Appendix 3. How we developed this book

As we outlined in the introduction, our approach was iterative and switched between inductive and deductive. We cycled between identifying elements of research integration (such as synthesising facts, judgments, visions, values, interests, and so on), examining different types of dialogue and analysing case studies in order to match methods with integration tasks.

As we also described in the introduction, our work on identifying elements of research integration did not aim to be particularly comprehensive or precise. Instead, we sought to develop a list that was 'good enough' for interrogating the literature on dialogue and for hunting out case studies. In terms of the elements we identified—facts, judgments, visions, values, interests, epistemologies, time scales, geographical scales and world views—we did not find any dialogue methods geared specifically to integrating facts, epistemologies, time scales or geographical scales. The elements we list here are also not the ones we started with; instead, we started with a narrower band. As we read about dialogue methods, we reflected on what they could integrate and then expanded our list of research elements. The most noteworthy element that we added in this way was 'judgments'.

In terms of identifying and searching through available dialogue methods, colleagues helped us brainstorm a list and identify the various tool kits listed in Appendix 2. Again, this was added to in the course of the project. We started out very broadly, considering participatory as well as dialogue methods. In this way, we came up with 70 methods (see Appendix Table 3.1) from which we chose 14 to cover here. We ruled out participatory methods that did not involve dialogue, as well as those that did not seem to be useful for research integration. For example, focus groups are dialogue methods that are useful for gathering information, rather than for synthesis.

In terms of the search strategy for obtaining cases to illustrate the dialogue methods, our primary aim was to generate at least one good-quality case example for each dialogue method. Because we are interested in *research* integration, we have concentrated on academic articles. These have the added benefits of having been quality checked through peer review and of being readily obtainable through any large academic library. We based our search primarily on one electronic database: *Current Contents* (ISI—Thomson Scientific). This is a major, broad resource covering about 7500 journals across the sciences, social sciences and humanities. We concentrated on the period 1993 to the present. If there were few or no cases found, *Web of Science* (ISI—Thomson Scientific) was also searched, mainly via checking the citation listings of any descriptive or theoretical articles we had to hand to trace case articles. The Internet search

engine *Google* was also used in these instances as this, on occasions, led to journal articles not listed in *Current Contents*, or to general resources through which case examples could be found.

A further restriction was that if an article describing a potential case study was not available electronically, it was passed over and another was selected. As the home organisation from which this search was conducted, The Australian National University, has extensive e-journal accessibility, this meant we could obtain rapidly most of what we identified as likely to be useful.

In terms of search practice, material on the dialogue method we were seeking to illustrate with cases was read and, from this, primary search terms were determined. Usually, this involved little more than taking the name of the dialogue method as the search term (for example, 'Delphi') with search controls to remove extraneous meanings. At times, however, more care had to be taken as some methods had multiple names or were difficult to separate through standard search strategies (for example, 'scenario planning' and 'scenario thinking'; 'search conferences' and 'future search conferences'). Within the initial search rotation, we focused on obtaining cases for each dialogue method from four target sectors: natural resource management (or, failing that, environment more generally), public health, security and technological innovation. For a number of the dialogue methods, we were not able to easily identify case examples in every sector. For a few, we found a good example in a different sector, which we decided to include. For principled negotiation, we were not able to identify any good case examples in *research* integration, so we chose one focusing on service provision. A summary of where we were able to find cases is provided in Table 2.1.

We present the best examples that we could find. For a few methods—for example, the Delphi technique—we were spoilt for choice. We found examples in each of our four areas of application and for various ways of combining discipline and stakeholder inputs, so that we could illustrate a range of ways of applying the method in research integration. In these instances, we sought cases that were complementary rather than identical. For example, if we had a case in natural resource management and we had two possible choices in security, we would use the security example that was most different from the case in natural resource management.

None of the dialogue methods we present is a tool solely for research integration. In other words, each method can also be used for purposes other than research in ways that do not involve researchers or that give them only a minor role. Because of our focus on research integration, we looked for examples where researchers had a role: in organising the dialogue, as facilitators, as participants, as 'expert witnesses' or in documenting the dialogue.

Most of the examples we found concentrated on stakeholder input. Examples where different disciplinary perspectives were brought together were less common, and illustrations combining disciplinary and stakeholder inputs were rare. That is not to say that the participants in dialogue for research integration always have to conform to a particular stereotype. On the contrary, the point we are making here is that the illustrations we are able to provide cover only a limited array of possibilities in terms of bringing various perspectives together.

Our aim in this book is not to be comprehensive, although we have included the majority of methods for which we could find reasonable descriptions. Primarily, we wanted to get a sense of the array of available methods and to explore how well they linked with specific research integration tasks. As far as we are aware, this has not been done previously. We did not include methods that were not yet well documented, even though a number of these were drawn to our attention. We urge colleagues to write these up. We are keen to hear about documented methods we have missed.

Appendix Table 3.1 Methods reviewed for their usefulness as dialogue methods for research integration

Action learning	Most significant change technique
Action research	Multi-criteria decision analysis
Appreciative inquiry	Multi-objective decision-making support
Backcasting	Nominal group technique
Battlemap	Open space technology
Boston box	Organisation readiness assessment
Charrette	Participatory development
Citizen committees	Participatory (rural) appraisal
Citizens' juries	Photovoice
Community fairs	Planning4real
Community indicator	Positioning
Consensus conference	Principled negotiation
Consensus development panel	Prioritisation matrix
Copy platform	Problem tree analysis
Critical systems heuristics	Promotions matrix
Deliberative dialogue	Public conversation
Deliberative forums	Public involvement volunteers
Deliberative polling	Public meetings
Delphi technique	Rapid assessment
Electronic democracy	Residents' feedback panel
Engaging public participation	Role-plays
Episode studies	Samoan circles
Ethical matrix	Scenario planning
Expert panel	Search conference
Field trips	Sketch interviews
Fishbowl	Social learning
Focus group discussion	Sociotechnical systems thinking
Force field analysis	Soft systems methodology
Future search conference	Speakouts
Interactive TV	Strategic assumption surfacing and testing
Interactive video display kiosks	Strategic planning
Kitchen table discussion	Study circles
Lens workshop	SWOT analysis
Market segmentation	Triangle analysis
Marketing approach	Visioning
Marketing matrix	Writeshops