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Final report

project

Enhancing project impact and science capability through ongoing evaluation

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1 Acknowledgments

This project wishes to acknowledge the contribution made by Kate Nichols. Kate was involved early in the project as an Evaluation Officer with the Victorian Department of Primary Industries (DPIV). Kate was invited to undertake a Youth Ambassador role in Vietnam and provided in-country support for the project for some months. On her return to Australia, Kate was employed by Clear Horizons Consulting, but continued to provide valuable insights and considerable input into the project. The level of success of the project is in part a result of the commitment by Kate to the Vietnam - Australia relationship and her ongoing support for the project.

The project also wishes to acknowledge the commitment and enthusiasm for monitoring and evaluation (M&E) demonstrated by the Vietnamese project partners. Their cooperation, friendship and preparedness to undertake the work has been a key in project success.

We would also like to acknowledge the contribution of ACIAR to the development of M&E within the Vietnamese government.

2 Executive summary

Monitoring and evaluation has a bright future in The Department of Science and Technology (DST) of the Ministry of Agriculture and Rural Development (MARD) as a result of this project. Some solid outcomes have been achieved including Monitoring and Evaluation (M&E) Guidelines, Science Capability Framework (SCF) and a network of trained evaluators. DST has a commitment to fully utilising these resources and are committing funds to ensure this is achieved.

The development of M&E Guidelines, published in both Vietnamese and English, for use in DST has been a large component of the project and required extensive work by both partner countries. The bringing together of cultural knowledge from the staff at DST along with the reinforcement of current evaluation thinking and practice from the Department of Primary Industries Victoria (DPIV) has established a framework upon which further evaluation capability can now be built. Support from senior staff needs to be ongoing within DST if M&E momentum is to continue becoming an entrenched part of the organisational culture.

The M&E Guidelines developed are an excellent resource for ongoing training. Staff have gained practical experience in evaluation and training and have trialled the guidelines as a training tool, of course further experience and skill development will further enhance the skill transfer process.

DST has established a network of over 100 evaluators and have designed a three tier capability structure that incorporates management, practitioners and experts to ensure that M&E is part of the normal way of doing business. DST are committing between 1.5 and 2% of the national budget for agricultural research to M&E including funds to continue training within the organisation.

The success of this project is recognised at Ministerial level within the Victorian and Vietnamese governments. Staff trained through the project are being sought by other parts of the Vietnamese government, NGOs and throughout DST. Meeting this demand will provide an ongoing challenge for DST management as unmet demand will restrict the growth of M&E within the organisation.

To assist in the process of embedding M&E within the organisation DST have taken the step to develop a set of M&E Regulations that provide the necessary institutional controls to ensure M&E momentum is not lost.

Objective 2 of the project related to the development of a tool to evaluate science capability. This was undertaken first in DPIV and then trialled in MARD. The MARD experience highlighted some points of difference relating to the prioritisation of categories that required further work by MARD in order for the tool to fit with their specific situation.

The report concludes by making the following recommendations:

1. To fully embed M&E into DST and therefore to have a continuing influence on the culture of the organisation, DST should continue to fund and conduct M&E training throughout the organisation. This may include further collaboration between DPIV and DST in the short term however in the longer term DST will be in a position to conduct its training in-house.
2. The use and application of evaluative enquiry requires an internal organisational environment that accepts positive and negative critique across and between all levels of the organisation. MARD should continue to progress towards this culture.
3. The success of collaborative projects such as this, are relationship dependant. To build strong relationships between partners, more face to face interaction would have been preferable. More travel to partner countries by both organisations would have helped improve the relationship and the project outcomes and should be more explicitly stated in future projects.
4. The impacts of this project from the adoption of the project outputs is starting to deliver changes in the way DST carriers out its business. It is too early to measure the impact conclusively at the organisational level and certainly too early at the social, environmental and economic level. An ex-post evaluation of the project is therefore recommended four years after completion.

3 Background

The Vietnamese Government is paying increasing attention to agricultural research and extension. Budgets for agricultural R&D are growing (12% per annum), as is the demand for public accountability and outcomes for the Vietnamese community. Strengthening the role of evaluation is seen as one way to start to address these challenges.

Working together with the Department of Primary Industries Victoria the Vietnamese Ministry of Agriculture and Rural Development sought to expand its internal capacity to meet the increasing demand for project evaluation and public accountability. The Department of Science and Technology (DST) were charged with this responsibility.

Within the Vietnamese Ministry an assessment approach was used to determine project success. Essentially this was a perception based approach that provided little rigour to subsequent decisions. To rise to the challenge of public accountability for investment decisions DST sought to increase its capability in the field of monitoring and evaluation.

In DPIV, the need to conduct research is linked to State Government policy priorities and the Government is also driven by a need for public accountability and measurable impacts. The efforts of DPI's Evaluation Support Team has been recognised nationally and internationally as implementing leading thinking in evaluation greatly assisting in achieving these policy aims. ACIAR and DST's interest in this practice was linked to the need for evaluation tools that can evaluate the emergent impacts of R&D and guide projects to better outcomes into the future. ACIAR approached DPIV about working in Vietnam after learning about the "story approach", an evaluation tool that was trialled and developed in DPIV (Dart, 2003).

The challenges were common to both DPIV and DST. These included:

- The increased demand for accountability in publicly-funded R&D including the demand for better outcomes for citizens
- The absence of organisational learning and evaluation systems to ensure that planned R&D outcomes occur as efficiently and effectively as possible
- The inadequacies of existing evaluation tools to evaluate "fuzzy" or poorly defined concepts such as science capability.

Important background to the project has been developing clarity of terms. Some critical terms are outlined below.

The terms capacity and capability building are frequently used interchangeably. For the purposes of clarification, this project used the following definition of science capability.

Science capability = Science capacity (people, funding, buildings, equipment)
+
Science quality (including review of methodology)
+
Science project management
+
Utilisation of science findings
+
The generation of new ideas, fore sighting and innovation.

There are many definitions of the term evaluation. In the context of this project, evaluation was defined as the systematic collection of information to improve decision making and enhance organisational learning.

Evaluation can be used for a range of different purposes. In the context of this project, evaluation has been used for three different but inter-related purposes:

1. for impact assessment to understand project results and outcomes
2. for continuous project improvement
3. for meeting the expectations of stakeholders.

It is important to note that there are different levels of impact that occur at different stages during the life of an agricultural R&D project. Broadly speaking there are three levels of impact:

1. immediate impacts which are identifiable at the end of a project
2. intermediate impacts which occur as a result of immediate impacts
3. *high-level* impacts.

In most agricultural R&D projects, high-level and intermediate impacts tend to occur some time after a project has finished. In light of this, it is only feasible that the research examined the immediate impacts of the projects it works with. In some cases it has been possible for the researchers to gain some idea about intermediate impacts.

4 Objectives

Objective 1: To develop an evaluation procedure for R&D projects suited to the DST environment

Objective 2: To develop a procedure for evaluating science capability (initially for DPIV, later for DST)

5 Methodology

Project methodology was based on participatory approaches aimed at creating the environment for maximum empowerment of project participants. The guiding principle was for be the gradual devolution of responsibility for project activities to the DST Evaluation Development Officers to increase the sustainability of the evaluation systems developed.

Approach for Objective 1: To develop an evaluation procedure for R&D projects suited to the DST environment.

The methods for Objective 1 included:

- Analysis of DST's current evaluation approaches
- Development of draft evaluation guidelines for DST
- Trial and modification of DPIV and DST evaluation guidelines on two DST/ACIAR projects initially, then on a further selection of DST projects later in the project
- Training and professional development for two DST evaluation development officers who will implement the trials mentioned in (b)
- Periodic evaluation of the trials and guidelines.

The approach for this objective was based upon one that was developed and successfully trialled by DPIV between 1999 – 2003. In brief, this approach involved:

- Gaining high-level organisational support for this work
- Testing evaluation methods that were suitable for evaluating the impact of R&D and extension programs, and that were easy for project teams to use

- Training R&D and extension projects within DPIV in-program evaluation methods and in particular, a form of program logic known as Bennett's Hierarchy
- Providing after-training support.

This approach was tested with ACIAR projects within DST and was adapted to suit the DST context. The lessons learnt from the DST trials were used to reinforce the current system within DPIV. The trial was conducted in accordance with the seven principles distilled from the DPIV trial (McDonald et al., 2003) and which included:

1. Stage, trial and grow evaluation: Start with one project, learn from that and then gradually spread to other projects. The risk of 'getting it wrong' is managed.
2. Pay attention to both developing peoples' ability to undertake credible evaluations, and to create an environment that uses and values evaluation.
3. Gain active support from senior management as well as working with project staff to determine frameworks and methods that suit them.
4. For staff, provide an educational opportunity, a peer support system, and one-to-one support to develop their skills and knowledge in evaluation.
5. Develop a common evaluation framework and language for use across an agency.
6. Ensure professional development of the evaluation leaders within an agency so that evaluation can continually improve and remain relevant.
7. Systematically and visibly evaluate each stage.

Approach for Objective 2: To develop a procedure for evaluating science capability (initially for DPIV, later for DST)

The methods used for Objective 2 included:

- Concept mapping to define areas of interest in science capability around which performance indicators and stories will be collected
- Design and implementation of a performance indicator system
- Periodic evaluation of the trials undertaken.

These methods have been applied in DPIV initially, and then were transferred to DST in the second and third years of the project. The research directly involved staff and key stakeholders from DST and DPIV.

The approach for Objective 2 was about developing an innovative M&E methodology to evaluate science capability in R&D. It combined qualitative and quantitative evaluation methods, for example performance indicators and concept mapping. Like Objective 1, the focus was on staff learning about the methods through participation so that staff can apply these methods in their work in the future. It is also complementary to Objective 1.

Objective 2 also builds on preliminary research conducted by DPIV. In brief, the preliminary research involved the following:

1. A literature review of the current ways of evaluating and defining science capability. This review found that:

- There is no singular definition of science capability. Despite this however, five themes emerged from the literature: science capacity, science quality, project management, utilisation of results and innovation.
- Quantitative performance indicators are the most common tools used to evaluate R&D.
- Even though performance indicators may be useful for measurement, they rarely create understanding about science capability or its impact.

2. A performance indicator system was developed and trialled. Indicators were selected from the literature to fit five science capability themes. The system was trialled with one DPIV R&D project to monitor their performance against performance objectives.

The preliminary research found that the performance indicator system has potential for evaluating the impact of science capability. Discussions with stakeholders though, revealed that the model was not transferable to every audience. This lack of transferability relates to the different values (or understanding of appropriate impacts) that each stakeholder has. In this project, this issue was addressed by using concept mapping.

Approach 2 sought to extend this research by conducting it in a more systematic and comprehensive manner.

6 Achievements against activities and outputs/milestones

Objective 1:To develop an evaluation procedure for R&D projects suited to the DST environment.

Activity	Milestone	Time line (Yr and m)	Comments
Appoint two Vietnamese evaluation development officers in Vietnam (PC)	Staff employed	Commence recruitment once project is approved	Completed on time
Vietnamese evaluation development officers travel to Australia for training provided by the Evaluation Support Team (PC & A)	Evaluation development officers have evaluation capacity	Yr1 – m2	Appointed officers from DST travelled to Aus and completed the Evaluation Training in Mildura
Review DST's existing evaluation practices. This will involve interviews and desktop analysis (PC & A).	Completed	Yr1 – m3	Ongoing process but was completed during the first quarter of year 2.
At a workshop, reach agreement about what evaluation methods have worked in DST (and which haven't). Determine what needs to be integrated into any project guidelines (PC & A)	Report on existing methods	Yr1 m4	Completed in the second quarter of year 2.
Development of Version 1 DST evaluation guidelines. Development and endorsement via email (PC)	Version 1 DST evaluation guidelines	Yr1 m4	Completed by October 2005
Training of two DST pilot projects in project evaluation	Projects have the capacity to implement Version 1 guidelines	Yr1 m4	Undertaken in Australia in February 2005, in Mildura, Victoria during a visit to Australia by the VN project team.
Trial the Version 1 DST evaluation guidelines (and DPIV evaluation tools) for 12 months with two ACIAR projects within DST in two different institutes (PC & A)	12 month trial completed & results documented	Yr1 m5 – Yr2 m4	Ongoing during the project, with projects identified during mid 2005, evaluation started in the 3rd quarter 2005.
Monitoring of trial implementation of Version 1 DST evaluation guidelines		Yr1 m11	Undertaken on the projects identified, with re-examination of the guidelines as a result of first trial.
Review and redevelop DST Version evaluation guidelines. Selection of 4 further trial projects (PC & A).	Version 2 DST evaluation guidelines	Yr2 m5	Further development undertaken by the VN and Aus project team members, with input from evaluation specialists from DPIV.
Training of new DST pilot project staff (PC & A)	Staff trained in project evaluation	Yr2 m6	VN staff undertook a training activity using the M&E Guidelines, engagement and commitment was a challenge.

Trial the Version 2 DST evaluation guidelines for 12 months with 4 additional DST R&D pilot projects, including some ACIAR projects. DPIV staff to provide remote support (PC).	12 month trial completed & results documented	Yr2 m6 – Yr3 m5	Trial undertaken by VN project team. Participation from VN projects in the trial was challenging, similar issues to evaluation in DPIV.
Review and redevelop DST evaluation guidelines. Workshop to be held in Vietnam (PC & A).	Version 3 DST evaluation guidelines & DST endorsement	Yr3 m6	Final version developed during a visit to VN by the Australian project officer, March 2007.
Training of further projects and DST institute staff (including managers) in the DST evaluation guidelines (PC & A).	Completed	Yr3 m7 – Yr3 m8	Over 100 staff now trained. Three tier evaluation support system established. Regulations drafted to establish controls
Development of publications (PC & A).	Publications produced & disseminated	Yr3 m9 – Yr3 m10	The final guidelines, signed by Minster Helper, Victorian Agriculture Minister and Mr. Bui Ba Bong, Vice Minister, The Ministry of Agriculture and Rural Development and published in both Vietnamese and English
Workshops/seminars to disseminate the outcomes of the research including the DST evaluation guidelines (PC & A)	Publications produced & disseminated	Yr3 m11	Delivery of a paper at the Australasian Evaluation society Conference in Melbourne, September 2007, by the VN Project Team.
Final project negotiations & planning of next steps for DPIV & ACIAR (PC & A)	Next steps determined	Yr3 m11 - Yr3 m12	In-country meeting between DPIV and MARD in June 08 to discuss & finalise the report and recommendations Included as recommendations to this report.

PC = partner country, A = Australia

Objective 2: To develop a procedure for evaluating science capability (initially for DPIV, later for DST)

Activity	Milestone	Time line (Yr and m)	comments
Identify DPIV projects & stakeholders to participate in Objective 2 (A).	Projects & stakeholders identified	Yr1 m1	Completed on schedule
Undertake concept mapping in DPIV to work out what stakeholders value about science capability (A)	Concept maps produced	Yr1 m1 – Yr1 m3	Completed on schedule
Design and implement performance indicator system, for monitoring the tangible and measurable dimensions of science capability in DPIV. Implement for 12 months (A)	12 month trial completed & performance data collected	Yr1 m4 – Yr2 m3	This ongoing aspect was completed on time.
Design and trial the story approach to complement the performance indicator system. Implement for 12 months (A)	12 month trial completed & performance data collected	Yr1 m4 – Yr2 m3	In consultation with DST and ACIAR, this activity was amended and removed in the project agreement.
Review of 12 month DPIV trial period. Make recommendations for DPIV & consider viability for DST (A)	Recommendations for DPIV	Yr2 m4	Complete
Present & discuss results with DST project team in Australia. Determine viability & next steps (PC & A)	Trial process for DST developed. Projects/institutes/ stakeholders identified	Yr2 m5	Completed
Undertake concept mapping in DST. DPIV to assist with process (PC & A)	Included in training undertaken by DPIV	Yr2 m6 Yr3 m7	Completed

PC = partner country, A = Australia

7 Key results and discussion

The Vietnamese Government recognise the importance of agriculture to their economy. This in part is driven by international investor requirements and is resulting in an annual budget increase of 12% per annum. With this comes increased accountability. DST are being asked to determine the benefit to farmers of this increase in budget. In response DST have made a strategic decision to spend 1.5 to 2% of their budget on M&E activities. This equates to M&E budget of approximately $670,000 USD per annum.

This project has delivered a range of results that are already starting to generate improvements for DST. It has provided key learning's that can be taken forward into subsequent projects both within the Victorian and Vietnamese governments. The results of the project are providing the capacity for a sustained effort by DST to fully implement the outputs of the project as well as building on them to provide a monitoring framework which institutionalises M&E within the organisation. Key results can be categorised into three areas, M&E guidelines, a science capability framework and building internal evaluation capability via formal training and specialist support activities.

Monitoring and Evaluation Guidelines

The development of a set of Monitoring and Evaluation Guidelines which have been endorsed by both by Mr. Bui Ba Bong, Vice Minister, The Ministry of Agriculture and Rural Development, the Government of Vietnam and Minister Joe Helper, Agriculture Minister, the Government of Victoria has been an excellent result. These guidelines published in both Vietnamese and English have recently been distributed to the DST institutes. They are now supported by a set of Monitoring and Evaluation Regulations that provide the necessary institutional arrangements that will ensure the effort of this project have an enduring legacy. It is too early to tell the impact of these guidelines and regulations on the economic, social and environmental contribution DST makes. What is noticeable is the improvement in the documentation prepared by DST researchers during project initiation and development as well as a noticeable improvement in ex-ante evaluation. DPIV's experience indicates that the use of evaluation at project development increases the quality of project design and delivery and provides data for evidence with ex-ante evaluation. This improvement is attributed to the network of over 100 trained staff now in place across the organisation and the high level commitment given to M&E. This commitment is evident as high in the organisation as the Minister who chairs the Science and Technology Council and recently led a discussion the importance of M&E in MARD.

DST recognise that while the project has created great successes and that the level of M&E expertise is enhanced through the development and distribution of the guidelines there still exists some old culture that wants to continue the old ways and focus on assessment without evidence as the means of determining project success. Within DST there is the strong desire to change this culture. Implementation the M&E Regulations will commence in late 2008 and will remain in place until review in 2013.

Science Capability Framework

The Australian Scientific Capability Framework (SCF), was developed after input from senior DPIV management, funders and collaborators of DPIV projects through the use of Concept Mapping. The mapping identified a number of domains around science capability which were supported by research undertaken during the early stages of the project. These domains formed themes within the framework with indicators developed for each theme.

The framework was developed and trialled with the Mallee Research Institute and a group of managers across DPIV. The trial resulted in minor amendments and further refinement to the SCF.

Implementation of the framework has been interrupted by restructuring and the implementation of

DPI's new Science Investment Framework (SIF). It has been used in the development of approaches to understanding science capability issues. Under the SIF all Divisions will be required to develop a capability plan. The SCF developed as part of this project will be a key tool for this over the coming years.

The SCF was further examined in the Vietnam context, and due to the differences in the organisational culture, was refined further. However not all issues are resolved. The Vietnamese partners believe that to implement the SCF a change management program will need to be developed and implemented that builds confidence in the tool. The main barrier to adoption is one of cultural fit. Issues relating to staff being comfortable to comment on management's performance or making general comments up the chain of command remain a barrier to implementation.

The Framework has been translated into Vietnamese in preparation for implementation.

Building Internal Evaluation Capability via formal Training and Specialist Support

The training component of the project has resulted in a comprehensive network of trained evaluation staff. DST now has in place three levels of trained evaluators with corresponding responsibilities. The three levels are:

1. Vice Directors of Research institutes – responsible for development and maintenance of M&E capacity within their institute.
2. Research Management Staff located in Research Institutes – responsible for overseeing M&E activities and providing support to specialist evaluators.
3. Specialist evaluators – these people will undertake detailed evaluations and may be internal or external providers depending on the complexity and need for independence in the evaluation.

DST are demonstrating continued commitment to training by providing budget for and scheduling 3 training courses per year. To ground the training of evaluation staff trained as part of this project 4 case study projects have been evaluated – 2 ACIAR funded projects and 2 DST. Importantly to further increase the reach of the training and development opportunities all project staff involved in the case study projects were involved to varying degrees in the evaluations. Over 100 staff who work in agricultural research or related fields have completed evaluation training. The impact of this is largely unknown but as mentioned above the improvement in project documentation and quality of ex-ante evaluations is already being seen by senior DST management.

Other training activities undertaken by DST Staff have included a 3 member delegation who travelled to Australia and undertook training in Evaluation Methodology and Practice. This has formed the basis for training of further staff in DST by the Vietnamese project staff supported by the M&E Guidelines.

Stephen Kelly, formerly of DPIV, travelled to Vietnam to deliver "Train the Trainer" for the VN project staff. This was designed to allow the VN team to build capacity in evaluation by undertaking training of other staff in evaluation and monitoring, using the M&E Guidelines developed as a component of this project as the training tool. This training was undertaken in October 2006.

A 3 member delegation of DST evaluation staff participated and presented a paper at the 2007 Australasian Evaluation Society Annual Conference in Melbourne. The paper titled, Not Lost in Translation, formed part of the conference proceedings. (Copy attached)

The participatory-style approaches used in this project have generated the necessary conditions for the sustained uptake of research outputs in DST and DPIV. This has been driven by a demand for evaluation within each agency that has been explored through the course of the project. Through their involvement in this research, stakeholders external to these organisations may also use the outputs of this research.

DST will in the future use the evaluation guidelines/project findings for agricultural research management on a continuing basis. Publications, peer reviews and debates within the Vietnamese evaluation research community are expected to lead to an increased level of awareness and adoption

of the research findings within the evaluation community and enhancement of new approaches to evaluation.

The Evaluation Support Team within DPIV will continue to use the lessons and approaches from this project in its work to provide ongoing support and promotion of evaluation within DPIV.

8 Impacts

This project's primary focus was on the development of capacity in M&E in DST with the view to increasing staff's ability to undertake project evaluation of their own projects. Contribution of the project to the broader impacts of DST are unquantifiable at this point. The project brief identified that the direct links to impacts of a scientific, environmental, social or economic nature were not expected from the development and delivery of this project in DST. There are however some significant contributions that are outlined below.

8.1 Scientific impacts – now and in 5 years

The project's contribution to scientific impact in Vietnam is evident in two key areas.

- First in a noticeable improvement in project proposals and project development documentation. It could be assumed that this improved documentation reflects better project design, leading to improved implementation and evaluation activity during the life of the project.
- Knowledge at the Institute level of what is required in the development of M&E plans leading to improved science management by senior managers.

There is an opportunity for utilisation of the M&E products of this project by the community. However, this was not an identified outcome of the project, and is unlikely to become evident without more rigorous investigation.

The premise of improving M&E skills in DST leading to economic impacts was not identified as a project outcome. The improved capacity in M&E will lead to more robust projects being developed in the future which are more efficiently delivered and with increased impact. This improvement in both efficiency and effectiveness will generate internal cost efficiency for DST. This is dependant on the utilisation of improved evaluation practices during projects and the adoption of findings by subsequent projects. Importantly this was an internally focused capacity building project and its contribution to DST's economic impacts can not be measured at this early stage. Ex-post evaluation is likely to find improved data availability that will allow DST to determine economic impact in the future.

As this was an internally focused capacity building project its contribution to DST's environmental impacts can not be measured at this early stage. Ex-post evaluation is likely to find improved data availability that will allow DST to determine environmental impact in the future.

Step 4: Design & implement a story approach to provide explanatory data for the performance indicator system

Step 5: Review Steps 1 – 4 & make recommendations for further implementation in DPIV and the trial to be undertaken in MARD

+

Science quality (including review of methodology)

+

Science project management

+

Utilisation of science findings

The generation of new ideas, fore sighting and innovation.

New guidelines for project development have been developed focused on development and implementation at the milestone level and ensuring a clear relationship between input to output relationships.

As a direct result of the influence of the DST evaluators they are now participating at a whole of government level, a testament to their new found skills. They have been used as M&E consultants for the Vietnam Science and Technology Evaluation Centre (VISTEC) as well as supporting several NGO projects and project staff.

As capacity increases in M&E, science projects will more adequately manage and identify the causal links in scientific research to end user adoption leading to increasing farmer benefits.

Within DPIV the implementation the SIF will drive improvements in science output and impact. Central to this will be the development and maintenance of critical capability. The SCF developed with assistance from this project will be a critical tool for understanding capability requirements and gaps over the coming years. The Victorian Government has recognised the importance of understanding capability requirements and ensuring core capabilities are maintained. This is an emerging issue world wide as science skill gaps become evident due to ageing populations in the western world and less people undertaking science careers. The $13.4 million Victorian Government's Our Rural Landscape Extension Initiative of DPIV was created to maintain core capabilities and is evidence of an increasing willingness to fund capability as well as outputs.

8.2 Capacity impacts – now and in 5 years

The capacity impacts of the project are best measured by the comprehensive network of trained evaluation staff. As a result of an appreciation of the skills of these staff and the need to increase the numbers DST are demonstrating continued commitment to training by providing budget for and scheduling 3 training courses per year. To ground the training of evaluation staff trained as part of this project, 4 case study projects have been evaluated – 2 ACIAR funded projects (Projects PHT/2002/086, AS2/2002/079) and 2 DST. Importantly to further increase the reach and impact of these activities all project staff involved in the case study projects were involved to varying degrees in the evaluations. Over 100 DST staff have completed evaluation training. The impact of this is largely unknown but as mentioned above the improvement in project documentation and quality of ex-ante evaluations is already being seen by senior DST management.

Project capacity was utilised in the development of the M&E regulations. Normal practice for the development of new regulations is to consult and regularly utilise external consultants. Because of the abilities of the M&E staff the development was fully carried out in house. This model of capacity development is being viewed by senior management as a useful model for optimising the introduction and ongoing deployment for areas of strategic importance.

The staff in involved in the project have significantly improved capacity in evaluation and monitoring, and have some improved skills in information transfer including the training of other staff in use of the M&E Guidelines.

As mentioned above DST evaluators are having a direct result and influencing at a whole of government level, a testament to their new found skills. They have been used as M&E consultants for the Vietnam Science and Technology Council (VISTEC) as well as supporting several NGOs projects and project staff. If supported, the staff can continue to build their skills in this area and become even more sought after and have greater impact across government.

8.3 Community impacts – now and in 5 years

8.3.1 Social impacts

As this was an internally focused capacity building project its contribution to DST's social impacts can not be measured at this early stage. Ex-post evaluation is likely to find improved data availability that will allow DST to determine social impact in the future. Internally it is anticipated that the social

impacts will be felt through project staff working more closely together through the implementation of evaluation plans.

8.4 Communication and dissemination activities

Throughout the project, regular updates have been provided to the Practice Change team within DPIV. This includes the Science Capability Framework (SCF) and the Monitoring and Evaluation Guidelines. The trial of the SCF was reported back to the management of DPIV and recommendations on implementation made to the group. From the Vietnamese perspective six individual workshops have been conducted aimed at developing an understanding of the use and application of the M&E Guidelines.

A key communication activity centred on a three person delegation of DST staff to attend the 2007 Australasian Evaluation Conference in Melbourne. A Conference Abstract was submitted jointly by the Vietnamese and Australian project staff. The Abstract was titled "NOT lost in translation", Challenges and opprtunities for building evaluation capability in the agriculture research sector, Vietnam. It highlighted that the challenge of implimenting M&E in Vietnam was not a great deal different from trying to embed the same processes in Australia. The paper presentation and powerpoint display generated discussion around the relevance of the topic. Other delegates practicing in the international evaluation field had experienced similar issues around the shift in thinking required including the need for management to be champions for a M&E in their organisation. The networking undertaken by the VN project team whilst in Australia for the conference provided feedback on the challenge faced in implimenting M&E was common among those who discussed the issue with the team.

Communication of the Guidelines at VISTEC by the Minister for Agriculture and Rural Development showcased successes of this project and the need for broad adoption of M&E across the Ministry.

9 Conclusions and recommendations

9.1 Conclusions

Building a culture of acceptance in an organisation of a discipline such as M&E involves considerably more than the production of a set of guidelines outlining the process. It involves several factors working together with the assistance of senior management within the organisation, ‘championing’ the process and requesting its utilisation.

The M&E Guidelines developed during the project are a sound base for training within MARD. They have been written to allow them to be used as a training tool and an evaluation resource post any training activity. The guidelines endorsed by both partner governments shows commitment to the aims of project by the two countries and the importance placed in M&E by them.

DST’s network of evaluators, their M&E Regulations and clarity of responsibility for M&E development within the organisation make it well placed to achieve the aim of being able to demonstrate the impact of their investment and satisfy public accountability requirements.

The trend for increased accountability required by funding organisations is unlikely to go away and will in turn require DST to continue its efforts in this area. This will require an increased demand on the skills of those within DST who have the experience in M&E. The ongoing development of M&E capacity in DST should be a priority moving forward.

9.2 Recommendations

1. To fully embed M&E into DST and therefore to have a continuing influence on the culture of the organisation, DST should continue to fund and conduct M&E training throughout the organisation. This may include further collaboration between DPIV and DST in the short term however in the longer term DST will be in a position to conduct its training in-house.

2. The use and application of evaluative enquiry requires an internal organisational environment that accepts positive and negative critique across and between all levels of the organisation. MARD should continue to progress towards this culture.
3. The success of collaborative projects such as this, are relationship dependant. To build strong relationships between partners, more face to face interaction would have been preferable. More travel to partner countries by both organisations would have helped improve the relationship and the project outcomes and should be more explicitly stated in future projects.
4. The impacts of this project from the adoption of the project outputs is starting to deliver changes in the way DST carriers out its business. It is too early to measure the impact conclusively at the organisational level and certainly too early at the social, environmental and economic level. An ex-post evaluation of the project is therefore recommended four years after completion.

10 References

10.1 References cited in report

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10.2 List of publications produced by project

M&E GUIDELINES
Australian Science Capability Framework

11 Appendixes

11.1 M & E Guidelines. A hard copy of the M&E Guidelines has been provided by post.

11.2 AES Abstract

Title of proposal:	"NOT lost in translation", Challenges and opprtunities for building evaluation capbility in the agriculture research sector.
Author's Name and job title:	Pham Quang Duy, Evaluation Development Officer, Ministry of Agriculture and Rural Development, Vietnam
Co – author names, job title and organisation:	Pham Thanh Hoa, Evaluation Development Officer, Ministry of Agriculture and Rural Development, Vietnam Nguyen Viet Hai, Senior Manager, Ministry of Agriculture and Rural Development Steven Vallance, Evaluation Research Officer, Department of Primary Industries, Victoria Kate Nichols, Principle Consultant, Clear Horizons, Victoria
Please specify the session type:	Paper
Abstract: Your abstract must use Arial 10 font and not be more than 200 words in length.	Until now, evaluation in Vietnam has not been considered a scientific field and there are no universities that include it in their curriculum. As a result, there are very few people who fully understand evaluation. Despite this however, the Ministry of Agriculture and Rural Development (MARD), Vietnam, has recognised the importance of evaluation, and in colloboration with Victoria's Department of Primary Industries (DPI) has implemented a project to build evaluation capacity in monitoring and evaluation for agricultural research and development (R&D). With the investment of the Australian Centre for International Agricultural Research (ACIAR), this project has employed and trained two evaluation development officers in MARD. These officers have implemented evaluation case studies with a range of R&D projects, developed evaluation guidelines for MARD as well as delivered evaluation training courses to MARD staff. Together, these activities have contributed to a small but solid skill set in evaluation in MARD with plenty of scope to grow. The project has enjoyed a range of successes, but has also faced many challenges. These challenges relate to the lack of people power in evaluation and a shortage of understanding about evaluation amongst other MARD staff, including a fear of being criticised. These challenges are similar to those faced the world over in regard to engagement in evaluation. The project has found that these issues are not lost in translation from one country to the next. Many key learnings have emerged from the project that can provide ongoing opportunities now and into the future.

11.3 AES Conference Paper

Do evaluation better!

Title, authors and addresses

“NOT lost in translation”: Challenges and opportunities for building evaluation capability in the agriculture research sector.

Pham Quang Duy, Evaluation Development Officer, Ministry of Agriculture and Rural Development, Vietnam

Co-authors

Pham Thanh Hoa, Evaluation Development Officer, Ministry of Agriculture and Rural Development, Vietnam

Nguyen Viet Hai, Senior Manager, Ministry of Agriculture and Rural Development

Steven Vallance, Evaluation Research Officer, Department of Primary Industries, Victoria

Kate Nichols, Principle Consultant, Clear Horizons, Victoria

ASEM 2002/103

Abstract and key words

Until now, evaluation in Vietnam has not been considered a scientific field and there are no universities that include it in their curriculum. As a result, there are very few people who fully understand evaluation. Despite this however, the Ministry of Agriculture and Rural Development (MARD), Vietnam, has recognised the importance of evaluation, and in collaboration with Victoria's Department of Primary Industries (DPI) has implemented a project to build evaluation capacity in monitoring and evaluation for agricultural research and development (R&D). With the investment of the Australian Centre for International Agricultural Research (ACIAR), this project has employed and trained two evaluation development officers in MARD. These officers have implemented evaluation case studies with a range of R&D projects, developed evaluation guidelines for MARD as well as delivered evaluation training courses to MARD staff. Together, these activities have contributed to a small but solid skill set in evaluation in MARD with plenty of scope to grow. The project has enjoyed a range of successes, but has also faced many challenges. These challenges relate to the lack of people power in evaluation and a shortage of understanding about evaluation amongst other MARD staff, including a fear of being criticised. These challenges are similar to those faced the world over in regard to engagement in evaluation. The project has found that these issues are not lost in translation from one country to the next. Many key learning’s have emerged from the project that can provide ongoing opportunities now and into the future.

Introduction

Purpose

The purpose of my paper is to show that:

Move 1- Establishing the field (introduce the topic by showing that the field is significant, or the research is relevant, by stating or summarising what is known)

Move 2- Summarising previous research (Summarising from the perspective of the current research and showing the relationship between this research and the whole field)

Introduction: Building Evaluation Capacity- Richard Boyle, Donald Lemaire, and Ray C. Rist. (Building Effective Evaluation Capacity-Lessons from Practice- Editors-Transaction publishers, New Brunswick, new Jersey-1999).

In recent years administrative reform programs in the public sector have placed significant emphasis on policy and program evaluation as a central element in the reform process (OECD, 1995).

Evaluation is seen as part of “managing for results” which has become one of the catch-phrases of public sector reform.

Substantial effort has been put into building and institutionalizing evaluation capacity in many countries, particularly in the “industrial” countries. There is now up to thirty years of experience in attempting to build evaluation practice in public policymaking and to integrate evaluation and decision-making. Derlien (1990) has described two “wave” in which central governments have introduced evaluation. The first wave of countries, involved in evaluation from the 1960s, includes the United States, Canada, Sweden, and Germany. In the “second wave,” starting from the end of the 1970s, are other countries which have made significant strides in institutionalizing evaluation, such as Norway, Denmark, the Netherlands, Great Britain, Finland, and France.

In the first wave are countries that sought to institutionalize evaluation as a means to improve government programs and initiatives and enhance monitoring. The evaluation effort during this time were closely linked to planning and program processes. Key stakeholders were the program administrators as well as the governmental officials responsible for designing and implementing pilot and demonstration programs in such diverse fields as health, education, criminal justice, housing, and welfare.

The second wave grew throughout the late 1970s and into the 1980s when the rationale for and applications of evaluation changed. Now evaluation was seen as a tool of public accountability via the budgetary process, a tool to force the reconsideration of existing justification for policies and programs, or as a means to influence activities at the political level of government. Evaluation became a means of assessing the performance of government against standards and objectives. In this second wave, the parliaments became much more actively involved, even supplanting the program administrators as the prime stakeholders in national evaluation systems. For the parliaments, the evaluation systems became a mean of helping to rationalize the budgetary process and ensure high performance by governmental entities. An evaluation system was also clearly understood as a means to strengthen the role of the parliament vis a vis the government by providing a new tool of accountability.

A Working Group on Policy and Program Evaluation has been tracking developments in these two “waves” over the last ten years. During that period, the Working Group has carried out substantive comparative research on various aspects of policy and program evaluation (Rist 1990a, 1990b; Gray, Jenkins, and Segworth 1993l Leeuw, Rist and Sonnichsen 1994; Toulemonde and Rieper 1997; Mayne and Zapico-Goni, 1997, Bemelmans-Videc, Rist, and Vedung 1997). In the course of this research, it has become apparent that evaluation practice in a specific country or government cannot be understood and assessed without taking into account the institutional context within which evaluation takes place. Institutional arrangements determine whether evaluations are carried out on an ad hoc basis or systematically; and whether and where evaluation plays a part in managing for results.

Members of the Working Group decided that now is an appropriate time to see what lessons can be drawn from this knowledge of institutionalization. This is a particularly appropriate time as a “third wave” of government-led evaluation initiatives can now be discerned. In Europe, countries such as Switzerland and Ireland are building evaluation capacity. Asia, Korea, and Indonesia are to the fore in attempts to institutionalize evaluation. Governments in Africa and Latin America, with Zimbabwe and Colombia being notable examples, are also trying to build and develop evaluation capacity. Much of this work in the “developing” countries is being supported by the World Bank, which recently established an Evaluation Capacity Development Task Force to help the Bank develop a strategy for assisting borrowing countries to develop their capacity to evaluate public projects, programs and policies (The World Bank 1994a).

Intriguing in assessing this developing wave is that this third group of countries are drawing their inspiration from both the experience and early objectives of the first wave countries as well as from the second wave countries. While the parallel for each third wave country is not absolute to that of both first and second wave countries, there are some striking similarities.

For example, like the first wave countries, the majority of these third wave countries are building their evaluation systems at a time of rapidly expanding economies and growing public sector budgets. They are undertaking large-scale social interventions and they are enhancing their formal planning systems. There is a strong desire to improve existing and new programs. Further, there is confidence in the growing quality and integrity of the public service. With such confidence, efforts to build a national evaluation system are not seen as a waste of scarce resources, but to the contrary, as a positive national investment. The optimistic view is that evaluation will come to be seen by public sector administrators and leaders as an effective tool of governance.

In similarity to the second wave countries, countries of third wave are also highly conscious of financial constraints and the growing pressures of public accountability. This third wave is organizing evaluation systems in response to the need for visible and transparent means of budgetary and management accountability, the requirements for the rationalization of resource allocations within the budget, learning of and then limiting the resources expended on ineffective programs, and demonstrating to taxpayers that the public sector can deliver necessary services.

Admittedly, there are other characteristics of this emerging wave where the parallels break down, both internally and in comparison to either of the two other waves. Consider these six dimensions where any argument for a strong commonality among the third wave countries appears to be a forced fit:

- The development and institutionalization of the social sciences
- The existence and maintenance of a trustworthy statistical apparatus
- The existing capacity to staff a national evaluation system
- The constitutional relationship between the executive and the legislative branches of the government
- The population and geographic size
- The administrative distance from the centre to the periphery of the governmental system.

This list makes clear that while this third wave of countries strive to build their national evaluation systems, there are sufficient dissimilarities that work against many generalizations about them as a group. As with any typology, it has its limits.

Move 3- Preparing for present research indicating a gap

Challenges

Objective factors:

Although evaluation now is the integrated part of any research project in some developed countries, it is still in an infancy period in Vietnam.

Until now, evaluation is still not considered as a scientific field in Vietnam, and there is no university that includes evaluation in the teaching curriculum. There is no training course in evaluation at universities either. As a result, there are still very few people who master in evaluation and can run an evaluation training course in Vietnam.

Most public sector organizations are now fully funded by government. In some case, people are assessed not base on the achievement of their work, but the relation with people at higher level. This may limit the role of evaluation in public sector.

Some organizations and managers at ministry level are now recognizing the importance of evaluation, and there are some projects trying to build evaluation capacity in Vietnam, but these projects are still in progress and the final results is not achieved yet.

The budget for doing evaluation is still very limited, and there is no decision or regulation that decides the amount of budget allocated to doing evaluation.

Doing evaluation may interfere other works, thus some people consider it is not very interesting professional work, especially in Vietnam where the salary for salaryman is still very low and the success in work still heavily dependent on the relationship among people. On the other hand, in some cases project leaders are often not very willing when an external evaluator approaches them.

Generally, evaluation work is not obliged in projects in Vietnam.

Subjective factors:

General speaking, there are very few people who consider evaluation is one professional, people still think evaluation as one part of manager's work. Evaluation is often confused as a work of managers or other people who check other people's work. Thus, the importance of evaluation is not fully recognized in both manager's and researcher's work.

Project leaders are often too busy with research and other works, and they may think evaluation is not necessary to their research work.

Some managers at high level still not fully recognize the importance of evaluation in the society.

Vibol

Through my experiences, I have observed that the key challenges of doing M&E are as following:
In the government:

- Low recognition from manager on the result of M&E
- Stakeholders try to hide real information that might affect to their interest
- Low commitment of implementers to take follow up the recommendations, even though the recommendation are publicly announced and sometimes recognized
- Have no budget package for M&E
- Has no risk work plan
- Not all staff accept that M&E is the task for all, not just for M&E person, so that they rely on only M&E staff to do.

***Move 4- Introducing the current research** stating its purpose giving an outline*

Recommendations for future research and practical applications

Further mechanisms for .....and ....needs to be found

Opportunities

There are some international projects that focus on building evaluation capacity in Vietnam. As a result of these projects, the word evaluation is now more familiar with people. Many people at high level are now interested in evaluation and are trying to build evaluation network in Vietnam.

The economic system now are changing from central government control system to the market-driven economic system. People are now attach much importance to the effectiveness and efficiency of their work. Thus, the role of evaluation become more and more important.

There are some Vietnam students who learnt or are learning evaluation at overseas university. These people can become the core member for building evaluation in Vietnam in the future.

With the more training courses and with more people who know and understand about evaluation, it will become more and more importance in Vietnam. But, for strengthening and building evaluation capacity in Vietnam, we need more time and patience.

11.4 References

Postscript: Evaluation capacity Building – A journey without an End- Donald Lemaire and Richard Boyle.

There are four key themes that emerge from the work of the various contributors to this book (Building Effective Evaluation Capacity-Lessons from Practice- Editors-Transaction publishers, New Brunswick, new Jersey-1999) which should be of assistance to those involved in the institutionalization of evaluation as part of the governance process.

> The first is the importance of balance – balance between the demand for and the supply of evaluation capacity.

Understanding three things for balance the demand for and the supply of evaluation capacity (Mayne, Divorski, and Lemaire: Locating evaluation: Anchoring Evaluation in the Executive or the Legislature, or Both or Elsewhere?) First, that there are multiple demands and markets for evaluation; second, that in anchoring the evaluation regime, thought needs to be given to the needs of these various markets; and third, that priorities must be set to meet the needs of governance at any particular moment in time.

> The second theme addressed by contributors relates to the need to be flexible and to utilize opportunities and incentives to foster evaluation capacity development. This is most explicitly addressed by Toulemonde when he looks at the role of incentives, constraints, and culture building (or “carrots, sticks, and sermons,” as he alternatively calls them) in developing evaluation demand. Looking at a range of examples of successful institutionalization of evaluation, he shows how a mix of incentives are needed to foster evaluation demand. Such incentives include budgetary and career incentives. But he also illustrates that incentives on their own are not enough. They need to be complemented by appropriate constraints and the development of a culture in the public service that accepts and supports evaluation activity.
>
> The existences of multiple markets for evaluation provides opportunities for evaluation capacity to be developed at more than one level or location. And, while there is no a priori specific location and level to initiate evaluation capacity building, such opportunities should not be addressed in an ad hoc manner. Opportunitism need to be tempered with an understanding of the complexity of the evaluation markets, and within a thought-through strategic approach to evaluation institutionalization, as illustrated by the successful experiences highlighted in this books. Lee (chap.3) indicates how Australia and Canada put a strong emphasis integrating evaluation into corporate and program management and planning, as part of broad public service reform. There is also strong central ministry coordination and encouragement of evaluation. Toulemonde (chap.7) shows how in the Netherlands, the Reconsideration of Public Expenditure system was tailored to suit the prevailing administrative culture. As a result, it had some considerable degree of success.
>
> This bring us to the third key theme, which relates to the actual governmental approaches being used to enhance the demand for evaluation and the need for resilience. In trying to develop supply and demand, governments have had more experience with using a supply-push approach. Indeed we began in the introduction to this book by noting that in many countries there is often weak demand for evaluation. Rist addresses this issue in chapter 5, where he examines appropriate ways to link that he calls the disparate worlds of political systems and evaluation systems. He looks at how evaluation can be linked to decision-making at the various stages in the policy cycle, and also how to promote governmental and organizational learning through evaluation practice. This conceptual use of evaluation to enhance learning can foster a positive cycle of further development of evaluation practice and subsequent utilization of evaluations.

A strategic approach requires flexibility to intervene on the supply side in parallel with the demand side. Sonnichsen (chap. 2) and Boyle (chap.6) both note how interventions on the supply side can help ensure an appropriate match between supply and demand. Sonnichsen explores the relative advantages and disadvantages of using evaluators employed full time in an organization or of using

expertise bought in from outside, or some combination of these two. He also explores the relative benefits of centralizing or decentralizing evaluation within organizations. Boyle identifies a mix of strategies that governments may use and which are appropriate to the professionalism of the evaluation function.

In essence, what is needed is an approach that recognizes the complexity of demand for evaluation, promotes coherent demand strategies, and adjusts supply strategies accordingly. The first and second wave of evaluation regime development mentioned in the introduction indicate the importance of supply strategies that are responsive to demand. In the first wave, demand was led by a desire to improve government programs. In the second wave, public accountability and budgetary restrictions led the demand for evaluation activities. Supply must respond to such changing demands if demand is to be self-sustaining and effective over more than the short term. In this, evaluation is no different than other key public sector functions. Budgeting, strategic planning, audit, and performance monitoring functions continue to evolve and adjust to a constant changing environment. These functions are an integral part of the learning process of public sector organizations.

> The fourth theme that emerged is the mainstreaming of evaluation regimes into the functions of government. Good governance requires meaningful accountability, both at the political and the administrative levels. A public sector based on transparency, probity, management systems that are efficient and effective in determining priorities, the allocation of resources in line with these priorities, and assessment of the extent to which objectives related to priorities are met, provides a sound foundation for meaningful accountability. The management tools available to public sector management have made substantial progress in meeting these requirements. Financial management systems provide for transparency and probity in accounting for public spending. Key public management functions such as budgeting, strategic planning, audit, and performance monitoring continue to evolve in providing the information necessary for meaningful accountability.

These public sector management functions serve specific purpose. However, as the old adage says, the whole is bigger than the sum of the parts. Bastoe (chap. 4) looks at how evaluation links with these other public sector functions, and under what conditions a coherent integrated performance management system can be achieved. For demand to be strong and effective requires link to be developed within and between the different markets for evaluation and the different public sector function.

Power Point Presentation at AES Conference

NOT lost in translation:
Challenges and opportunities for building evaluation capability in the agriculture research sector

Pham Thanh Hoa, MARD
Kate Nichols, Clear Horizon

Overview

1. Evaluation in the Ministry of Agriculture and Rural Development (MARD)
2. Our case study project: *Enhancing project impact and science capability through ongoing evaluation*
3. Key challenges encountered by the project
   - Mobilisation staff interest - human capacity
   - Gaining support and leadership
   - Policy and authorising environment
4. Opportunities for further development

Evaluation capability building

Give someone a fish and they eat for a day; teach them to fish and they eat for a lifetime.

The need for individuals skilled in catching fish, the equipment to successfully fish, an effective distribution system, people who want to eat fish, and entire fishing system that is sustainable.

(McDonald, Rogers and Kefford, 2003, p.10)

Evaluation in Vietnam

- Not a scientific field
- Not valued
- No cultural history of it
- Little in the way of accredited training available

Evaluation in the Ministry of Agriculture and Rural Development (MARD)

- Reliance on quantitative rather than qualitative
- Not budgeted for
- Not officially mandated
  - Some decrees now in draft form
- Ex-post, mid-term reviews and ex-ante science evaluations that use internal peer review

Enhancing project impact & science capability through ongoing evaluation: Origins of the project

- ACIAR: Capturing the intermediate outcomes of agricultural R&D
  - Lag time between project activities and outcomes
- MARD: A need to demonstrate accountability and recognising the role evaluation can play in enhancing performance
  - Leader driven
- DPI: Interested in further testing its model of capability building
- An international collaboration amongst the 3 agencies blossomed!

Title	Enhancing project impact & science capability through ongoing evaluation
Objective	To develop an evaluation procedure for R&D projects suited to the MARD environment
Timeframe	2004 – 2007
Staff	•2 evaluation development officers, MARD •1 project manager, MARD •1 project manager, DPI •1 project officer, DPI •Consultancy input •1 Youth Ambassador
Funding	•ACIAR •DPI •MARD
Other resources	•4 voluntary R&D case study projects, MARD •Input of senior managers, MARD •Lessons and models from DPI

Approach

- Based on the experiences of DPI between 1999 and 2003
  - Recommendations formalised by McDonald, Rogers and Kefford (2003)
- Approach taken
  - 2 evaluation development officers appointed and trained in Australia
  - Review of existing practices in MARD
    - High level discussions with senior staff
  - Develop draft guidelines and evaluation procedure
  - Evaluation training: Researchers and senior managers
  - Trial guidelines/procedure in 2 case studies
  - Update guidelines/procedure
  - Undertake 2 further case studies
  - Finalisation of guidelines/procedure: Publication, dissemination and training
    - In progress

Key challenges encountered by the project

- Mobilisation staff interest - human capacity
- Gaining support and leadership
- Policy and authorising environment
  - All challenges interlinked

Challenge 1: Mobilising staff interest

- Cooperation of staff
- Competing priorities
- Limited time
- Not valued or not seen as part of job
- Jobs not traditionally linked to the evaluation of performance
  - No incentive or reason to dedicate time and resources to evaluation
- Staff turnover within the project

Challenge 2: Gaining support and leadership

- Senior staff have biased experience in evaluation
  - Familiar with scientific peer reviews
  - Testing hypotheses not performance
    - A different concept of evaluation
    - Not the model of evaluation promoted by the project
- Managers do not like being questioned
  - Perception that evaluation is about checking for mistakes
- Managers measure success against outputs and not outcomes
  - They do not fully understand the full scope of evaluation

Challenge 3: Policy and authorising environment

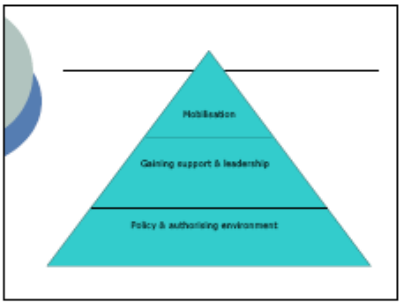
- Limited mandate due to a lack of understanding about evaluation
  - Senior managers who can make a difference to policy and the way evaluation is done, do not value or understand evaluation and the need for capability building
  - Staff turnover means that champions are lost
  - There is a tradition of evaluating budgets and scientific outputs
  - There is a preference for committee-based evaluation rather than ongoing project-based evaluation
- Draft decrees concerning evaluation will take a long time to take effect
- The burden of financial decrees
  - Do not account for the real cost of research
    - scientists rely on persons that manage revenue to do their work and interested to save on expenses
    - this makes them some kind of evasion
  - Accounting processes create a lot of work for staff leaving no time for evaluation

Opportunities for further developing evaluation capability in MARD

- Training of staff
  - More training is currently planned
  - Is training the answer?
- Finding champions and leaders to embed evaluation within the organizational culture
  - Developing a shared idea about evaluation
- Creating and harnessing demand for evaluation
  - Increased annual investment in agricultural R&D – evaluation is required to demonstrate effectiveness
  - MARD intends to allocate 2% of its annual budget for evaluation
  - Institutionalisation of evaluation
    - Building M&E plans into research proposals
    - Scientists need to deliver an evaluation report

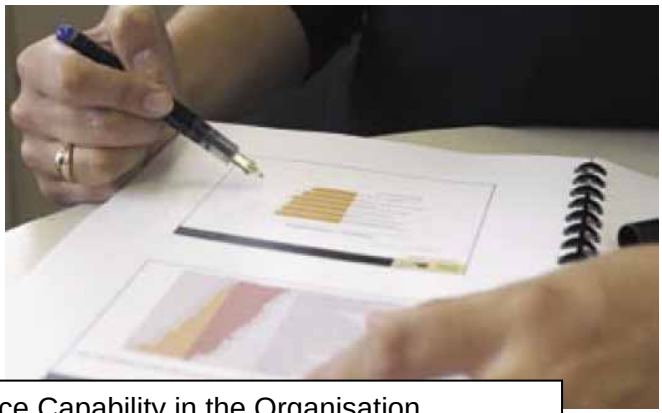
Conclusions: Not lost in translation

- These challenges and opportunities are not that different to what we see in other organisations and in other countries
  - Mobilising staff interest
  - Gaining support and leadership
  - Policy and authorising environment
    - All inextricably linked
    - **A multi-pronged approach to capability building is required**
- Our experiences reinforce the significance of the recommendations made by McDonald, Rogers and Kefford (2003) for building evaluation capability



Australian Science Capability Framework

Organisational Assessment Guide



A tool to assess, monitor and build Science Capability in the Organisation.

Australian Government

Australian Centre for International Agricultural Research

Victoria
The Place To Be

Background

The Science Capability Framework has been developed out of a research project funded by the Australian Centre for International Agricultural Research (ACIAR) and the Victorian Department of Primary Industries (DPI).

The ACIAR project was developed to strengthen the role evaluation plays in the Vietnamese Government, and in particular the Ministry of Agriculture and Rural Development (MARD).

The Vietnamese Government is paying increasing attention to agricultural research and extension.

Budgets for agricultural R&D are growing, as is the demand for public accountability and outcomes for the Vietnamese community. Strengthening the role of evaluation is one way to start to address these problems.

Science Capability

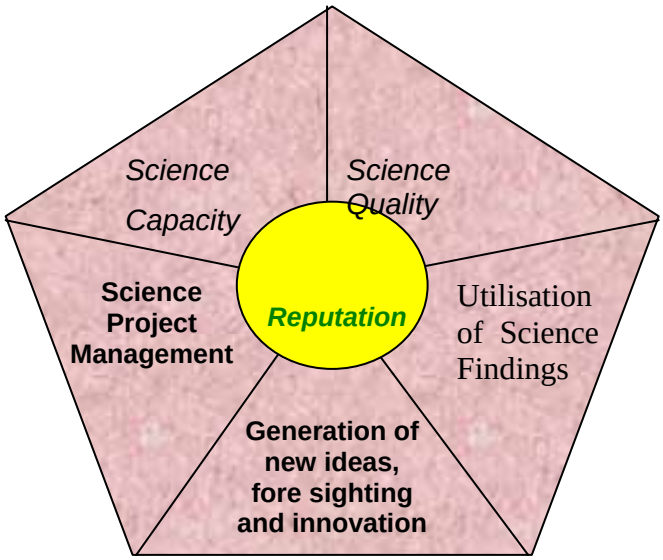
In recent times the terms capacity and capability building have been used frequently and interchangeably. For the purposes of clarification, the authors offer the following definition of science capability. This definition is based on different ideas found in the literature.

Science capability = Science capacity (people, funding, buildings, equipment)
+
Science quality (including review of methodology)
+
Science project management
+
Utilisation of science findings
+
The generation of new ideas, fore sighting and innovation.

During the research phase, it was found that ‘Reputation’ was considered an important factor in Science Capability. This was identified by principal scientists in DPI during the concept mapping workshops, and was subsequently included in the Science Capability Framework. The SCF has been developed by Steven Vallance and is built upon the extensive research work undertaken by Kate Nichols in the formative stages of the ACIAR project. Considerable input and assistance has been received from Stephen Kelly, David Beckingsale, Bron McDonald, Rosemary McKenzie and Greg Roberts, who comprise the Australian component of the ACIAR project team.

The Science Capability Framework

SC as identified by the project brief has five major themes with the Reputation having an influence on each of these themes. A simple representation of the framework shows each of the 6 themes closely aligned, with none being more important and reputation having an impact an each of the others.



This assessment questionnaire has been designed to give an indication of the Science Capability of your organisation at this particular point of time. It may be completed by more than one person and the results compared or collated. It may also be completed as a team exercise, with consensus reached for the score of each question. This process may provide greater insights into the strengths and weaknesses of your project or organisation.

Individual Assessment:

The view of an individual with regard to an organisation, project or locations Science Capability, is an important factor in the success and sustainability of Science within that organisation. The SCF will allow an individual to assess, record and monitor their view of SC at a particular point in time. The score of several individuals may be amalgamated to gain a wider perspective of SC from a location, project or group.

Group Assessment:

Having a group of people, individually undertaking the assessment, then collating the score or completing the assessment through reaching consensus on each item will provide a sound understanding of the SC of the organisation.

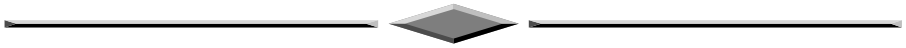
Alternatively, the group may choose to use the SCF to assess the work group or project as the entire focus of the assessment. This will provide insights into the current capacity of the group/project from those staff within the group. This view will enable staff to explore improvement strategies in their Science Capability.

Location Assessment:

The opportunities to have all staff at a work centre or institute undertake the assessment will provide insights into science culture that exists at the location. This may enable comparison with other locations or the organisation as a whole. Examples of exemplary performance or otherwise, will allow for further exploration of the values and views that have driven the recorded results. Investigating improvement strategies to address deficiencies in the SCF will promote a culture of improvement, and an improvement of our Science Capability.

Organisational Assessment:

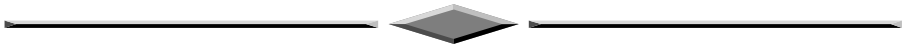
The are many benefit's an organisation can gain from undertaking the Science Capability Framework assessment. An organisation will be able to develop a benchmark for it performance in Science Capability, and measure and record improvement over time. It will be able to compare itself to other organisations, and look at methods of developing a culture of improvement that will lead to better science capability and outcomes. An organisation will be able to look across all of its sectors to ensure its staff, locations and projects share a common understanding of the Science Capability. If required, remedial action can be targeted at areas of need as disclosed in the SCF.



The Science Capability Framework will allow an organisation to look internally at how it views its own capability, with significant input from all staff, regardless of location, employment status or position within the organisational structure.

Once the questionnaire has been completed, you may wish to revisit each section and look at ways of improving your responses, this will increase not only the numerical score achieved, but will also improve the Science Capability of your organisation.

Repeating the process at a later date may provide some measure of improvement in the organisation of time and again provide more insights into improving the way science is planned, managed, delivered and reported.



Calculating Science Capability

The Assessment Questions are divided into the 6 themes of Science Capability.
Answer the questions in all sections before starting the calculations.
This should take around 10 to 15 minutes.
The variance in the equations <u>does not</u> indicate a ranking of importance of each theme. It allows each theme to be expressed as a score out of 100, for easy comparison.

Science Capacity	Total _____	Divided by **1.20** = _____
Utilisation of Science Findings	Total _____	Divided by **0.84** = _____
Science Quality	Total _____	Divided by **0.54** = _____
Management and Development Of Science Capacity	Total _____	Divided by **1.02** = _____
Generation of New Ideas, Foresighting and Innovation	Total _____	Divided by **0.66** = _____
Reputation	Total _____	Divided by **0.54** = _____

Total = _____
<u>Divided by 6.0</u>

YOUR SCIENCE CAPABILTIY

RATING OUT OF A POSSIBLE 100 IS: _____

If an individual has undertaken this questionnaire, please record the following information.
Location:_____ Position:_____ Level:_____
Record the date you undertook this activity for future reference ____ /____/ 20__
If you are funded by more than 1 project, what is the breakdown of your funding? ____/____/____

Assessment Questions	Strongly Disagree 1	2	3	4	5	Strongly Agree 6	Extremely important			Not Important
Science Capacity	Our Performance Level						Importance to the Business			
1. The length of tenure of our science staff improves our Science Capacity.										
2. We have sufficient numbers of ongoing staff to maintain continuity of knowledge.										
3. DPI has the ability to retain quality science staff.										
4. DPI places a great value on its science staff.										
5. DPI has an appropriate reward mechanism for its science staff.										
6. Staff training is supported in an appropriate manner										
7. Staff have access to the appropriate training to build science capacity										
8. DPI staff who are seconded to other organisations improve our science capacity when they return.										
9. We have sufficient numbers of recruits entering the science field within DPI.										
10. We are successful in retaining recruits in the science field.										
11. Our recruits have the appropriate level of training when they enter DPI.										
12. We have the ability to attract recruits with the appropriate science discipline.										
13. DPI continues to use technology that is current and up to date.										
14. My project has appropriately qualified staff to undertake its current projects										
15. My project has a solid knowledge base and understanding of the capacity of its staff										
16. We have sufficient staff to successfully undertake our current projects.										
17. We have the resources to attract sufficient staff to undertake our proposed projects.										
18. Our current infrastructure allows for quality science outcomes.										
19. There is sufficient opportunities to highlight and hand on learning's within our project										
20. There is sufficient opportunities to highlight and hand on learning's within DPI										
Total										
Multiplied By	1	2	3	4	5	6				
Total										

Total Score for **Science Capacity**: _____

Comments & Improvement Strategies: (What can be done to improve the items that scored 1, 2 or 3?)

	Much Worse	Slightly Worse	The Same	Slightly Better	Much Better
In the past two years, has DPI improved its Science Capability?					
Do you think that in the next two years, DPI will improve its Science Capability?					

Assessment Questions	Strongly Disagree 1	2	3	4	5	Strongly Agree 6	Extremely important			Not Important
Utilisation of Science Findings	Our Performance Level						Importance to the Business			
21. My project is achieving the required impact through the delivery of its science findings										
22. My project has a strong record of developing quality intellectual property										
23. My project has the appropriate systems to protect our developed IP										
24. Commercialisation of our science is providing benefits to Victoria										
25. Through the delivery of our science findings we are achieving the desired practice change										
26. My projects internal communication activities are adequate for sharing our skills and knowledge of our science findings										
27. My projects external communications strategy is adequate for sharing or skills and knowledge of our science findings										
28. Workshops delivered by the project share the knowledge and experience to the appropriate audiences										
29. My project uses the print media to share the knowledge and experience of its science findings										
30. My project engages the electronic media to share the knowledge and experience in science										
31. The outcomes and impacts of our science findings are adequately reported in the current project reports										
32. Our project delivers the science findings desired by our investors.										
33. My projects are able to identify emerging community issues										
34. Our project acknowledges the key stakeholders at all opportunities.										
Total										
Multiplied By	1	2	3	4	5	6				
Total										

Total Score for **Utilisation of Science Findings**: _____

Comments & Improvement Strategies: (What can be done to improve the items that scored 1, 2 or 3?)

	Much Worse	Slightly Worse	The Same	Slightly Better	Much Better
In the past two years, has DPI improved its Utilisation of Science Findings?					
Do you think that in the next two years, DPI will improve its Utilisation of Science Findings?					

Assessment Questions	Strongly Disagree 1	2	3	4	5	Strongly Agree 6	Extremely important			Not Important
Science Quality	Our Performance Level						Importance to the Business			
35. Peer review of our science projects significantly improves the quality of our science										
36. Our science projects are cited in a manner that recognises the quality of our science										
37. The quality of our science allows my project to deliver the right impacts for end users										
38. My projects produce sufficient numbers of refereed papers during the life of the project										
39. The high quality of our science leads to invitations to be keynote presenters or speakers at conferences										
40. My project staff are confident in challenging themselves and each other to ensure we are undertaking quality science										
41. DPI science staff are viewed as leaders in their field.										
42. Our science quality is maintained by using effective self monitoring and review processes										
43. My project is confident in challenging itself to ensure we are undertaking appropriate science research										
Total										
Multiplied By	1	2	3	4	5	6				
Total										

Total Score for **Science Quality**: _____

Comments & Improvement Strategies: (What can be done to improve the items that scored 1, 2 or 3?)

	Much Worse	Slightly Worse	The Same	Slightly Better	Much Better
In the past two years, has DPI improved its Science Quality?					
Do you think that in the next two years, DPI will improve its Science Quality?					

Assessment Questions	Strongly Disagree 1	2	3	4	5	Strongly Agree 6	Extremely important			Not Important
Management and Development of Science Capacity	Our Performance Level						Importance to the Business			
44. The current Business Systems assist in managing my current projects.										
45. The current Business Systems aid in developing future projects.										
46. Our project has an efficient method to monitor project milestones										
47. We have an efficient method of reporting milestone variance										
48. Our project has an appropriate method of tracking budget variance										
49. Tracking any budget variances allows our project to stay within is resources.										
50. Having staff who have the capacity to bring in co-investment is important to the success of DPI science projects										
51. The management systems in DPI encourage collaboration and partnerships with other agencies to build science capacity										
52. DPI actively promotes networking across science communities to build science capability										
53. The current Fellows and Professors in DPI provide high level pro-active science leadership										
54. The management structure and systems allow our projects to build our Science Capacity										
55. DPI has the ability to position itself well, for change.										
56. The current organisational systems allows our project to build our Science Capacity										
57. The systems and procedures in place in DPI allows our project to build Science Capacity										
58. The DPI project-planning format is suitable for planning my project.										
59. DPI is very good at reading and predicting the political agenda.										
60. The project management structure is suitable for project implimentation.										
Total										
Multiplied By	1	2	3	4	5	6				
Total										

Total Score for **Management and Development of Science Capacity**: _____

Comments & Improvement Strategies: (What can be done to improve the items that scored 1, 2 or 3?)

	Much Worse	Slightly Worse	The Same	Slightly Better	Much Better
In the past two years, has DPI improved its Management and Development of Science Capacity?					
Do you think that in the next two years, DPI will improve its Management and Development of Science Capacity?					

Assessment Questions	Strongly Disagree 1	2	3	4	5	Strongly Agree 6	Extremely important			Not Important
Generation of New Ideas, Fore sighting and Innovation	Our Performance Level						Importance to the Business			
61. DPI projects actively support the promotion of innovation and new ideas										
62. Innovation and risk taking is encouraged within DPI science projects										
63. Investment in DPI is influenced by the sound knowledge base our science staff bring to new projects										
64. Investment in DPI is based solely on the quality of the new initiatives proposed to funders										
65. By maintaining our scientists we are able to maintain the continuity of our knowledge										
66. My project has the processes for capturing and retaining all relevant knowledge.										
67. The process for capturing and retaining all relevant knowledge is well developed in DPI										
68. DPI has the appropriate systems to capture and institutionalise strategic knowledge										
69. The DPI project-planning format is suitable for planning my project.										
70. DPI has the processes for capturing and retaining all relevant knowledge.										
71. DPI is able to evaluate how well we set up priorities and prioritise ideas										
Total										
Multiplied By	1	2	3	4	5	6				
Total										

Total Score for **Generation of New Ideas, Fore sighting and Innovation**:

Generation of New Ideas, Fore sighting and Innovation_____

Comments & Improvement Strategies: (What can be done to improve the items that scored 1, 2 or 3?)

	Much Worse	Slightly Worse	The Same	Slightly Better	Much Better
In the past two years, has DPI improved its Generation of New Ideas, Fore sighting and Innovation?					
Do you think that in the next two years, DPI will improve its Generation of New Ideas, Fore sighting and Innovation?					

Assessment Questions	Strongly Disagree 1	2	3	4	5	Strongly Agree 6	Extremely important			Not Important
Reputation	Our Performance Level						Importance to the Business			
72. DPI has a strong reputation for science capability amongst its collaborators and funders										
73. Changes to the corporate identity has no impact on our reputation										
74. Our strong reputation allows us to be discerning about our customers and partners										
75. DPI is always looking at ways to compare its performance against other organisations										
76. DPI has the ability to attract Research contracts because of its quality reputation										
77. DPI's science reputation is improved by the number of citations of our science research										
78. DPI staff are recognised as leaders, this is supported by citations in science literature.										
79. Because of its reputation, DPI scientists receive invitations to international conferences										
80. DPI research is recognised internationally because of its high quality science										
Total										
Multiplied By	1	2	3	4	5	6				
Total										

Total Score for **Reputation**: _____

Comments & Improvement Strategies: (What can be done to improve the items that scored 1, 2 or 3?)

	Much Worse	Slightly Worse	The Same	Slightly Better	Much Better
In the past two years, has DPI improved its Reputation?					
Do you think that in the next two years, DPI will improve its Reputation?					

ACTION PLAN FOR IMPROVING SCIENCE CAPABILITY IN THE ORGANISATION

SCF FIELD	ISSUE FOR IMPROVEMENT	ACTION STRATEGIES	WHO	WHEN	PRIORITY L/M/H

DEPARTMENT OF
PRIMARY INDUSTRIES

AUSTRALIAN CENTRE FOR
INTERNATIONAL AGRICULTURAL RESEARCH

Science Capability Framework ~ ORL Pilot Review
Steven Vallance
Ph. 0418 515 468

Australian Government
Australian Centre for
International Agricultural Research

Victoria
The Place To Be

Contents:

1. The project

The Vietnamese Government is paying increasing attention to agricultural research and extension. Budgets for agricultural R&D are growing, as is the demand for public accountability and outcomes for the Vietnamese community. Strengthening the role of evaluation is one way to start to address these problems. This project proposes two objectives. These are mutually reinforcing.

Objective 1: To develop an evaluation procedure for R&D projects suited to the MARD environment. The methods for Objective 1 include:

(a) Analysis of MARD's current evaluation approaches;
(b) Development of draft evaluation guidelines for MARD;
(c) Trial and modification of DPIV and MARD evaluation guidelines on two MARD/ACIAR projects initially, then on a further selection of MARD projects later in the project;
(d) Training and professional development for two MARD evaluation development officers who will implement the trials mentioned in (b); and
(e) Periodic evaluation of the trials and guidelines.

Objective 2: To develop a procedure for evaluating science capability (initially for DPIV, later for MARD)

The methods used for Objective 2 will include:

(a) Concept mapping to define areas of interest in science capability around which performance indicators and stories will be collected;
(b) Design and implementation of a performance indicator system;
(c) Design and implementation of the story approach (also known as the Most Significant Change approach) for evaluating science capability. This will complement and supplement methods (a) and (b); and
(d) Periodic evaluation of the trials undertaken.

2. Part B

Objective 2 research will be conducted in DPIV initially, and then pending the outcomes of this trial, will be extended to MARD.

Step 1: Identify DPIV participants for Objective 2 evaluation research

Step 2: Use concept mapping to describe & statistically analyse what DPIV stakeholders value about science capability

Step 3: Design & implement a performance indicator system for evaluating science capability

3. Definition of Science Capability

In recent times the terms capacity and capability building have been used frequently and interchangeably. For the purposes of clarification, the authors offer the following definition of science capability. This definition is based on different ideas found in the literature.

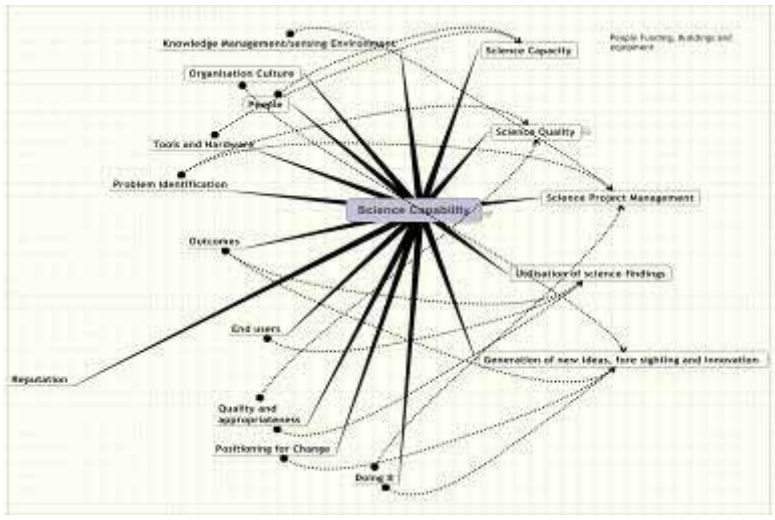
Science capability = Science capacity (people, funding, buildings, equipment)
+

4. Concept Mapping

Concept mapping is structured brainstorming technique used by groups to build consensus through grouping and prioritising ideas. The difference between concept mapping and other consensus-building processes is that is uses a specialised computer package to:

(a) Preserve the integrity of individual responses
(b) Generate visual “maps” of the brainstormed ideas in relation to one another, and
(c) Statistically analyse the “maps” using cluster analysis, ie: determining the strength of relationships between particular groups of ideas (see Trochim, 1989).

5. Mapping the CM outcomes back to definition

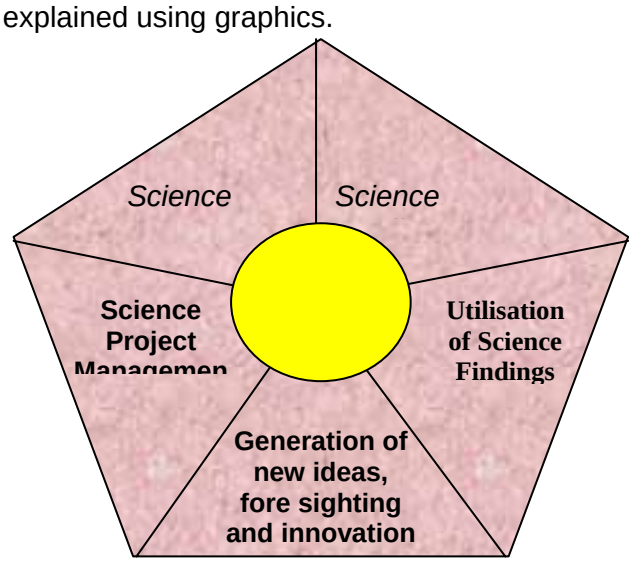


6. Inclusion of Reputation into the framework

It became apparent during the mapping process and from the Concept mapping exercise that Reputation was of great importance to the Scientists involved in the CM workshops. This was not picked up during the Lit review phase of the project. As reputation was identified as such a high priority during the CM, it was included as on of the key themes of the Science Capability Framework.

7. Using the ABEF concept to develop a framework for SC

To better understand the idea of Science Capability, and to make it more easily understood a pictorial representation was developed called the Science Capability Framework. This was developed after participation in the ABEF workshops, and seeing how a complex concept could be more easily explained using graphics.



8. The two outcomes ~ Self Assessment Guide and the Data Collection Guide

From the project work to date, it was decided that two methods of using the data collected from the Concept Mapping exercises would be developed to measure both the qualitative and quantitative aspects of Science Capability.

The data collection guide will use information already gathered by DPI to provide insights into Science Capability. This data will be supported by triangulated evidence collected as part of the data collection process. The evidence may have been identified in the Self-Assessment guide or uncovered during the collection of data.

This was also a method used in the ABEF assessment of DPI recently undertaken.

9. The rationale of the SCF assessment guide

This assessment questionnaire has been designed to give an indication of the Science Capability of your organisation at this particular point of time. It may be completed by more than one person and the results compared or collated. It may also be completed as a team exercise, with consensus reached for the score of each question. This process may provide greater insights into the strengths and weaknesses of your project or organisation.

Individual Assessment:

The view of an individual with regard to an organisation, project or locations Science Capability, is an important factor in the success and sustainability of Science within that organisation. The SCF will allow an individual to assess, record and monitor their view of SC at a particular point in time. The score of several individuals may be amalgamated to gain a wider perspective of SC from a location, project or group.

Group Assessment:

Having a group of people, either individually undertaking the assessment, then collating the score or completing the assessment through reaching consensus on each item will provide a sound understanding of the SC of the organisation.

Alternatively, the group may choose to use the SCF to assess the work group or project as the entire focus of the assessment. This will provide insights into the current capacity of the group/project from those staff within the group. This view will enable staff to explore improvement strategies in their Science Capability.

Location Assessment:

The opportunities to have all staff at a work centre or institute undertake the assessment will provide insights into science culture that exists at the location. This may enable comparison with other locations or the organisation as a whole. Examples of exemplary performance or otherwise, will allow for further exploration of the values and views that have driven the recorded results. Investigating improvement strategies to address deficiencies in the SCF will promote a culture of improvement, and an improvement of our Science Capability.

Organisational Assessment:

The are many benefit's an organisation can gain from undertaking the Science Capability Framework assessment. An organisation will be able to develop a benchmark for it performance in Science Capability, and measure and record improvement over time. It will be able to compare itself to other organisations, and look at methods of developing a culture of improvement that will lead to better science capability and outcomes. An organisation will be able to look across all of its sectors to ensure its staff, locations and projects share a common understanding of the Science Capability. If required, remedial action can be targeted at areas of need as disclosed in the SCF.

10. Trialing the Assessment Guide in ORL

The SCF has been developed and internally refined by team and some expert internal feedback such as Bill Underwood and Clive Noble. Now we wish to pilot the tool with a sample of senior ORL staff -the most senior person in each of the 14 ORL projects plus the 4 members of the ORL Steering Group, ie a pilot with a sample of 18. Then following any changes flagged by the pilot process we will trial the SCF across the 180 staff of ORL.
Timing of the pilot -asap but ideally to send to each of the 18 within the next fortnight (we will need a set of questions about use of the SCF for them to answer to guide feedback on the pilot tool)
What questions did they have difficulty with, what didn't make sense, what requires further clarification, what is missing etc, any other suggestions about layout, format or content).

11. Refining the guide

Results and feedback of this pilot will guide refinement of the process and further roll out of the SCF across ORL, CAS and DPI.

12. The Pilot Group

In undertaking the pilot, the senior person in each of the 14 ORL projects was identified as a suitable participant in this process. This was endorsed at an ORL meeting in Mildura, in October.
The Organisational Assessment Guide was distributed to 18 ORL managers with instructions for use and a return envelope to facilitate a timely response.

13. Response Rate

Of the 18 questionnaires sent to the ORL management group, 11 were returned, this is a response rate of 61.1%, similar to the response rate of CAS employees to the Rodski Employee Opinion Survey.

14. Summary of Learning's

- The process as developed, is a sound method of collecting the views of a range of individuals across the organisation.
- The response rate of in excess of 60% is the expected response rate from a survey using the process of providing return mail envelopes. This is similar to the response from on-line data collection processes.
- Answering the questions and undertaking the calculations took between 20 minutes and 45 minutes for the respondents to compete. All but 1 of the pilot group thought this time frame was acceptable, 1 thought it took too long to complete.
- Some of the themes need to be revisited to reduce the questions to fit onto one page. This will make it easier for those undertaking the process to complete and transfer the data to the calculation page.
- The Science Capability Framework may be suitable for an on-line process, similar to the Rodski Survey. Early indications are that this would cost in the vicinity $1000.00 to set up.
- The Science Capability Framework will be able to give some clear and sound information on the organisation, and its deficiencies and strengths.

15. Results

The results in this report are reflections on the responses to the pilot and have not had any rigorous data analysis completed at this point.

The data collected from participants in the pilot process has been viewed, collated and placed into a series of graphs. This has been done to give an impression of the results, but not a definitive analysis of the data.

The pilot was undertaken to test the process and the questionnaire developed from the concept mapping workshops.

16. Feedback

Participants who undertook the pilot of the SCF recorded the following comments.

Science Capability:

- *Fundamental issue is that core science capacity is only maintained in areas that are successful in attracting funds. This is somewhat serendipitus and not backed by strategic funding for core business. Timing of projects, applications for projects, timeframes for delivery of projects are at odds with the need to maintain capacity AND deliver projects AND confidently commit to new projects.*
- *As a project leader, I find myself thinking across many projects and it is hard to apply a single ranking.*
- *It is even more difficult to recruit top level scientists than in years gone by. DPI is not an employer of choice for such people. It is even more difficult if they must have an interest and expertise in agriculture. We need a strategy to educate suitable scientists and to make DPI a more attractive employer. We should support PhD training where students spend time in DPI locations and in the best lab's worldwide. We need to make DPI a more attractive employer for top level scientists. Strategies include:*
    - *Higher worldwide reputation for our science, eg. More quality publications*
    - *More freedom at individual scientist level*
    - *Less over management*
    - *Employment of 'post docs'*

- *Higher salaries*

- *As with similar surveys often difficult to assess response to answers neither agree nor disagree in many situations. Though expect reflected in many responses in the 4th column.*

Utilisation of Science Findings:

- *Our science findings have not yet got the maturity for the major input hence the medium approach to scoring here.*

Science Quality:

- *again I keep thinking across many projects and you typically think of scoring the best*
- *Many of our projects are developed to solve industry problems, which don't always lead to science quality outcomes.*
- *Unrealistic expectation to patent have inhibited publication of scientific results*

Management and Development of Science Capacity:

- *Couldn't answer 2 questions, 56 and 61*
- *Do business systems mean FABS staff as well?*
- *The current program management, purchaser/provider model is too complex, with too many managers, most of whom have little knowledge of the science they managing. The management systems are sometimes a pointless impost on the time of staff, eg. Pubtracking.*

Generation of New Ideas, Foresighting and Innovation:

- *DPI is very poor at knowledge management for core activities. We have good practices for monitoring outputs from projects. (eg. Pubtracking, milestones etc) but generally useful date are not managed or supported through any current projects or core business programs. This is a critical and strategic failure in DPI. In particular hard data concerning spatial soil and land attributes are neglected in the funding arena and business systems.*
- *Decisions about projects are being made by people who are not expert in the field of the project*

Reputation:

- *Changes in names (eg. RRI) results in a loss of reputation. Initiatives are based on individual performance in science not departmental performance. DPI are regarded with suspicion by mass purchasers (eg. CMA's) who see the organisations as a 'bums on seats' approach to projects and deliver late with middling quality in some areas, this may be unfair but it is a perception that I have received from others over the years both prior to my joining DPI (NRE) and since.*
- *DPI is not recognised, people/staff are.*
- *The DPI brand is not well known, we change our name every 2-5 years.*
- *When did CSIRO last change it name?*
- *The quality of our scientists is better than the organisations reputation for quality science.*

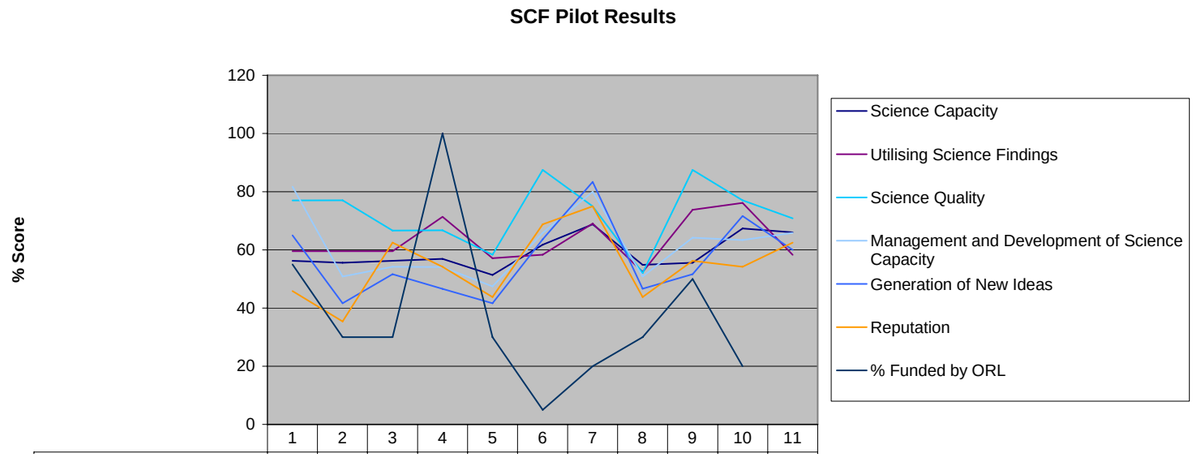
17. Recommendations

- Further analysis of the process is done to refine it to a point where it is more robust.
- The Science Capability Framework is rolled out to a wider ORL audience to validate the process.
- Work on the formatting to reduce the number of questions.
- Undertake research into the questionnaire process to see if a random order of questions or listed under headings as tested is more appropriate.
- Work to develop a data analysis process that will deliver significant outcomes and results from a full roll out to ORL staff.
- ORL support the further implementation of the SCF across ORL, and review the findings and process to guide further implementation across CAS and DPI.
- The SCF be trialed by a sector of the Ministry of Agriculture and Rural Development in Vietnam as part of the joint ACIAR/DPI project.

Figure 1.

Figure 1.

This shows the scores calculated by the pilot participants using the scores from the Science Capability Framework. Each of the major themes has been plotted, showing the ratings of each participant.



	1	2	3	4	5	6	7	8	9	10	11
Science Capacity	56.25	55.56	56.25	56.9	51.39	61.8	68.75	54.86	55.55	67.36	66
Utilising Science Findings	59.5	59.52	59.52	71.4	57.14	58.33	69.05	52.38	73.8	76.19	58.3
Science Quality	77	77.08	66.67	66.7	58.33	87.5	75	52.08	87.5	77.08	70.8
Management and Development of Science Capacity	81.7	50.83	54.16	54.1	47.5	65.8	80	50.83	64.17	63.33	65.8
Generation of New Ideas	65	41.67	51.66	46.6	41.67	63.6	83.33	46.66	51.66	71.66	60
Reputation	45.8	35.42	62.5	54.2	43.75	68.8	75	43.75	56.25	54.16	62.5
% Funded by ORL	55	30	30	100	30	5	20	30	50	20	

Participant

Figure 2.
Here the average of the pilot participants of has been collated for easy comparison. This show that on average, Science Quality was rated the highest by the participants. In their view, the organisation is capable of producing high quality science. However, as an organisation we performed poorly in the 'Generation of Ideas, Innovation and Foresighting' and in our 'Reputation'

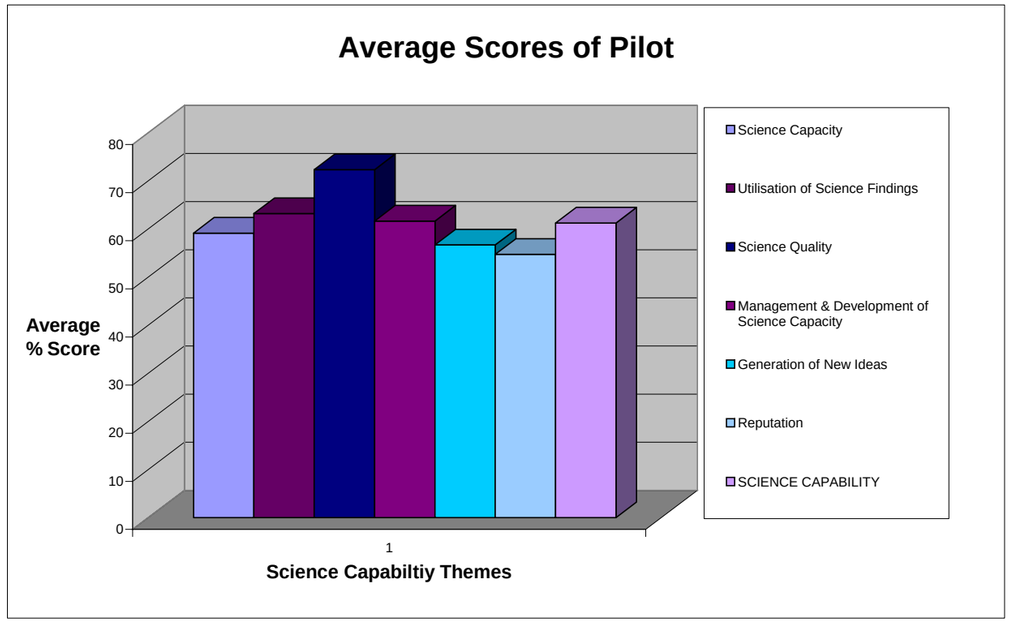


Figure 2.

17.

Calculating Science Capability

		1	2	3	4	5	6	7	8	9	10	11	
SC	Score	81	80	81	82	74	89	99	79	80	97	95	
	Divided	1.44											
	%	56.25	55.56	56.25	56.9	51.39	61.8	68.75	54.86	55.55	67.36	66	59.1518
USF	Score	50	50	50	60	48	49	58	44	62	64	49	
	Divided	0.84											
	%	59.5	59.52	59.52	71.4	57.14	58.33	69.05	52.38	73.8	76.19	58.3	63.1936
SQ	Score	37	37	32	32	28	42	36	25	42	37	34	
	Divided	0.48											
	%	77	77.08	66.67	66.7	58.33	87.5	75	52.08	87.5	77.08	70.8	72.34
M & D	Score	98	61	65	65	57	79	96	61	77	76	79	
	Divided	1.2											
	%	81.7	50.83	54.16	54.1	47.5	65.8	80	50.83	64.17	63.33	65.8	61.6563
Gen N I	Score	39	29	31	28	25	38	50	28	31	43	36	
	Divided	0.6											
	%	65	41.67	51.66	46.6	41.67	63.6	83.33	46.66	51.66	71.66	60	56.6827
Rep	Score	22	17	30	26	21	33	36	21	27	26	30	
	Divided	0.48											
	%	45.8	35.42	62.5	54.2	43.75	68.8	75	43.75	56.25	54.16	62.5	54.7390
RATING		72.23	53.35	58.46	58.3	49.96	67.6	75.19	50	56.49	68.3	63.9	61.2527
Level		6	5	6	6	4 acting 5	External		6.2	6	Prin Sci	5	
% Funded		55	30	30	100	30	5	20	30	50	20		
Location		Epsom	Mildura	Rutherglen	Mildura	Attwood	Werribee	Werribee	Spring St	Tatura	Attwood	S Creek	

Science Capability Framework. (Data

responses)

Question	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Survey 6	Survey 7	Survey 8	Survey 9	Survey 10	Survey 11
1	4	4	5	4	4	4	3	3	4	5	4
2	2	2	3	2	2	3	3	4	4	5	2
3	3	3	6	4	3	3	3	2	3	4	4
4	5	5	1	4	2	4	3	2	2	4	4
5	5	2	2	5	3	5	3	3	2	5	4
6	5	3	2	2	2	5	5	3	3	3	3
7	4	4	5	4	4	3	5	5	4	5	4
8	3	3	3	5	5	4	5	4	3	4	4
9	5	4	5	5	5	3	4	5	4	5	4
10	5	5	5	5	5	3	5	4	4	4	4
11	2	2	3	4	2	2	3	3	5	2	2
12	3	3	3	2	2	4	3	3	4	4	4
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