Specific

This means that the objective is concrete, detailed, focused and well defined. Specific means that it's results and action-orientated. Objectives must be straightforward and emphasize action and the required outcome. Objectives need to communicate what you would like to see happen.

Measurable

If you can't measure the outcome of the objective , you can't manage it. Being able to measure the outcome allows you to monitor changes and to clearly establish whether you achieved the objective.

Achievable

You need to have a realistic chance of achieving the objective. Objectives that are too ambitious or too far into the future will cause low morale in the team, will not be achieved and the project will have failed.

Relevant

Objectives need to be directly related to the goals and be a stepping-stone towards achieving the goal.

Time-bound

You need to commit to when you will achieve the objective. Planning deadlines for achieving the objectives will keep the team focused on completing the work and increase the chances of success. Deadlines create the necessary sense of urgency and prompt actions.

- When setting objectives and outcomes remember to ask: is my objective SMART? This will help produce a more useful result.

4. PROJECT DOCUMENTS

4.1 THE NEED FOR DOCUMENTATION

- Project documentation is a key part to making a project successful. While some documentation can take a lot of time to complete it is all useful effort. Ensure sufficient time is allocated in the project for completing the required independently-reviewed project documentation.
- As projects get larger in size, the importance of documentation also grows.
- The importance of project documentation:
 - Communication. Having all the details of a project in one place greatly helps you easily explain the why-what-how-when of a project to others: within the project team and to others.
 - It makes you plan. Much of the project documentation is about recording the plans for later stages.
 - Experience has taught us that a lot of planning is required beforehand to make the operation a success. By recording the plans in documents ensures that this vital planning is completed.
 - Centralized information. As you move through the planning processes you will gather together large amounts of vital information and plans. Recording the information in a few key documents ensures that everybody in the project team will know where to look if they are in need of project information.
 - Changes in the team. Invasive species management projects can take a long time –projects will often span many years. Over such long periods, the people involved with the project will change and people will forget details. Keeping clear and detailed notes and completing all the documentation will help capture all the vital information and will help you as Project Manager to explain the details and history of the project to new team members.
 - Funding applications. You will be able to use the project documents to support funding applications to agencies.
 - Helps with reviews and making improvements to the project.
 - Accountability. If something goes wrong a good paper trail will help identify what happened and prevent this happening again. It will show if staff were following the plan and procedures.

4.2 INDEPENDENT REVIEWS

- Independent reviews of all key project documents is a key step in a successful project.
- An independent review is when a knowledgeable expert, who has no relationship or involvement with the project, reads a document and, using their experience and expertise, provides feedback to the project manager on all aspects of the document.
- Independent reviews give the project team the opportunity to check that they are doing everything they need to do, that they have made the correct decisions and are considering everything relevant to the project.

- While independent reviewers can offer advice and guidance to the team, it is important that they do not become directly involved in completing the project work or documentation – keeping their distance and separation from the project is important if they are to be useful as independent reviewers.
- Independent reviews are standard project methods, used widely to help project teams.
- Independent reviews demonstrate to funders that the project team are using all available expertise and make funders more confident that the project will achieve its objectives.
- Independent reviews can occur at any time when preparing a document; in fact, it is better not to leave the first review until you have nearly completed the document as you may have spent a lot of time writing a document only to be told by an external reviewer that you have made some serious mistakes – review often and early.
- The number of reviewers depends on the project and the available reviewers.
- It is usual to have more than one reviewer review a document so each reviewer can bring different expertise to the review process. For example, the Feasibility Study Report (prepared in the Feasibility Study Stage) has sections on ‘invasive species management techniques’ and ‘social issues’ – it is unlikely that one reviewer will be an expert in both areas, so separate reviewers may be required.
- Identify your independent reviews early and seek their agreement to act as reviewers when you begin writing the document. Some experts are very busy and may need plenty of warning.
- It is helpful to document who has reviewed the document on the front page of the document – this allows you to demonstrate to readers that experts have contributed to the writing of the document.
- Independent reviews are particularly important for project managers who have not undertaken many invasive species management projects and have not built up significant experience of their own. However, even experienced project managers can benefit from external reviews.

4.2.1 BENEFITS OF INDEPENDENT REVIEWS

- The final version will be a better, more complete document
- Improves the planning process so improves the chances of the project success
- You will learn and be a better, more knowledgeable project manager
- You can demonstrate you are following best practice
- You can demonstrate to funders and managers that the document is of high quality

5. PROJECT PLANNING

5.1 PLANNING TOOLS

- There are many useful tools available to make planning easier for the project manager. Which tools a project manager uses will depend on many factors, for example: their experience, the agency, the size of the project.
- Some useful tools to help project managers with planning:

5.1.1 CHECKLISTS

- One of the simplest planning tools – simply a list of tasks and a column to indicate when it has to be completed.

An example checklist for preparing for a site visit:

Task	Tick when completed
Agree site visit team	✓
Purchase GPS	✓
Train team in using a GPS	
Assemble and check all the equipment	
Agree site visit protocols and agenda with village chief	✓
Prepare biosecurity loading checklist	
Prepare site visit plan	

5.1.2 TASK SCHEDULE

- A tabular format that includes who is responsible and required completion date

An example task schedule:

Task	Who is responsible	Output	Time/Date completed
Agree site visit team	M. Toa	Team list	4 May
Purchase GPS	Viliamu Reed	GPS is ready for site visit	18 May
Train team in using a GPS unit	Viliamu Reed	Team can undertake the required monitoring	2 June
Assemble and check all the equipment	Viliamu Reed	Team understand the objectives of the trip and their roles	9 June
Agree site visit protocols and plan with village chief	M. Toa	Village support and involvement in site visit	4 May
Prepare biosecurity loading checklist	Viliamu Reed	Actions required by team when loading vehicle/boat to prevent any invasive species getting onto site	9 June
Finalise site visit plan	M. Toa	A clear plan of what the team will be doing during the visit	9 June
Site Visit	M. Toa	Feasibility Study Report	23 – 24 June

5.1.3 GANTTCHART

- A Gantt chart is a graphical representation of the tasks. They can start off very simple and become quite complex if required.
- Gantt charts can be prepared on paper or using an Excel spreadsheet or more sophisticated software, for example Microsoft Project.

Example of a simple Gantt chart:

Task	Responsible	4 May	11 May	18 May	25 May	2 June	9 June	16 June	23 June
Agree site visit team	M. Toa								
Purchase GPS	Viliamu Reed								
Train team in using a GPS	Viliamu Reed								
Assemble and check all the equipment	Viliamu Reed								
Agree site visit protocols with village chief	M. Toa								
Prepare biosecurity loading checklist	Viliamu Reed								
Finalise site visit plan	M. Toa								
Site Visit	M. Toa								

Example of a Gantt chart showing tasks dependent on other tasks. Column Task Dependency indicates which tasks need to be completed before a task can start. For example; training the team in using the GPS (Task 3) cannot be started until the GPS has been bought (Task 2).

Task no.	Task	Responsible	Task dependency	4 May	11 May	18 May	25 May	2 June	9 June	16 June	23 June
1	Agree site visit team	M. Toa									
2	Purchase GPS	Viliamu Reed									
3	Train team in using a	Viliamu Reed	1,2								
4	Assemble and check all equipment	Viliamu Reed	3								
5	Agree site visit protocols and plan with village chief	M. Toa									
6	Prepare biosecurity loading checklist	Viliamu Reed									
7	Finalise site visit plan	M. Toa	5								
8	Site Visit	M. Toa	1,2,3,4,5,6,7								

Example of a Gantt chart used in a rat eradication operation report. From Wegmann, *et al*, 2009.

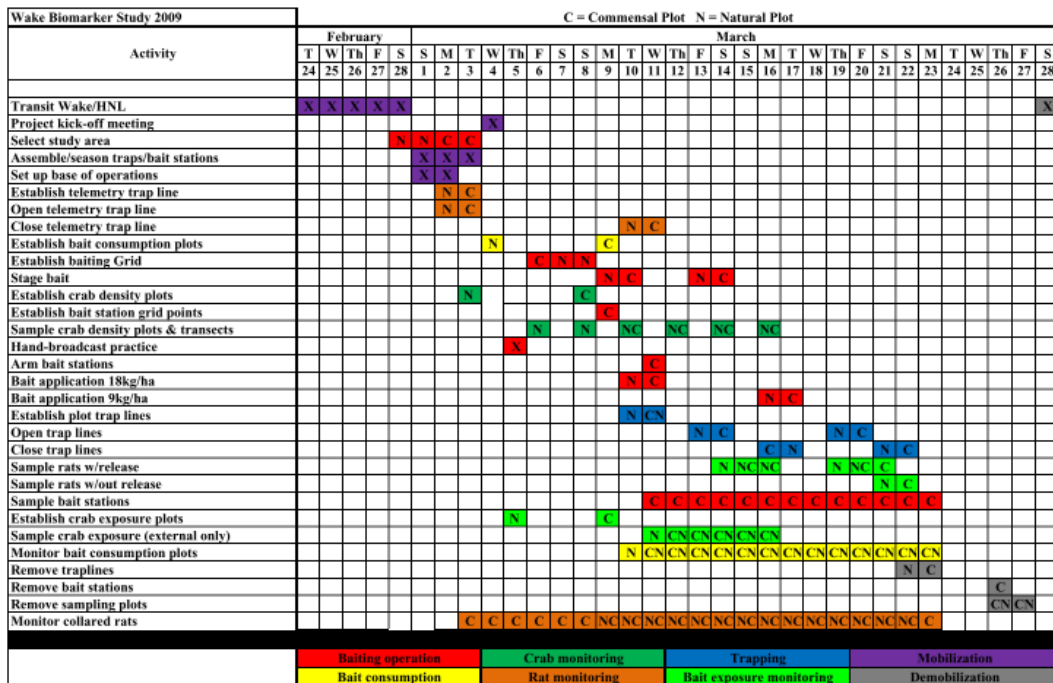


Figure 2. Gantt chart of Wake rat eradication biomarker study activities as they occurred 24 February to 28 March 2009.

5.2 COSTING PROJECTS

5.2.1 CONTINGENCY

- It is often very difficult to exactly predict all the costs of a project during planning as during the actual project, costs increase for a number of reasons. For example; unforeseen work will be required, prices will increase, equipment will get damaged. These uncertainties are handled by including a contingency amount in the project budget.
- Once individual activities and expenses have been identified and costed as accurately as possible and a sub-total calculated, add a contingency amount to the sub-total. The contingency is to cover the unforeseen or unexpected costs.
- As you work through the planning stages, you should be able to identify and cost most activities, but the higher the risk of unforeseen costs occurring, the higher the contingency should be.
- Calculate the contingency as a percentage of the sub-total. A contingency of 20% is a typical amount, for example, if the budget is estimated as \$USD1,000, then requested a contingency of \$USD200 which gives a total project budget of \$USD1,200.
- Some funders and implementing agencies may have organizationally mandated contingency amounts. Some funders do not allow the use of contingency amounts. Check with them before costing the project.
- During the project stage, the contingency money is not allocated to the planned work; it is held in reserve to be used only if the budget over-runs or a cost not in the project plan is encountered.

5.2.2 ON-GOING COSTS

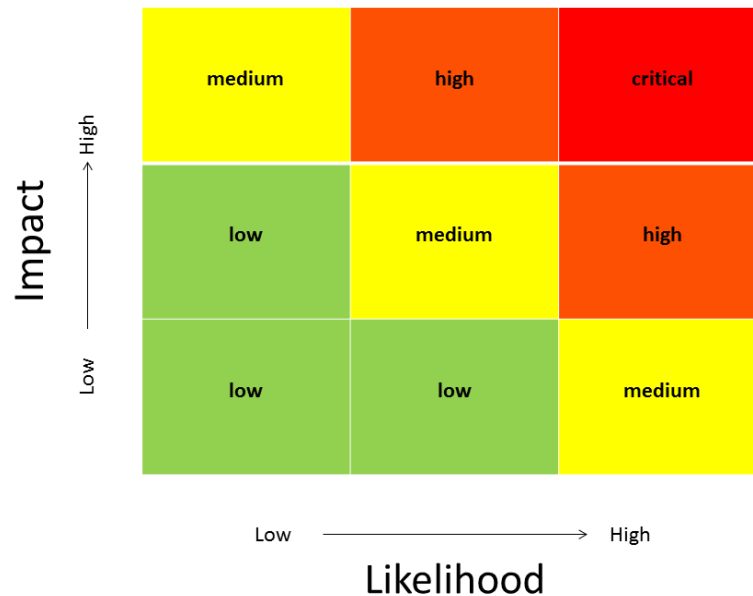
- Consider how you will fund the biosecurity measures long-term after the invasive species management operation is completed and the operation team have moved onto other projects.
- The Sustaining the Project Stage may run for many years. For example; Biosecurity costs may need to continue indefinitely. When estimating the budget for this stage it is important to carefully cost those activities that will continue every year (ongoing costs).
- Such ongoing costs in the Sustaining the Project Stage could include, for example:
 - Annual salaries of people undertaking surveillance.
 - Amount spent each year on travel for surveillance.
 - Costs to repair Biosecurity information signs.
 - Costs to repair/replace equipment used for surveillance.
- In any budget, indicate the ongoing costs required per year and over a specified number of years by multiplying the annual ongoing cost by the number of years. Also include the total cost of the specified number of years.
- Be clear about how many years of ongoing costs this will fund – remember after that there will be no funding to continue the biosecurity measures!
- Be very clear in the budget how many years of funding is being requested for the Sustaining the Project Stage.

6. RISK MANAGEMENT

- A risk is a problem that may occur, but you do not know for sure it will. A risk is ‘something bad that is likely to happen that will affect the project’.
- Risk management is planning how to reduce the likelihood of a risk occurring or what to do if a risk does occur.
- Risk management is made up of:
 - Risk analysis – identifying the risks and the impacts.
 - Risk Management – planning how to deal with each risk.
- There are 2 independent factors to the severity of the risk:
 - **Likelihood** is a measure of the chance that the event will happen.
 - **Impact** is a measure of the effect(s) if the risk were to occur.

6.1 RISK MATRIX

- Risk is the result of the combined effect of the 2 independent factors (likelihood and impact) and is often portrayed as a risk matrix –



- When using the risk matrix, analyse the Likelihood and Impact of the risk and allocate it to one of the matrix positions. The most severe risks are those that are most likely to occur and would have the worst effect and, when the 2 factors are combined, would be positioned in the top right hand of the matrix and are Critical. Severity of risk reduces as the Likelihood reduces (moving left on the matrix) and as the Impact reduces (moving down the matrix). The bottom left hand corner of the matrix represents low severity risks that are low impact and unlikely to occur.
- Risks should be prioritised based on how close they lie to the top right hand corner of the matrix: those closest are most critical and should be managed with highest priority. As you move away from the critical corner the severity and priority decreases.

7. COMMUNICATION

- Communication is a key part of a project manager's responsibilities. They need to ensure that right communication is happening within the team and between the team and the project stakeholders.
- Communication with project stakeholders is covered in detail in the Guidelines on Stakeholder Engagement.
- Communication can take many forms – you should use the format most suitable to the purpose and the audience.
- Some ways of communicating within the project:
 - One-on-one and face-to-face meetings
 - Team meetings
 - Letter
 - Telephone
 - Email

- Skype
- Social media

8. PROJECT GOVERNANCE

8.1 DECISION MAKING

- It must be clearly agreed and documented who is authorized to make key decisions in the project.
- If the agreed project or operational plans need changing, the documented decision-making authority will be used to decide how these decisions will be made.
- Decision-making authority will be recorded in the project plan.

8.2 PROJECT MONITORING

- Three levels of monitoring are required:
 - 1) The project status; budget, milestones, team performance, etc.
 - 2) The operation; treatment methods, materials, tools, team safety, etc.
 - 3) The conservation outcomes; changes in the natural environment as a result of project activities.
- At the start of the project, select indicators that relate directly to the outcome or objective to be measured for each level of monitoring and that are practical and affordable,.
- Monitoring method(s) must relate directly to indicator(s) and may be: Qualitative (visual assessment that can't be measured, i.e. based on observations, e.g. photo-points) ; or Quantitative (can be measured, e.g. marked plots or quadrats where you count actual plants or other species, amount of herbicide used, length of time for hand-pulling).
- The Project Manager uses monitoring information to:
 - Give a view of project status and direct what the project manager needs to do to keep the project on track.
 - Determine that treatments are being applied correctly and safely.
 - Ensure conservation outcomes are achieved.
 - Report on the status of the project to funders and management.
- Budget spent and budget remaining are key indicators that should be included in all project management monitoring.
- Outcome monitoring will be undertaken as part of the monitoring work in Implementation. Project and Operational monitoring continues throughout the project.

8.3 PROJECT REPORTING

- It is important that key stakeholders are kept informed of progress of the project – ongoing communication throughout the project will help retain interest and involvement.

- During Project Design, the project manager will document in the Project Plan what reporting is required.
- When deciding on the reporting, you need to consider:
 - What monitoring information to include
 - Frequency of reporting.
 - Format of the report.
 - Which stakeholders will receive the reports.
 - Do you need more than one report to address different stakeholder needs?
- The Project Manager could get monthly reports from staff involved with different parts of the project. These can be simple one page reports with four headings:
 1. What did you do in the previous month?
 2. What are you going to do in the next month?
 3. What support do you need?
 4. General comments?

9. MANAGING THE WORK

- 'Plan the work and then work the plan'. Stick to the plan – a lot of time and thinking will have gone into the plan and task schedule by the time the work begins. Any changes, once the work is underway, should be made only after careful consideration of the impacts.
- Before commencing any work, ensure those taking part understand the why, what, who and how of the work.
- The project manager is responsible for clearly explaining to the team all aspects of the work.
- Regular briefings before the operation and a debrief after each treatment application can help achieve this.
- Throughout the work, keep the team informed of progress.
- Communicate any changes to the plan widely within the team.
- Checklists are a great way of tracking which tasks have been completed, which are in progress and which are yet to start.
- Health and safety of the team is always paramount when undertaking work in remote and dangerous locations.
- As project manager, you are responsible for the morale and spirits of the team. Projects can involve long hours working in difficult and demanding conditions – remember to spend time on ensuring that team morale stays high throughout the operation. Keeping the team's morale high will keep them focused on the work.
- Remember to ensure that all the post-operation activities are undertaken. Often, the excitement of completing a treatment means some non-essential activities, e.g. cleaning and packing equipment and cleaning up the project site, are overlooked.