Australian National University

Collaborating successfully in Integrated Assessment and Modelling exercises: personal reflections

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Top 10 Practice Barriers

1. Unclear purpose
2. Unable to demonstrate value for effort
3. Lack of champion: no one responsible for building trust and moving information around
4. Unwillingness to invest in relationships
5. Unable to listen to one another
6. Spending too much time on decision making and not enough on learning
7. Inappropriate decision making processes, ignoring consensus
8. Failing to treat partners as partners
9. People are too trusting of contracts
10. Your/their organization does not fully support the decisions of the partnership

Top ten tips 08/26/12 Centre on Governance, 4 University of Ottawa

1. Don’t depend on agreements but on people and collaborative enquiry
2. Leadership crucial
3. Expect failure, prepare for it and be saved by it
4. Create shared ownership and change our own behavior
5. Answers are *not* more important than questions. Action not better than dialogue
6. Vitality of any partnership depends on its diversity and the integrating conversations that go on amongst its members
7. Don’t assume government knows best
8. Mistakes to be learned from
9. We cannot compel people to collaborate voluntarily
10. Collaboration – we don’t know how to do it

Key considerations

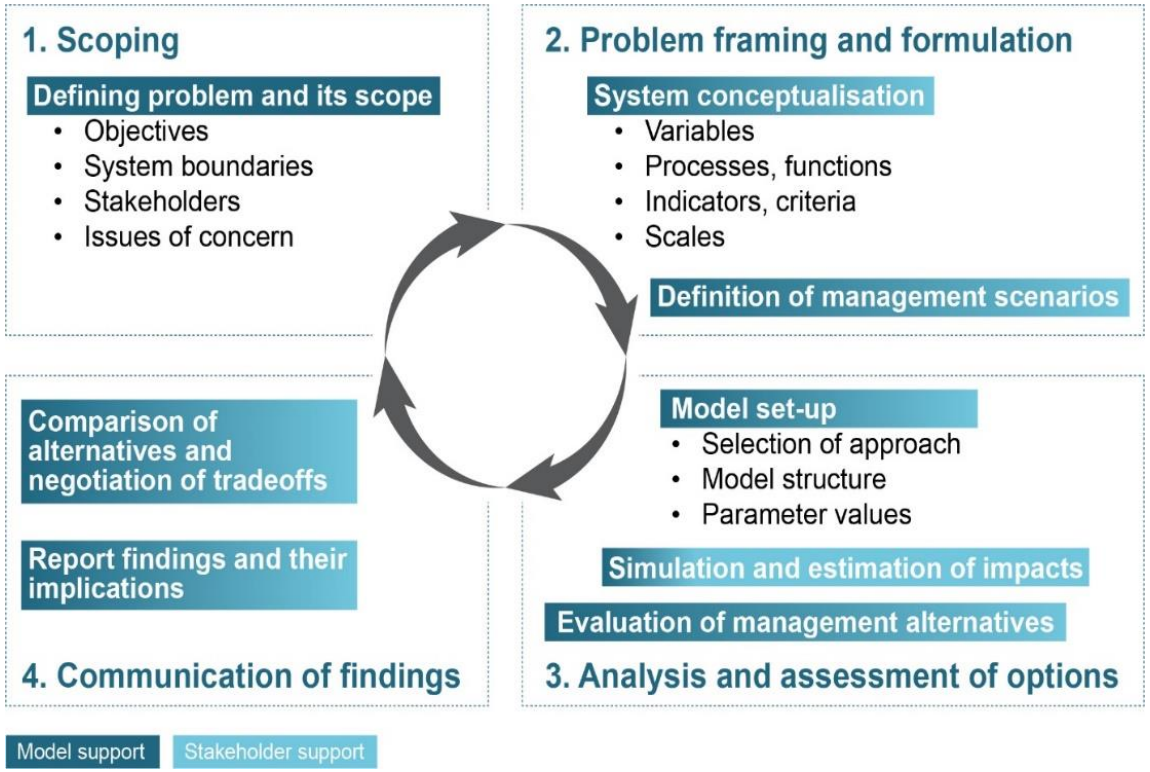
- Issue identification; what futures to bring to the table for consideration
- Stakeholder mapping and who to include and how/when; who’s problematic, who’s the champion
- How to work together and generate a culture of cooperation: colocation, virtual meetings, informal meetings, reporting
- What milestones to be achieved
- What assumptions to make explicit and to be checked
- Set up feedback mechanisms to monitor progress and make adjustments
- Metrics for trust, learning, results – revisit

Our three hooks for an IAM process

1. Clarity around phases and steps
2. Appreciate factors for characterizing success
3. Design

- the information flows within steps
- pathways of interactions
- execution of a pathway within the planned timeframe

1. Conceptualization of process phases



Hamilton et al. (2015) ***Env Mod & Software***

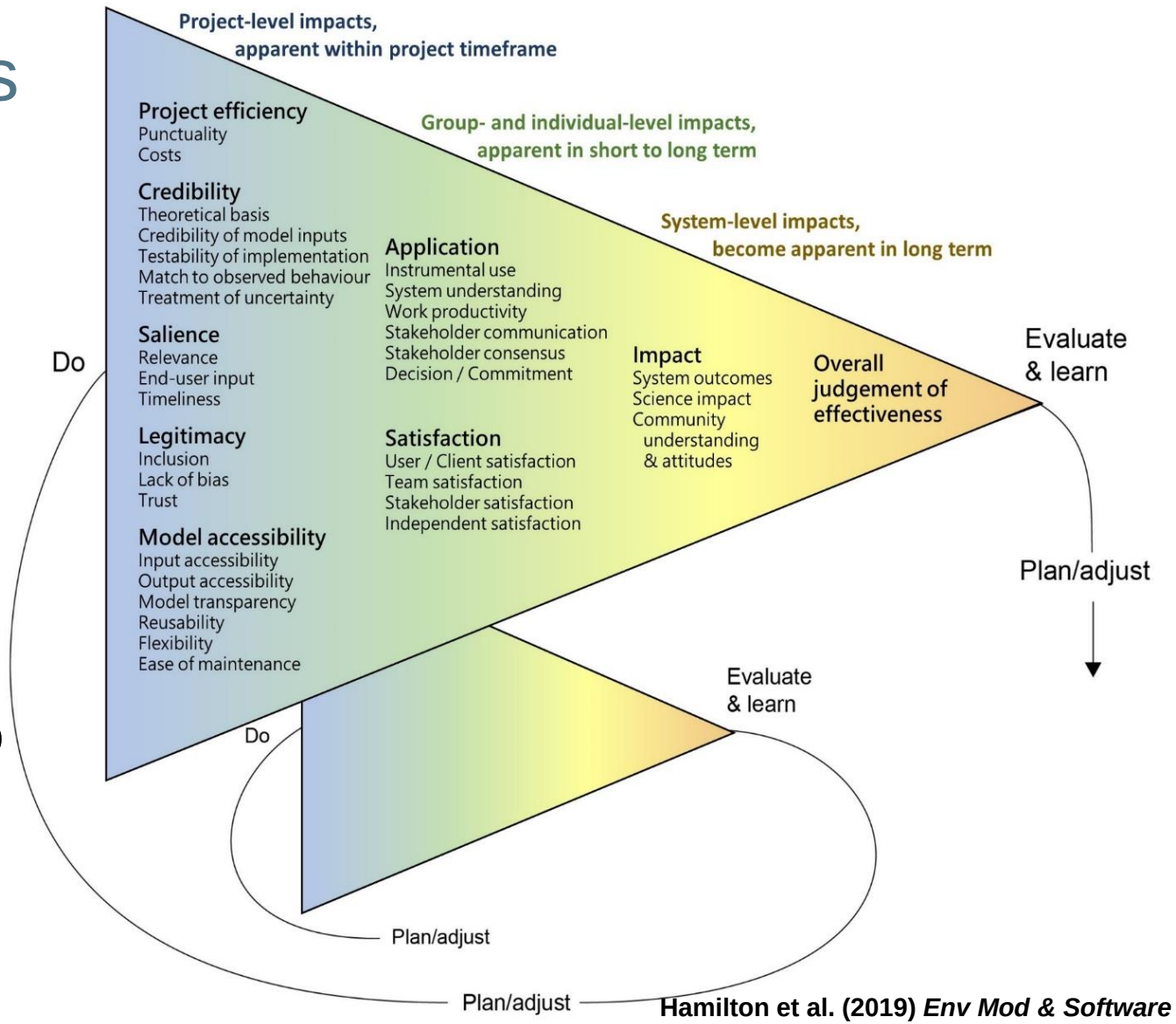
Phase	Step
Planning Phase	Problem definition and scoping
	Stakeholder Planning
	Project management planning
	Preliminary conceptual model
Development Phase	Data collection
	Construction
	Model Calibration
	Uncertainty analysis
	Testing/evaluation
Application Phase	Experimentation
	Analysis and Visualization
	Communication of results
Perpetuation Phase	Documentation
	Process evaluation
	Monitoring and maintenance

Badham et al. (2019) ***Env Mod & Software***
QWMN Good Modelling Practice Principles

2. What constitutes success

- Towards a new process-oriented paradigm of modelling as a social process
  → collaboration & participation are key

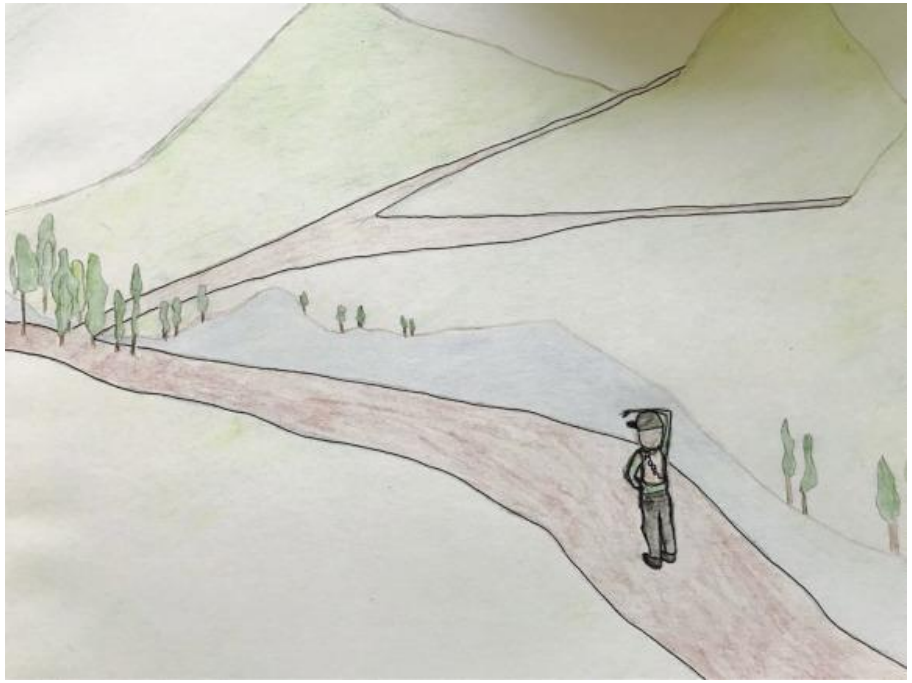
- Using the success framework (32 success criteria in 8 categories) to assess/design collaborative mechanisms
  - Did the collaborative mechanism help to achieve credibility / legitimacy/ model accessibility (etc)?
  - Which criteria did it work best for?
  - How can the mechanism be improved?



Hamilton et al. (2019) *Env Mod & Software*

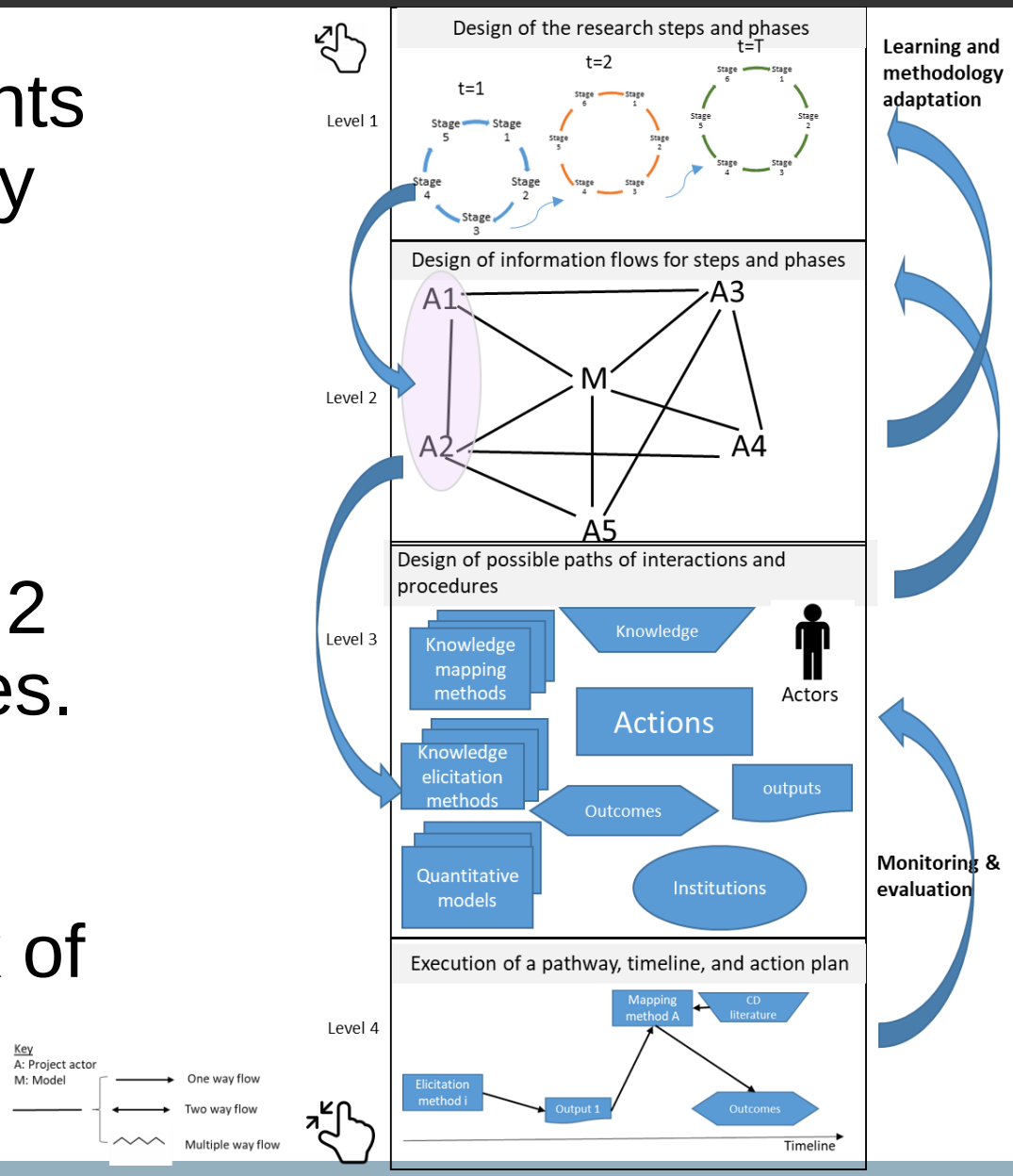
3. Design

- Pathway metaphor:
  - IAM is usually off the beaten track, not following well formed recipes
  - Choices at forks, influenced by deliberate, tacit, and structural phenomena
  - It’s ok to go down the wrong path, the important thing is to not get stuck, ensure you are checking for the need to redirect the path

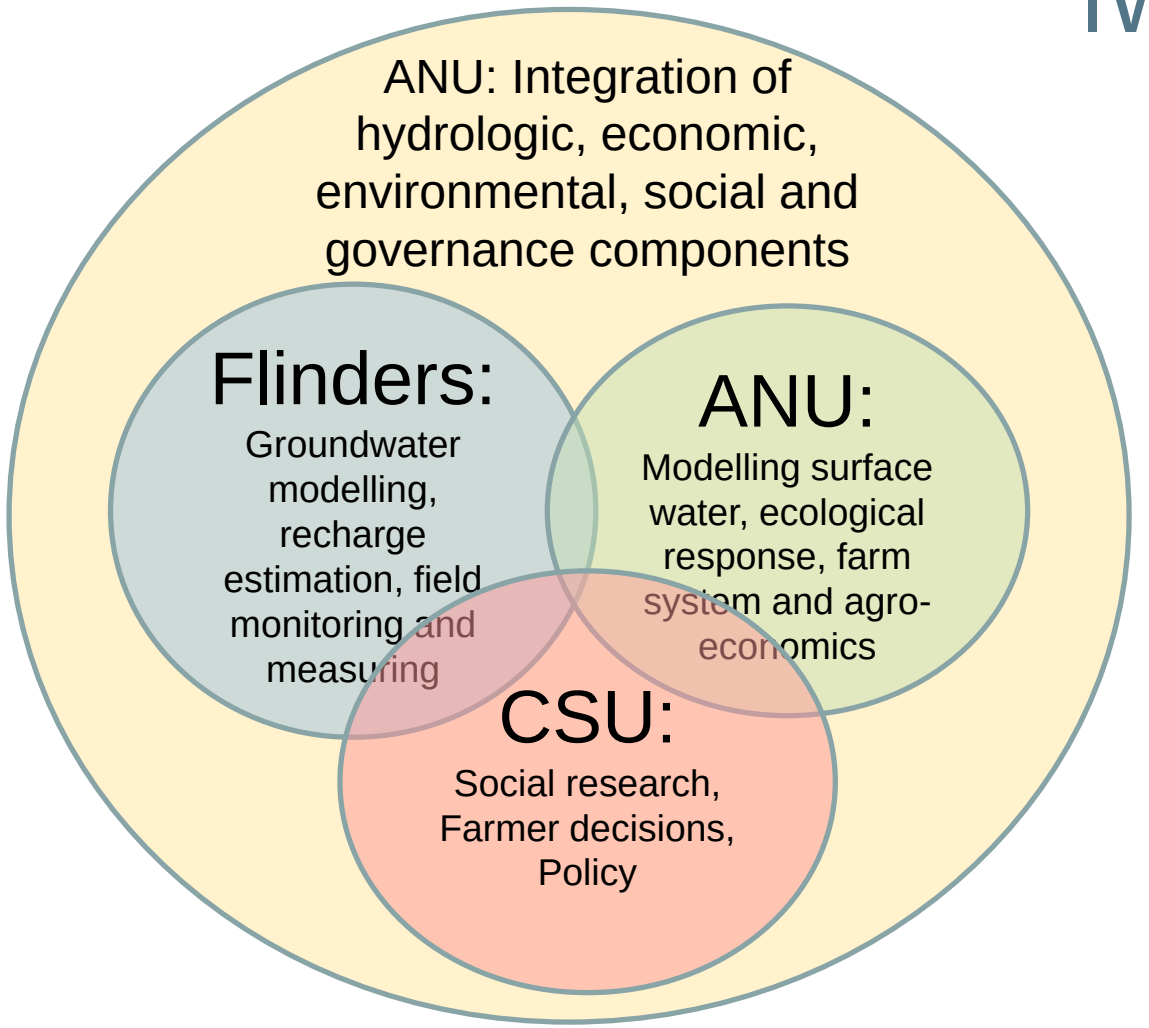


Lahtinen TJ, Guillaume JHA, Hämäläinen RP (2017) Why pay attention to paths in the practice of environmental modelling?, Environmental Modelling & Software 92:74–81, doi:10.1016/j.envsoft.2017.02.019

- The focus on generating process variants is essential for incorporating disciplinary perspectives about how the research activities may unfold.
- At the start of each phase, the project team should have sufficient procedural clarity about how the design of (Levels 2 and 3) will inform the execution activities.
- The focus on fundamental information exchanges helps to bypass debates around convergence and avoid the risk of being bogged down in early deadlocks.



Example project: MDBA-NCGRT Partnership on IWRM



- Exploring opportunities for complementary water uses at Campaspe
- Ongoing collaboration between Flinders University, Australian National University (ANU) and Charles Sturt University (CSU), funded by MDBA in a strategic partnership.
- Collaborators include North Central CMA, Goulburn-Murray Water, Vic Ag, irrigators etc.

Some key lessons: Build trust

- **Building trust** with your stakeholders leads to enduring collaborations
  - Can bridge the gap in funding between short-term projects
- **Be realistic about expectations** of the research team and stakeholders
  - With time and money constraints on everyone, research outcomes might only feel like a small step forward, but towards a longer-term goal
  - Over-promising and under-delivering rapidly undermines trust
- Ask stakeholders for ideas on how to ***solve*** their water challenges, not just what the problem is
  - Don’t be bound by current policy, think outside the box, then test it’s feasibility
  - This is empowering, and might just lead to a great opportunity

Some key lessons: Be Sincere

- ***Be sincere*** when engaging stakeholders.
  - Every collaborative effort (particularly workshops) ***must deliver a tangible outcome*** for stakeholders. What's in it for them? (e.g. learning new methods, processes, or something about their region)
    - Every meeting must allow for both give and take (i.e. giving new information/knowledge/findings to the stakeholders, while taking their guidance/knowledge/experience)
  - Provide written summaries (e.g. documents, reports, flyers) for stakeholders ***throughout the project***
    - Don't' leave it till the end when research findings are polished
    - Should be done from all researchers/ disciplines (not just one or two)
    - Keeps the research team focused on the end-users
    - Written materials for workshops should be provided in advance to allow stakeholders to process it, and be in a position to provide constructive feedback and ask insightful questions.

Summary

- Integrated assessment demands collaboration and participation
- Collaborating successfully in Integrated Assessment and Modelling exercises requires
  - Better understanding of how IAM can be successfully used to design and implement research–practice collaborations.
  - Clarity around phases and steps (i.e. how will information flow among the project actors? who will be responsible to produce information? Who will consume this information? who will receive and communicate the results? What is the timing of the involvement of project participants at each step of the research process?)
  - Clear understanding of the expected (integration and participation) outcomes, and factors for characterizing success
  - Embedding the principles (i.e. ethical, methodological) and methods for reflective practice throughout the process
- Engagement in general demands *many* facets: be prepared to devote the major component of your time to it!
- Multiple role (and skills) of integrated modellers: scholar, collaborator, facilitator and advocate.

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