



Landcare Research
Manaaki Whenua

Integrative research: steps to success

the Motueka Integrated Catchment Management (ICM) case study New Zealand

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**Will Allen, Andrew Fenemor
& the ICM whanau**



The background of the slide is a photograph of a rocky beach at low tide. Numerous tide pools of various sizes are scattered among the dark, wet rocks. The water in the pools reflects the light, creating a shimmering effect. The overall color palette is muted, with greys, browns, and blues.

in this talk

- Emerging issues – the P's
- Integrative science - 10 steps to success
- ICM Motueka - case study
- Does it fit the model?
- Final message

people, passion, purpose



“The ability to act on knowledge is power.

Most people in most organizations do not have the ability to act on the knowledge they possess”.

Michael Schrage

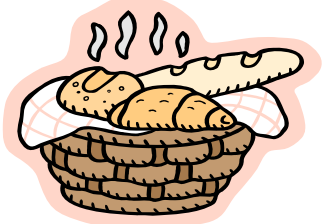
Emerging issues

“The great challenge for the next several decades will be to advance understanding of social systems in the same way that the past century has advanced understanding of the physical world”.

Jay Forrester

Simple

Following a Recipe



The recipe is essential

Recipes are tested to assure replicability of later efforts

No particular expertise; knowing how to cook increases success

Recipe notes the quantity and nature of "parts" needed

Recipes produce standard products

Certainty of same results every time

Complicated

A Rocket to the Moon



- Formulae are critical and necessary

- Sending one rocket increases assurance that next will be ok

- High level of expertise in many specialized fields + coordination

- Separate into parts and then coordinate

- **Rockets similar in critical ways**

- High degree of certainty of outcome

Complex

Raising a Child



- Formulae have only a limited application

- Raising one child gives no assurance of success with the next

- Expertise can help but is not sufficient; relationships are key

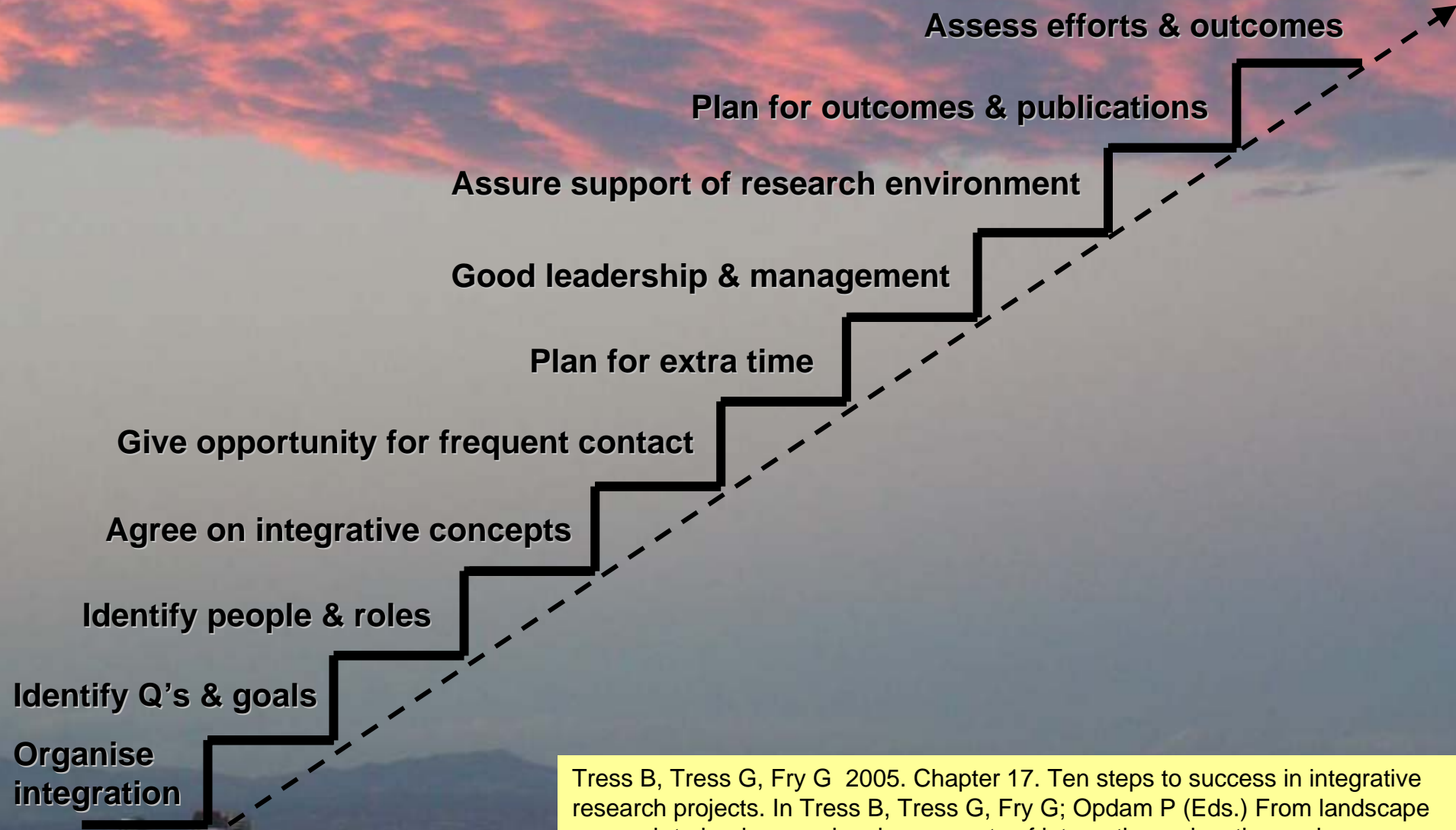
- Can't separate parts from the whole

- **Every child is unique**

- Uncertainty of outcome remains

10 steps to success

after Tress et al. (2005)



Tress B, Tress G, Fry G 2005. Chapter 17. Ten steps to success in integrative research projects. In Tress B, Tress G, Fry G; Opdam P (Eds.) From landscape research to landscape planning: aspects of integration, education and application. Springer, Dordrecht. UR Frontis Series , Vol. 12.

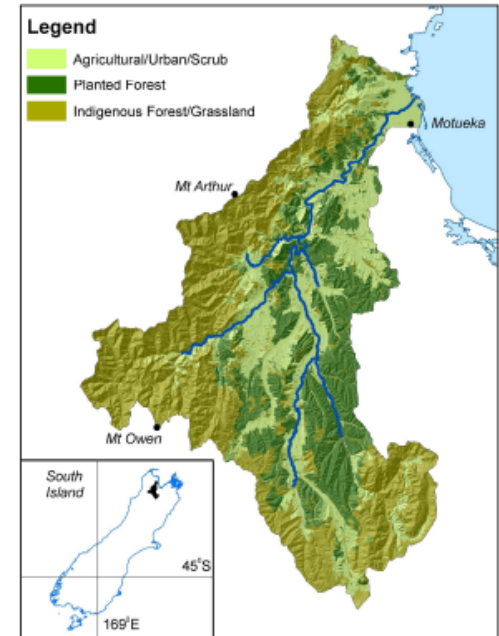
INTEGRATED CATCHMENT MANAGEMENT

for the *Motueka River*

• ridge tops to the sea •

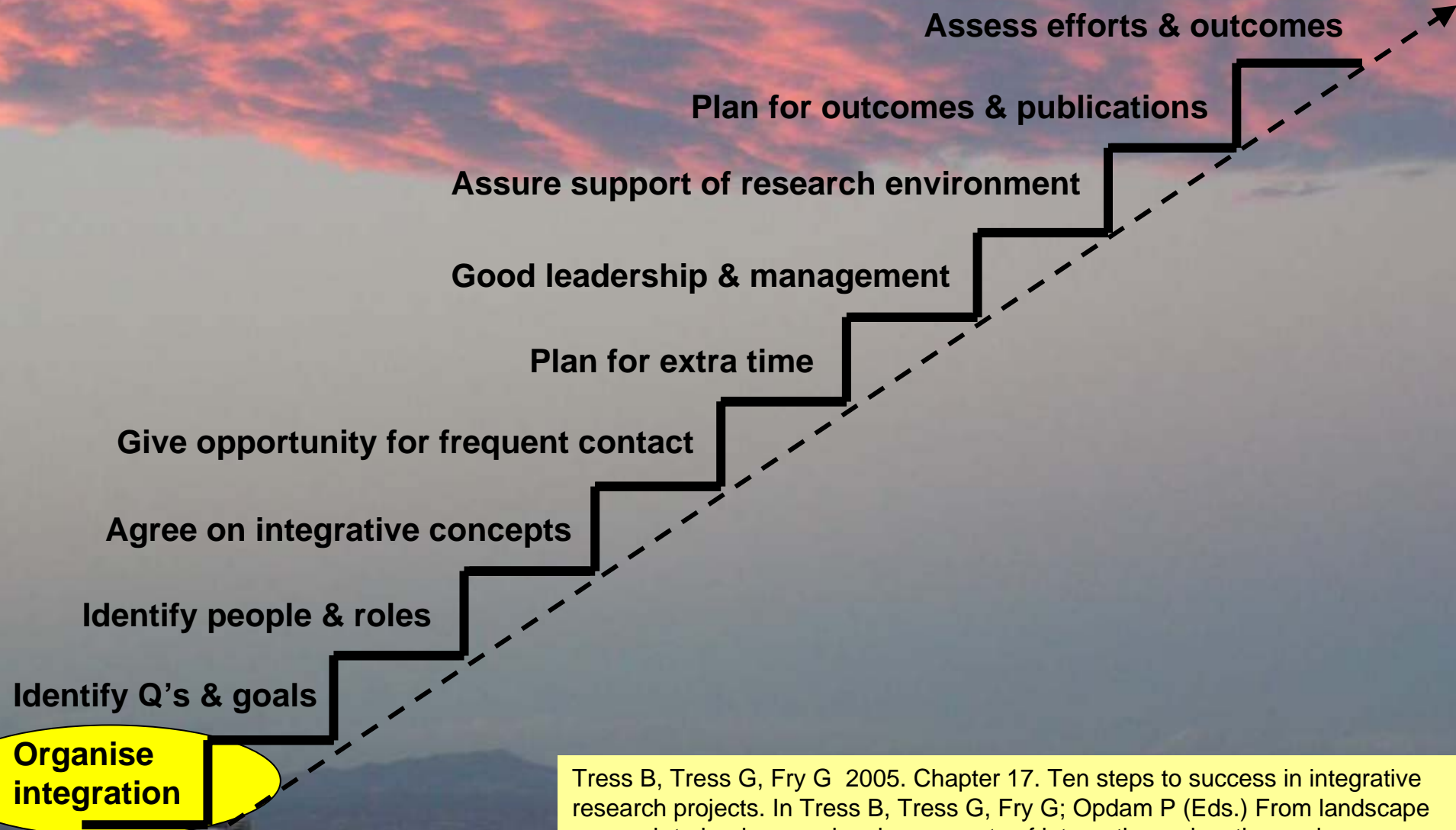
<http://icm.landcareresearch.co.nz/>

Where is the Motueka?



10 steps to success

after Tress et al. (2005)

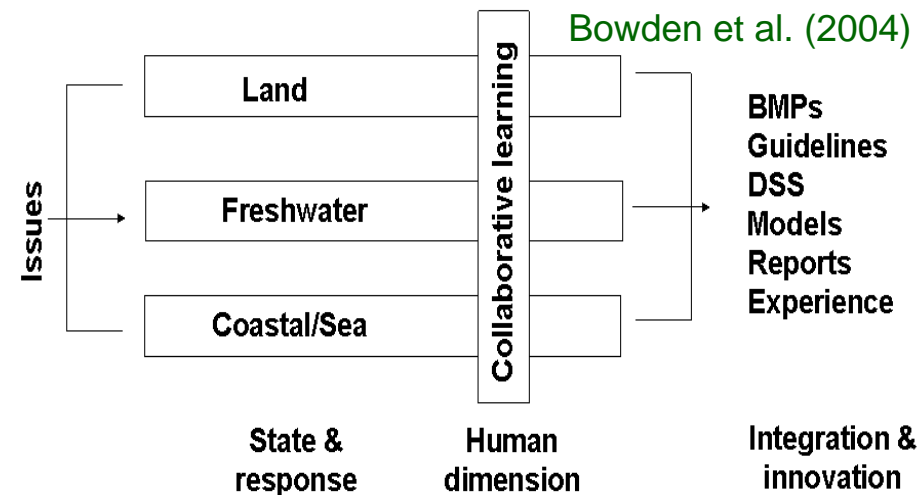


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Step 1: Organise integration

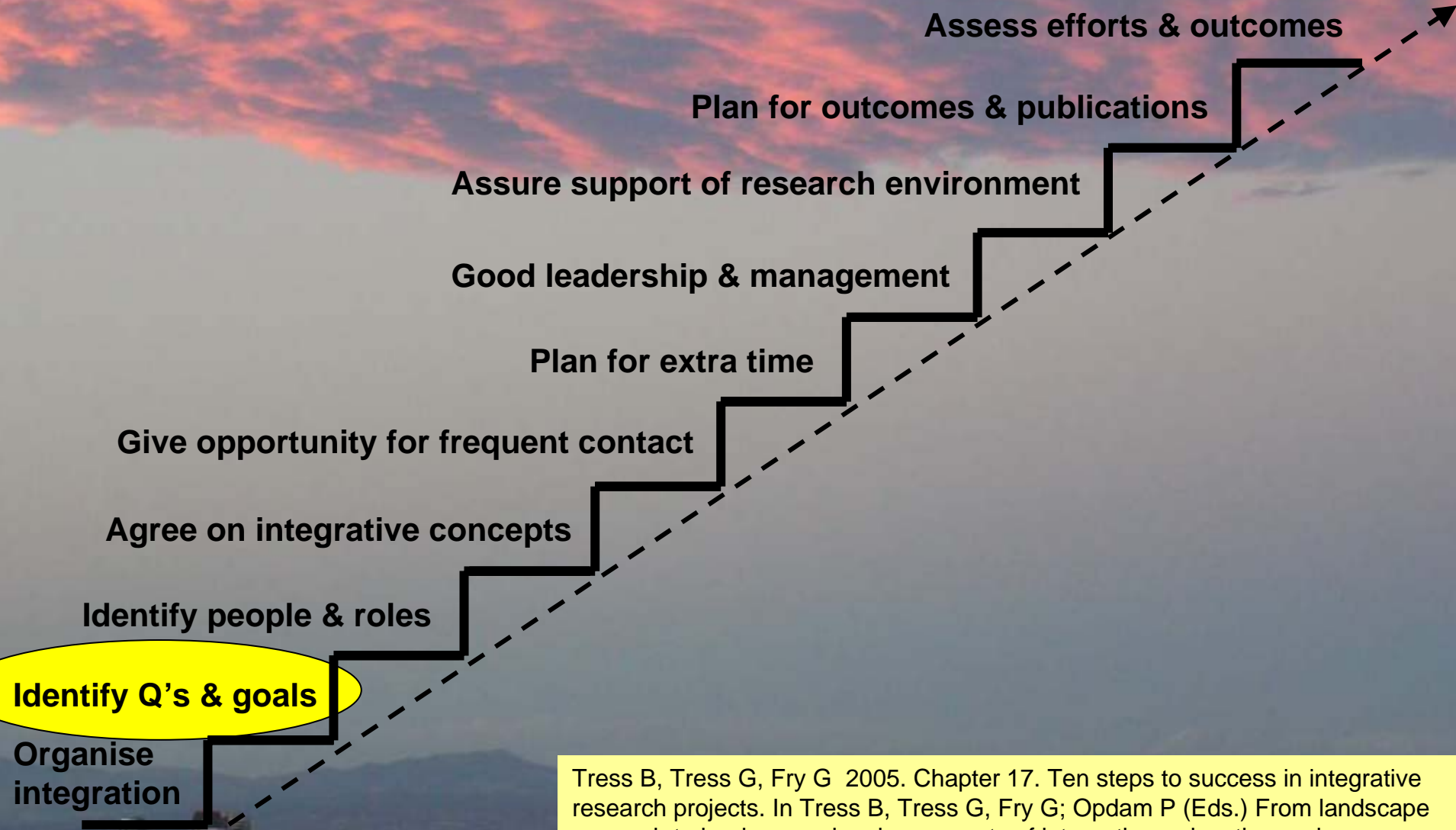


- Make integration part of the project
- Start integration at the beginning
- Plan an integrated research programme
- Multiple levels of interaction



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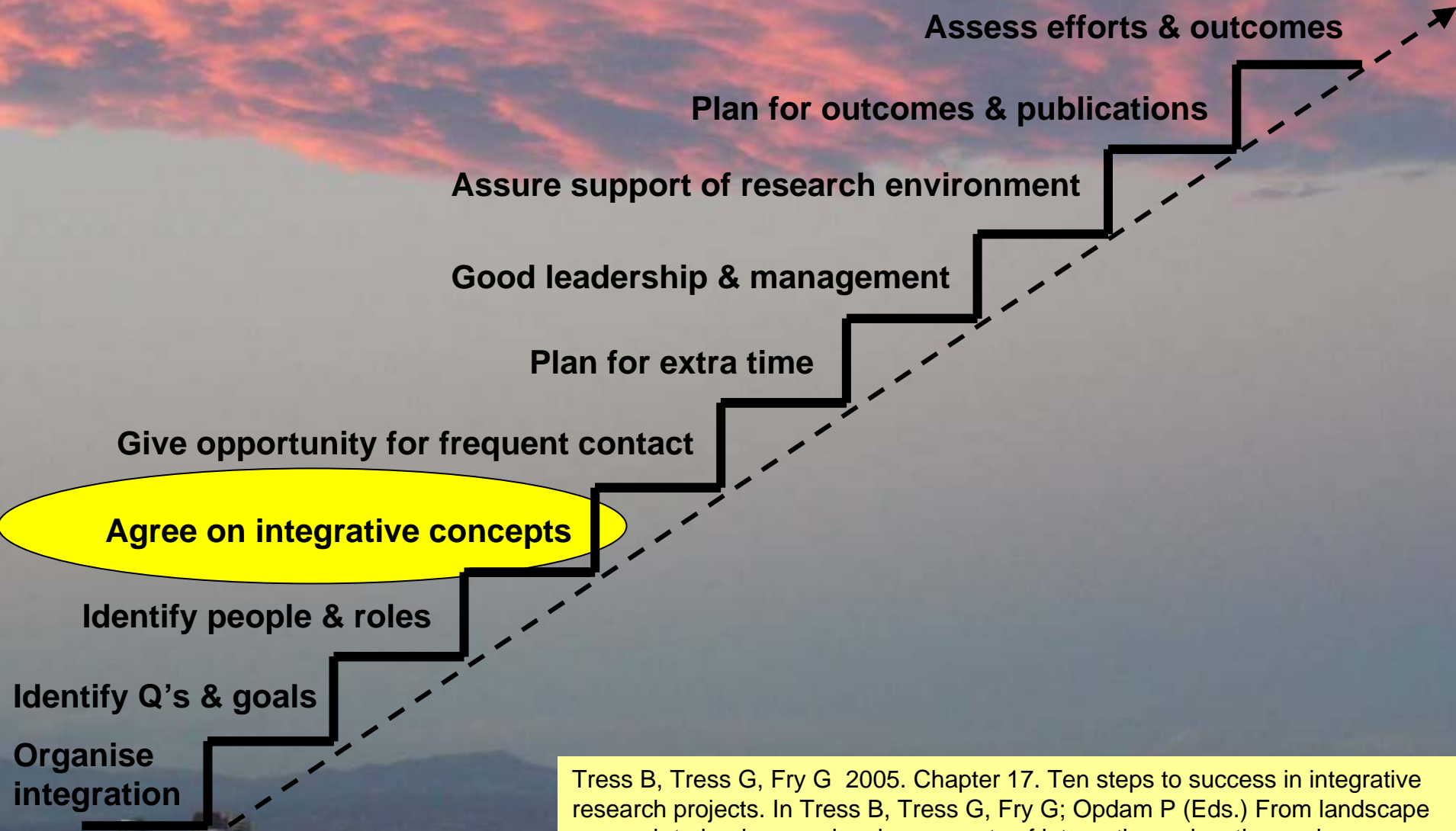
Step 2: Identify common questions & goals

- Programme goal
- Common research questions
- Outside of programme – stakeholders
- Reassignment of disciplines

Goal: undertake research to help improve the management of land, freshwater, and near-coastal environments in catchments with multiple, interacting, and potentially conflicting land and water uses.

10 steps to success

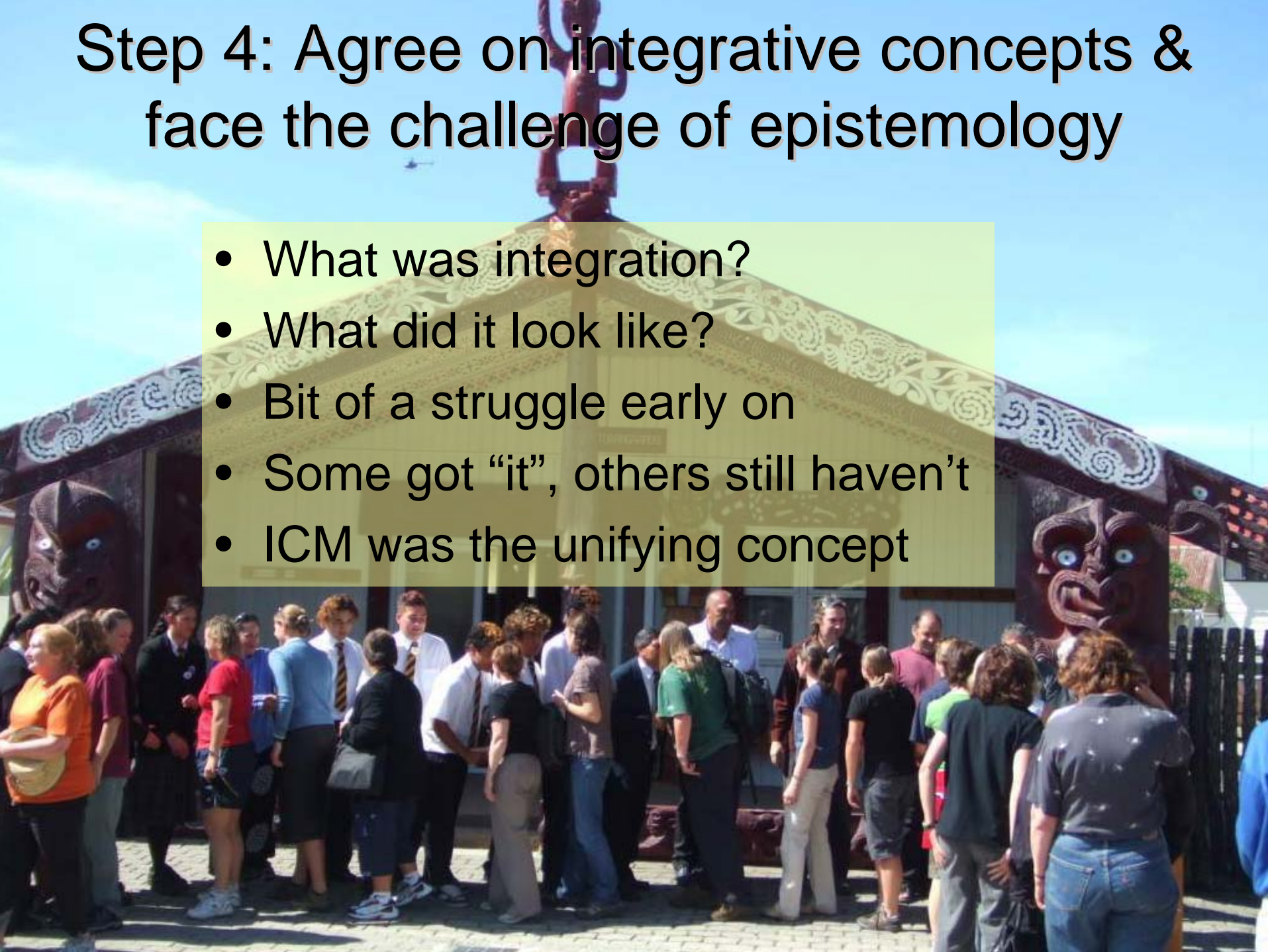
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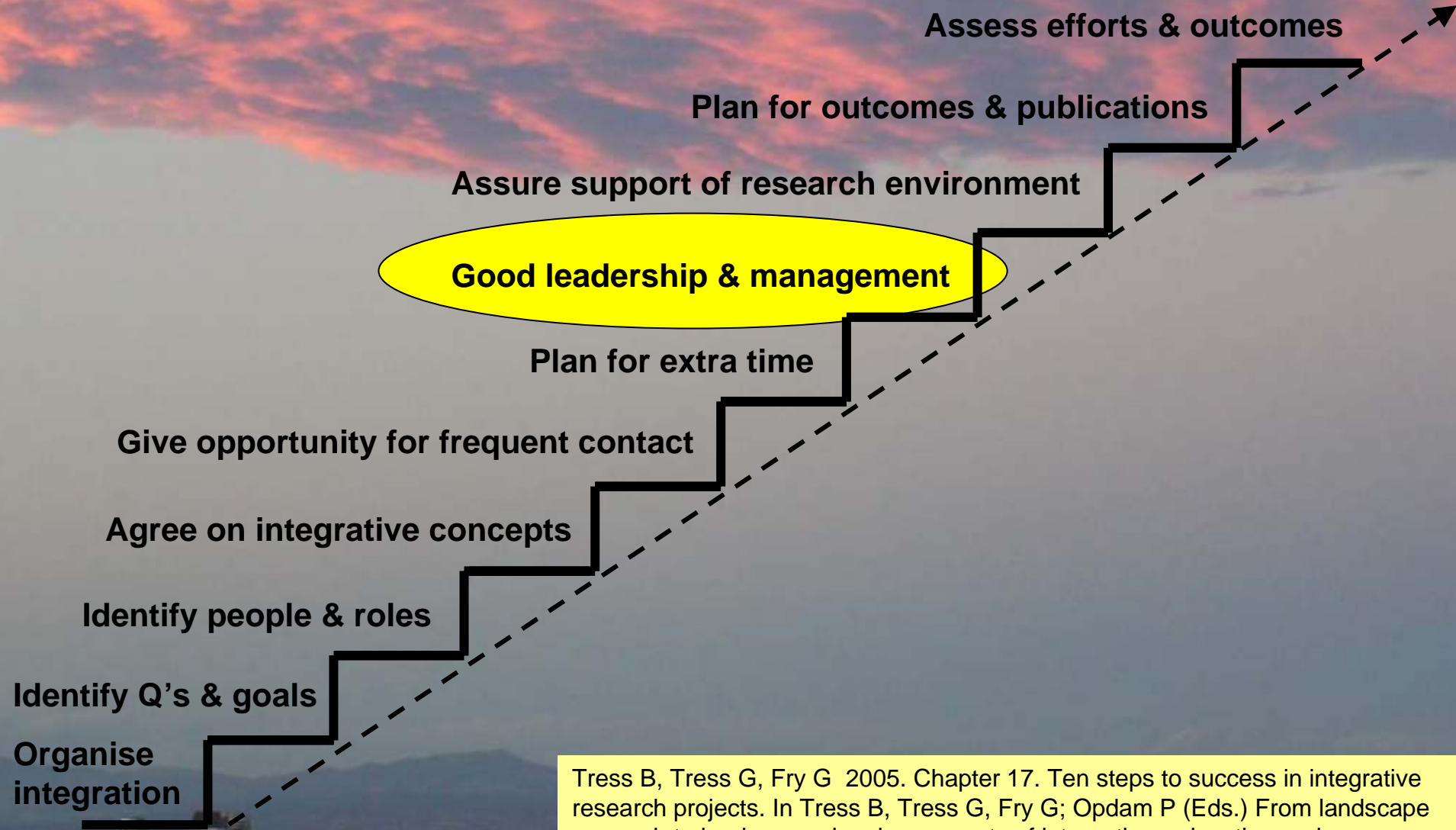
Step 4: Agree on integrative concepts & face the challenge of epistemology

- What was integration?
- What did it look like?
- Bit of a struggle early on
- Some got “it”, others still haven’t
- ICM was the unifying concept



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Step 7: Strive for good leadership & management

- 2 leaders – 2 styles
- End user partner became leader
- Both did some science
- Maintaining the momentum



10 steps to success

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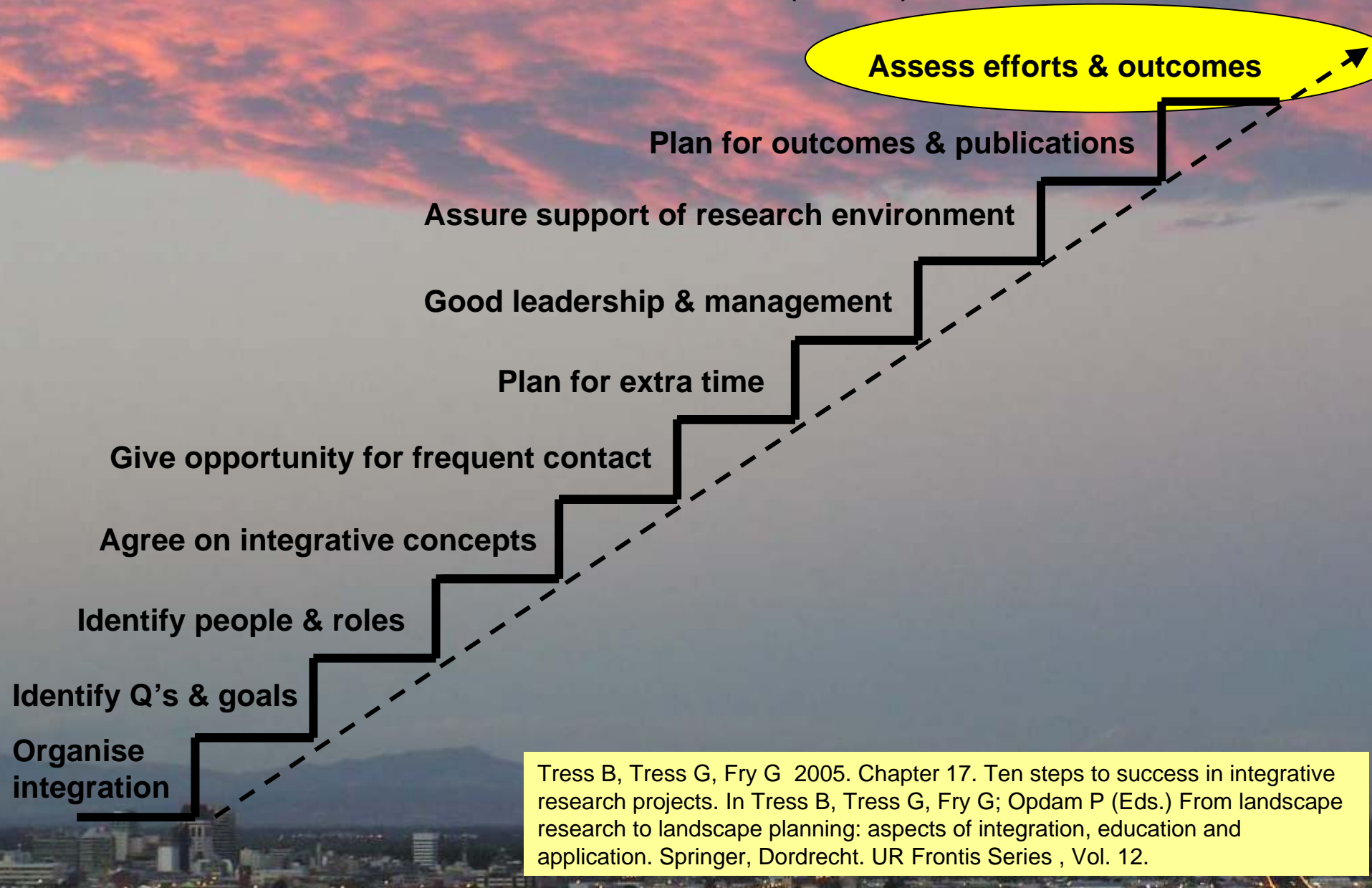
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Step 9: Plan for project outcomes, including publications

- Wider K products
- Publish or perish
- Different paradigm
- Acknowledgement - institution or funder
- Single vs multi authored papers
- Bias – reward recognition

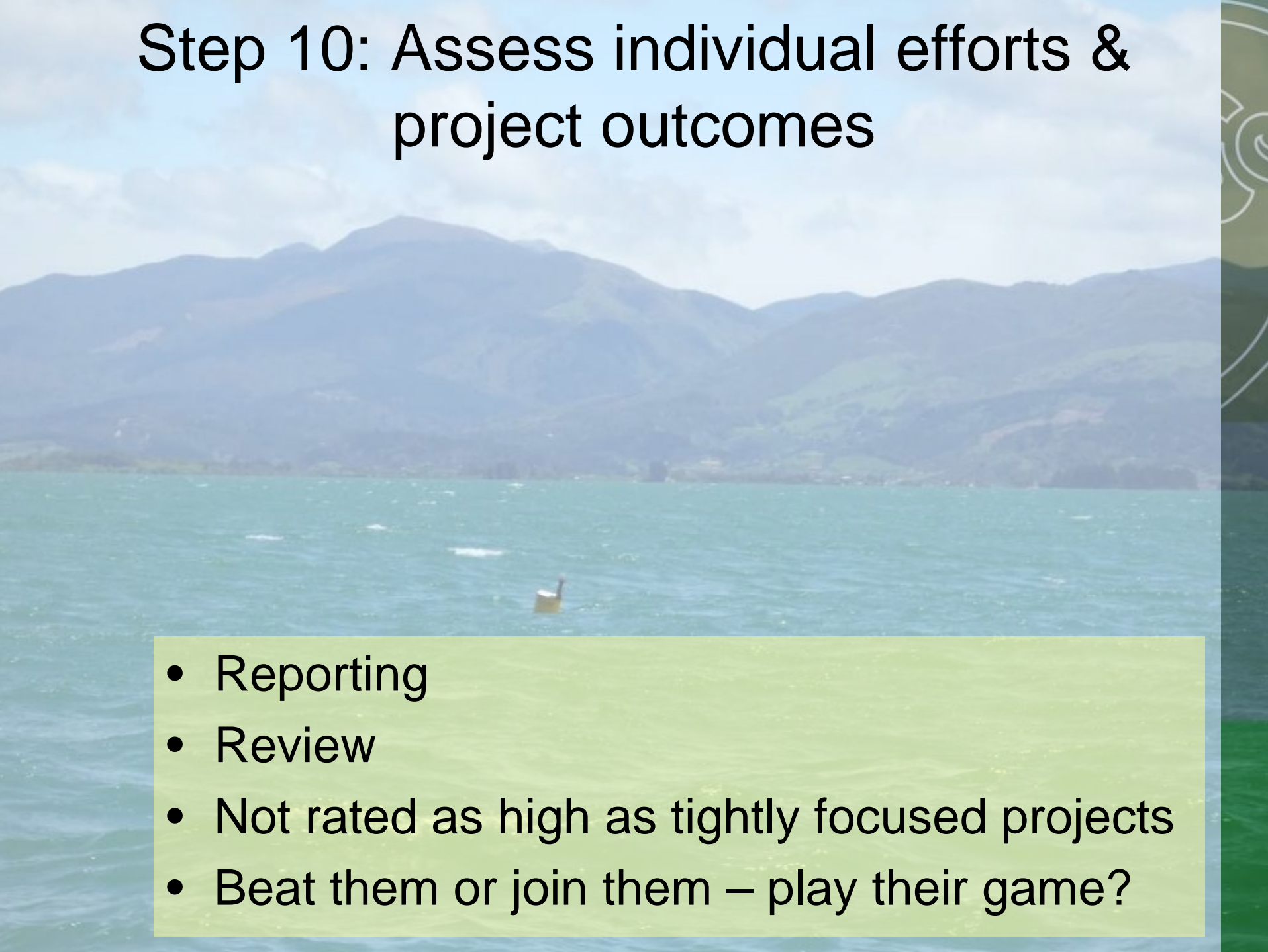
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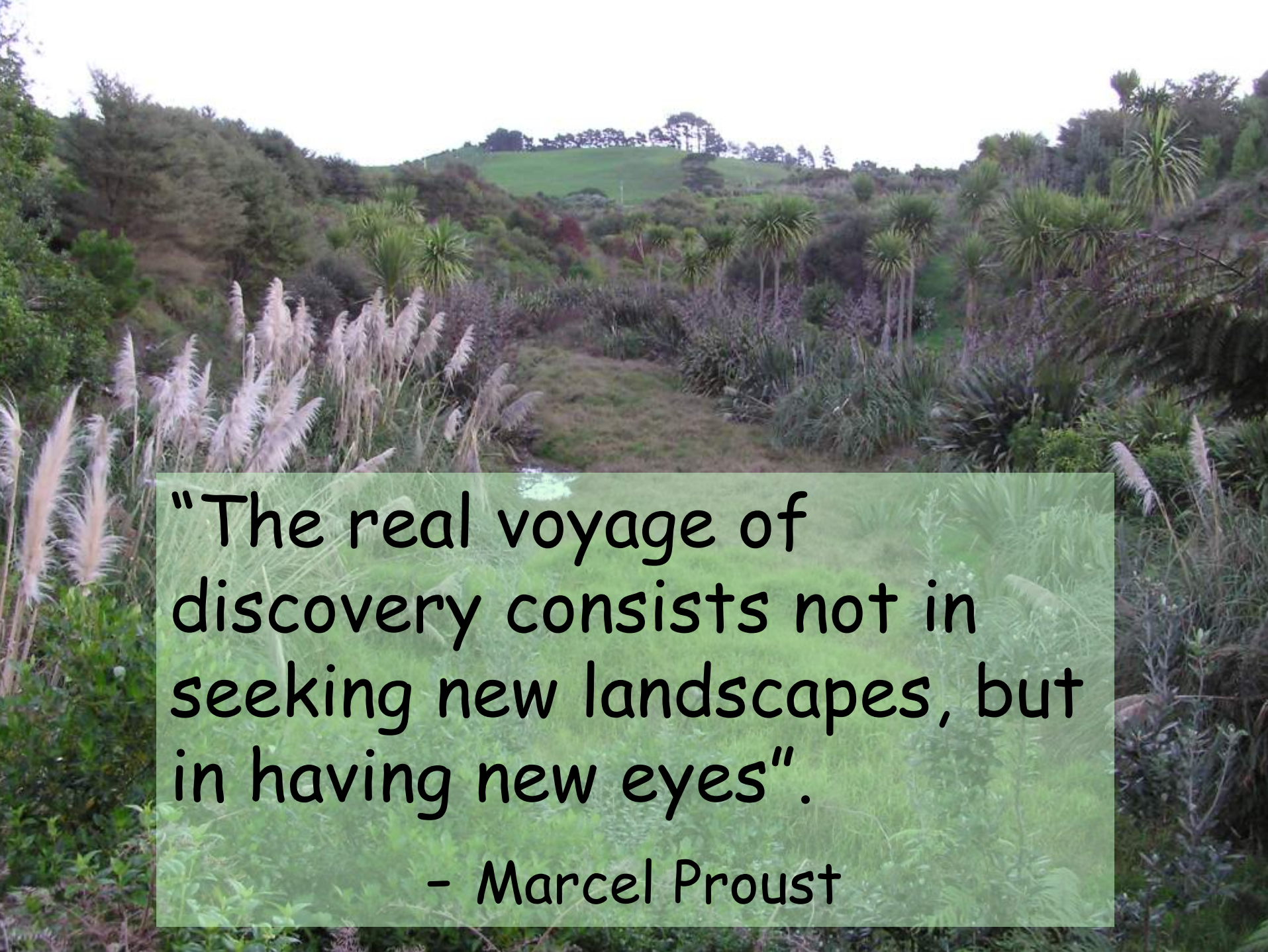
Step 10: Assess individual efforts & project outcomes

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- Reporting
 - Review
 - Not rated as high as tightly focused projects
 - Beat them or join them – play their game?

A full-page background image showing a sunset over a body of water. The sky is filled with horizontal bands of orange, yellow, and grey clouds. The sun is a bright yellow line on the horizon. The foreground shows a dark, silhouetted coastline on the left and the dark water of the ocean on the right.

in summary

Our ICM Motueka experience confirms that the Tress model is useful to describe integrative science projects.

A photograph of a lush, green landscape. In the foreground, there are tall, feathery grasses on the left and various tropical plants, including palm trees, on the right. A dirt path leads from the bottom center towards the middle ground. In the background, a green hill rises under a pale sky, with a line of trees at its peak.

"The real voyage of
discovery consists not in
seeking new landscapes, but
in having new eyes".

- Marcel Proust