

# **PNG National Forest Inventory Research Skills Workshop**

**FAO Mountain Partnership**

**Presented by; Sapienza University of Rome, Italy  
and The University of Queensland, Australia**

**PNG Forest Research Institute, Feb 2018**



## Session 7

# Research Plan Presentations

## Day 2 Session 7 Exercise

- Everyone will be required to present an outline of their Research Plan/Proposal in this Session (7) at 1300hr to 1430hr.
- The outline should follow the suggested research plan structure (example included in next few slides) and include at least one and up to three key points under each heading.
- Please take some time now to finalise your Research Plans.

## Research Plan Format

- Title
- Introduction, Rationale, Research Problem & Questions
- Literature Review (Synthesis and Significance)
- Methodology (Data Collection and Analysis)
- Projected Timeline and Resource Requirements
- Expected Limitations
- Expected Results
- References – *not to be included today*

# Example – Research Plan/Proposal

## 1. Title

Assessing the effectiveness of peatland forest restoration activities in Central Kalimantan Indonesia

## 2. Rationale, Research Problem and Research Questions

Rationale : There are more than 4 million ha of degraded peatlands in Indonesia. Low intensity, extensive fires are common on degraded peatlands. Peatland fires in Indonesia are one of the world's worst environmental problems. Major efforts are underway to restore degraded peatlands but little evidence exists about how we can assess whether these restoration activities are likely to be successful.

RP: How should the effectiveness of peatland forest restoration activities in Central Kalimantan Indonesia be assessed?

RQ 1 What methods are available to restore peatland forest ecosystems in Central Kalimantan?

RQ 2 What are the key hydrological, biogeochemical, biological and socio-economic indicators of peatland restoration effectiveness in Central Kalimantan Indonesia?

RQ 3 How can the hydrological, biogeochemical, biological and socio-economics aspects of restoration activities be usefully integrated to assess peatland restoration effectiveness in Central Kalimantan?

# Example

## 3. Literature Review

Whilst a lot has been published on methods to restore peatland ecosystems in temperate regions, very little has been published on methods to restore tropical peatlands. Moreover, no publication has addressed how various aspects of restoration (which can be classified as hydrological, biogeochemical, biological and socio-economic) can be integrated in a framework that can be used to assess the effectiveness of tropical peatland restoration activities.

## 4. Methodology

RQ 1 – Use case studies to examine the characteristics of several existing restoration initiatives in Central Kalimantan.

RQ 2 – Use three reference sites that represent peatlands that are fully degraded, partly restored and fully restored, to establish indicators of hydrological, biogeochemical, biological and socio-economics restoration effectiveness in Central Kalimantan.

RQ 3 – Use systems dynamics modelling methods to develop a framework that integrates hydrological, biogeochemical, biological and socio-economics aspects of peatland restoration into a framework to assess peatland forest restoration effectiveness in Central Kalimantan.

# Example

## 5. Timeline and Resources

- The project will take three years
- Year 1 will be used for planning and to address RQ1; Year 2 will be focussed on collecting data for RQ 2; Year 3 will focus on RQ 3
- The budget for the project is US\$150,000 over three years

## 6. Expected Limitations

- How comprehensive will the use of only three reference sites be?
- How applicable are the results to areas outside of Central Kalimantan?
- Is three years long enough to complete the project, or should RQ 3 be separated as a distinct additional project with additional budget?

## 7. Expected Results

RQ1 – A series of case studies that review existing restoration activities in the region

RQ 2 – A series of tables of indicators of restoration effectiveness derived from the reference sites

RQ 3 – A systems dynamics model that provides a tool/measure of tropical peatland restoration effectiveness

# Presentations

- Dambis Kaip PNGFA
- Constin Bigol PNGFA
- Gewa Gamoga PNGFA
- Elizabeth Kaidong PNGFA
- Samuel Gibson PNGFA
- Bruno Kuroh PNGFA/FRI
- Miller Kawanamo PNGFA/FRI
- Penniel Lamei PNGFA/FRI
- Tiberius Jimbo PNGFA/FRI
- Peter Homot PNGFA/FRI
- Graham Kaina PNGA/FRI
- June Mandawali PNGFA/FRI
- Leroy Moripi PNGUoT
- Gibson Sosanika BRC
- Redley Opasa BRC
- Jacob Yombai BRC
- Bulisa Iova BRC
- Jason Paliau/Robert Kiapranis
- John Pena NFI/FAO
- Kasbert Evei NFI/FAO



## Summary Discussion

What makes for a good research plan/proposal?

## Session 8

# Successfully Managing Research Projects

## Managing Successful Research

In this session we highlight five important elements to managing successful research projects;

1. Timelines and Resources
2. Managing the Relationship with your Supervisor
3. Linking Results with Objectives
4. Identifying Limitations
5. Communicating your Results

## 1. Time and Resources

- Often the biggest challenge
- Should be included in your research plan/proposal
- Seek advice on whether you have things covered

## 1a Timelines

- Have you clearly identified the major tasks and stages of your project and the time required for each?
- Have you defined a detailed schedule of tasks?
- When will you begin and finish?
- What stages need to be completed before others are carried out?
- Have you presented your tasks and timeline as a flow chart and a Gantt chart?
- If your timeline logical and realistic? Is enough time allocated to each stage?

## 1b Resources

- What resources are needed to carry out your research; software, hardware, data, equipment?
- Identify resources required at each stage of your methods
- What resources are available?
- What resources need to be purchased/procured?
- Do you have the funding to support these purchases?
- Have you included a draft budget in your plan/proposal?
- Is your budget realistic? **What happens if it isn't?**

## Resources

- Have you listed all required resources and their costs?
- Have you included all expenses?
- Will you require additional funding?
- Do you need to develop additional skills?

Discussion – How do you get access to international peer-reviewed literature in PNG?

## 1b Resources

Complete this sort of table for your plan/proposal;

KEY OBJECTIVES	DATA EQUIPMENT	SOURCES	AVAILABILITY	COST
Collect soil samples	GPS, transport, auger	PNGFA	Yes	\$300
Geocoding	GIS consultant	?	?	>\$500

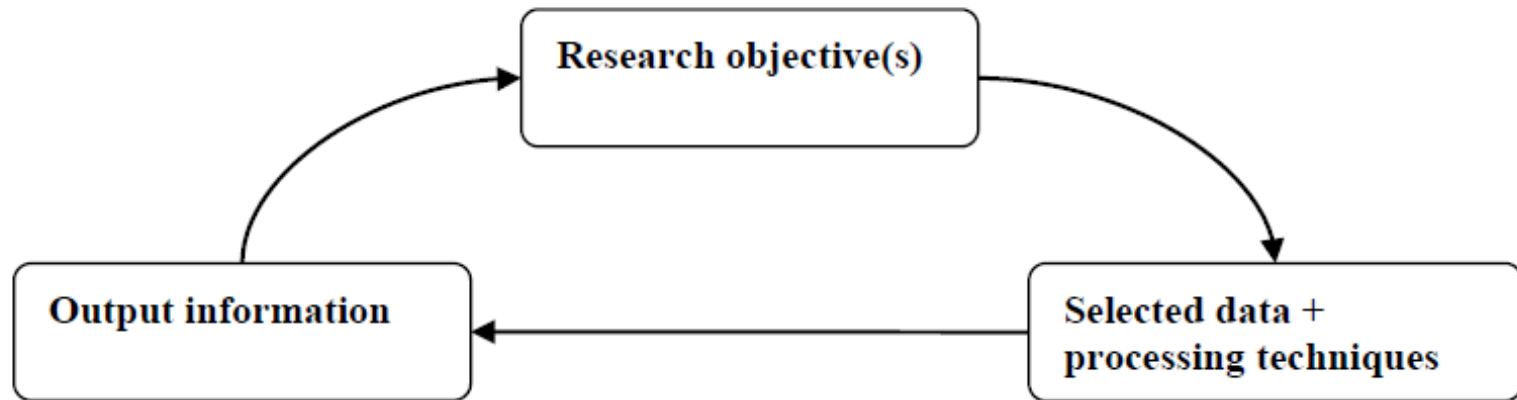


## 2. Supervision and Support

- Refer again to the table on page 6 of the handbook
- The relationship with your academic supervisors is very important. The table on page 6 of the workshop handbook outlines some useful issues to discuss with your supervisor.

Discussion - Overseas expert academic supervision discussion

### 3. Linking Results to Objectives



### 3. Linking Results to Objectives

You need to include a paragraph in your plan that identifies the type of output information from each stage of your methodology and directly link it to one or more of your research questions/objectives.

### 3. Linking Results to Objectives

*Results*

<b>Key Objective</b>	<b>Output/Results</b>	<b>Limitations</b>

## 4. Identifying Limitations

*Why identify limitations of your research?*

To demonstrate;

- Your understanding of the research problem
- Your understanding of the data collection methods
- Your understanding of data analysis methods
- Establish contingency plans
- Justify your approach and conclusions

## 4. Identifying Limitations

*What can go wrong probably will go wrong...*

- Weather events
- Sickness and personal issues
- Depending on other people
- Equipment fails
- Software and computer problems

## 4. Identifying Limitations

- Research design is an iterative process
- Assess the 'risk' and 'seriousness' of a limitations
- Should you add a contingency to your timeline?
- Consider how your suggestions for future research projects could be used to manage the limitations of your current research

Discussion – What are some limitations you think you will or have already encountered in your research?

## 5. Communicating Results

- Communicating your results is a very important part of successful research. If you have done good research, your colleagues need to know about it.
- There are two main ways to communicate your results;
  - Presentations
  - Publications



## 5. Communicating Results - Presentation Design

- Definition of presentation purpose
- Recognition of audience composition
- Presentation structure
- Presentation content
- Use of presentation media
- Identification of likely questions
- Independent review and rehearsal

## 5. Communicating Results - Presentation Tips

- See page 42 and 43
- Oral delivery
- Structure
- Content
- Use of graphics
- Response to questions
- Tip.....1 slide = 2 mins talking

## 5. Communicating Results – Publications

Discussion – Can every participant here publish a paper in a good peer reviewed journal on their research project?

What needs to happen to enable that publication objective to be achieved?

## Next Steps

- Workshop 1 – Feb 2018 Lae PNG
- Workshop 2 – July 2018 Lae PNG
- Workshop 3 – Oct 2018 Brisbane, Australia
- Workshop 4 – Feb 2019 Brisbane, Australia

## Tips (lets revisit PAGE 18)

- Plan the structure of your plan/proposal
- Start writing as soon as possible
- Use a standard bibliographic software
- Back all your work up every day
- Support arguments with examples and evidence
- Be consistent with capitals, terms and acronyms
- Reference from primary sources
- Give credit to others when due
- Ask others to read your work and give feedback
- Keep it simple

Thank you for your participation.

Please email me if I can be of any assistance.

Paul Dargusch

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