

# Interdisciplinary ECRs – perspectives and potential partnerships

Dr Rachel Kelly  
[r.kelly@utas.edu.au](mailto:r.kelly@utas.edu.au)



# Overview

- Developing interdisciplinary ECRs
- Challenges
- Enablers
- Engaging the next generation of interdisciplinary leaders

# Developing Interdisciplinary ECRs

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PERSPECTIVE ESSAY



## Ten tips for developing interdisciplinary socio-ecological researchers

Rachel Kelly<sup>1,2</sup>  · Mary Mackay<sup>1,3</sup> · Kirsty L. Nash<sup>1,2</sup> · Christopher Cvitanovic<sup>1,4</sup> · Edward H. Allison<sup>5</sup> · Derek Armitage<sup>6</sup> · Aletta Bonn<sup>7,8,9</sup> · Steven J. Cooke<sup>10</sup> · Stewart Frusher<sup>1,2</sup> · Elizabeth A. Fulton<sup>1,11</sup> · Benjamin S. Halpern<sup>12,13</sup> · Priscila F. M. Lopes<sup>14</sup> · E. J. Milner-Gulland<sup>15</sup> · Myron A. Peck<sup>16</sup> · Gretta T. Pecl<sup>1,2</sup> · Robert L. Stephenson<sup>17,18</sup> · Francisco Werner<sup>19</sup>

Institutional structures and research practices? *Still emerging*

Knowledge on how to develop effective interdisciplinary research and researchers? *Limited*

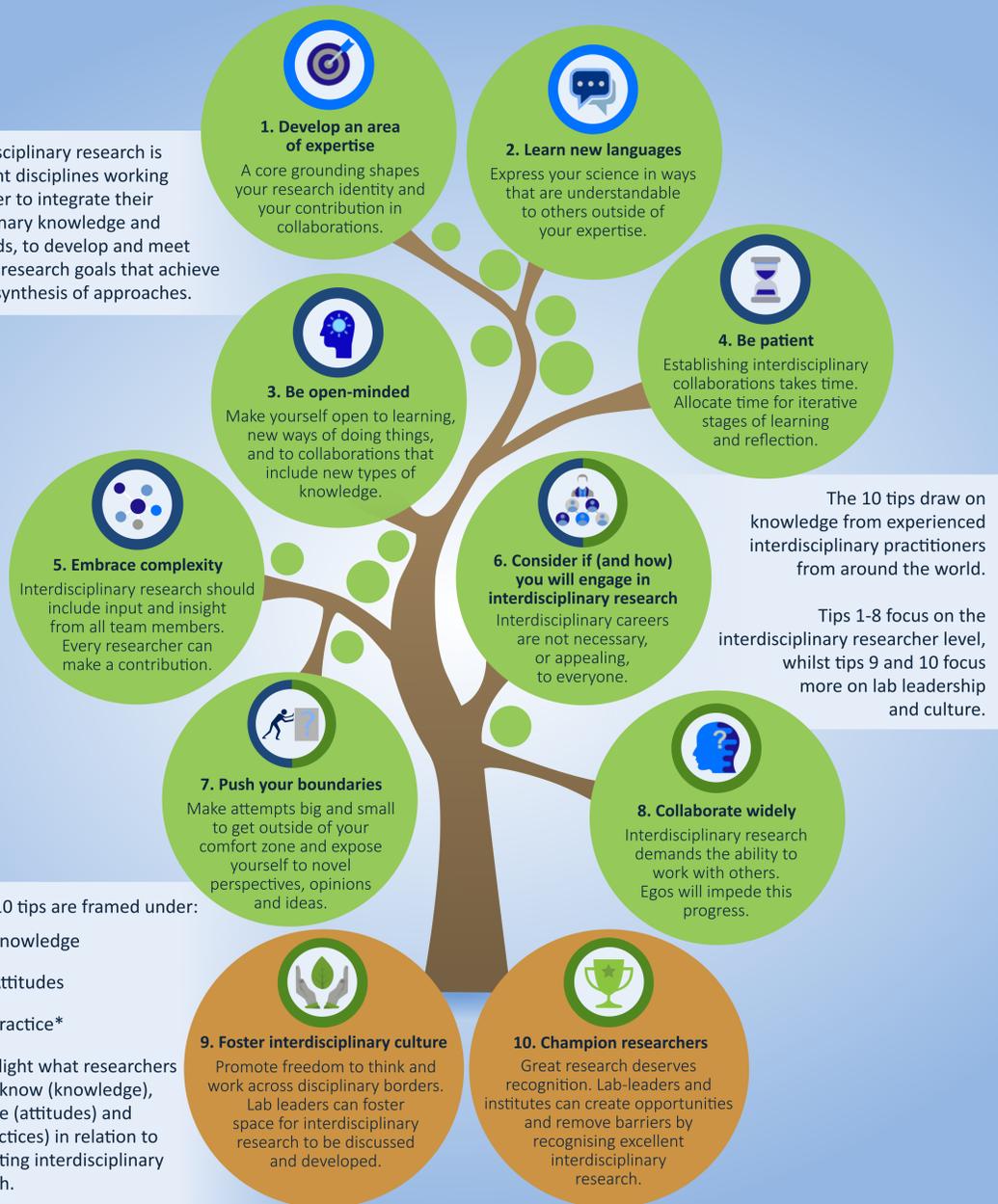
- Disciplinary ‘languages’
- *Where should your expertise lie? When are you an ‘expert’?*

>> How can ECRs

1. best engage in interdisciplinary research, and
2. develop interdisciplinary research skills?

# Ten tips for developing interdisciplinary socio-ecological researchers

Interdisciplinary research is different disciplines working together to integrate their disciplinary knowledge and methods, to develop and meet shared research goals that achieve a true synthesis of approaches.



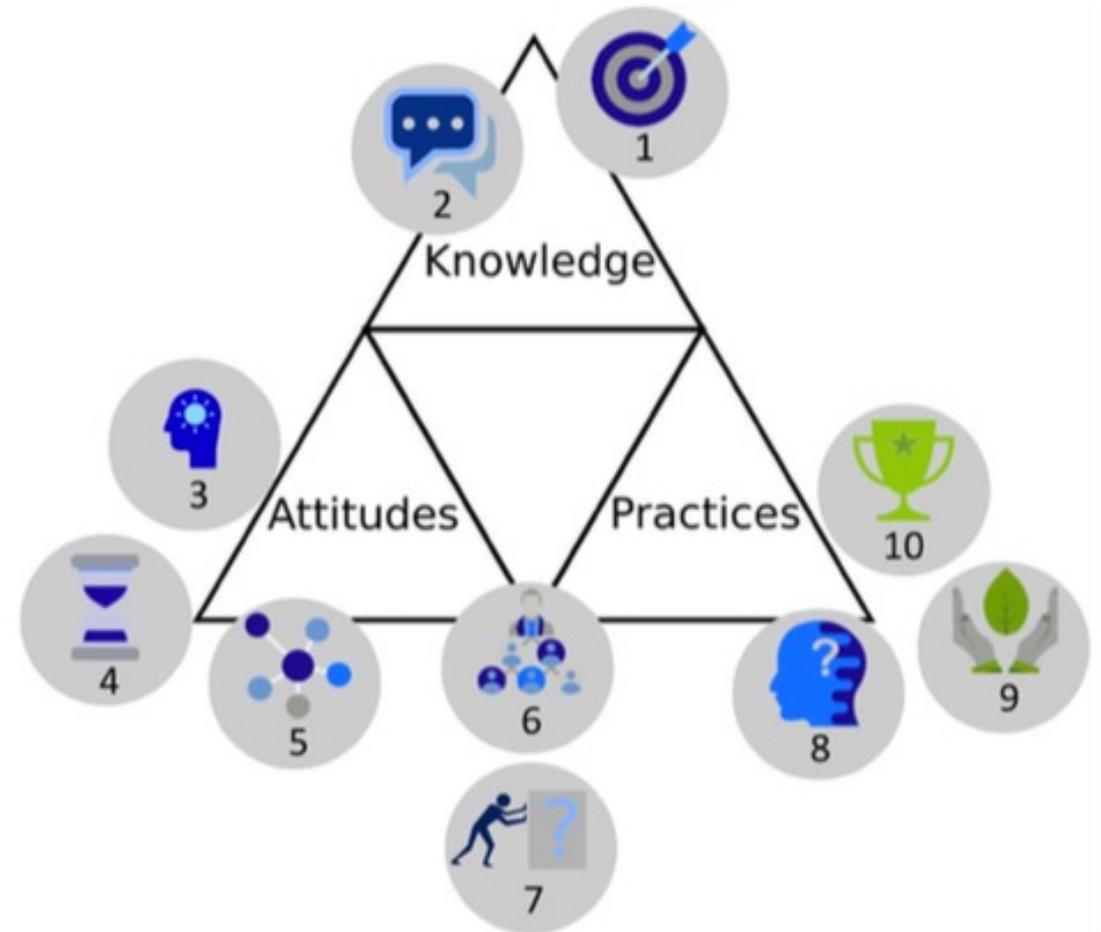
The 10 tips draw on knowledge from experienced interdisciplinary practitioners from around the world.

Tips 1-8 focus on the interdisciplinary researcher level, whilst tips 9 and 10 focus more on lab leadership and culture.

These 10 tips are framed under:

- Knowledge
- Attitudes
- Practice\*

To highlight what researchers should know (knowledge), perceive (attitudes) and do (practices) in relation to conducting interdisciplinary research.



## Goals, challenges, and next steps in transdisciplinary fisheries research: perspectives and experiences from early-career researchers

Elizabeth A. Nyboer  · Andrea J. Reid · Amanda L. Jeanson · Rachel Kelly · Mary Mackay · Jenny House · Sarah M. Arnold · Paul W. Simonin · Mary Grace C. Sedanza · Emma D. Rice · T. E. Angela L. Quiros · Andrea Pierucci · Kelly Ortega-Cisneros · Julia N. Nakamura · Valentina Melli · Stella Mbabazi · Mariana S. L. Martins · Anne Brigitte B. Ledesma · Clara Obregón · Chepkemboi K. Labatt · Andrew N. Kadykalo · Michael Heldsinger · Madeline E. Green · Jessica L. Fuller · Milagros Franco-Meléndez · Matthew J. Burnett · Jessica A. Bolin · Solange Andrade-Vera · Steven J. Cooke

# Challenges

## Barriers to conducting TFR

Institutional inertia and lack of support



Lack of recognition of time and emotional labour



Lack of mentorship and skill development opportunities



>> further exacerbated for underrepresented, marginalised, disadvantaged groups

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~~Challenges~~  
Enablers

Next steps..?

**Early career researcher**

Form non-academic or peer-mentorship networks  
Communicate methodologies and processes



# Engaging the next generation of research leaders

Sustainability depends upon future actions and leaders

ECRs are the innovators = the essential ingredient

Bridge generational gaps

Enhance knowledge transfer

Develop innovative solutions to novel problems

How can we position and empower emerging and future research leaders?

## PLOS BIOLOGY

CONSENSUS VIEW

Five actionable pillars to engage the next generation of leaders in the co-design of transformative ocean solutions

Erin V. Satterthwaite<sup>1\*</sup>, Valeriya Komyakova<sup>2,3</sup>, Natalia G. Erazo<sup>4</sup>, Louise Gammage<sup>5</sup>, Gabriel A. Juma<sup>6</sup>, Rachel Kelly<sup>2,3</sup>, Daniel Kleinman<sup>7</sup>, Delphine Lobelle<sup>8</sup>, Rachel Sapery James<sup>9</sup>, Norlaila Binti Mohd Zanuri<sup>10</sup>

# How can we position and empower emerging and future research leaders?

## Share knowledge

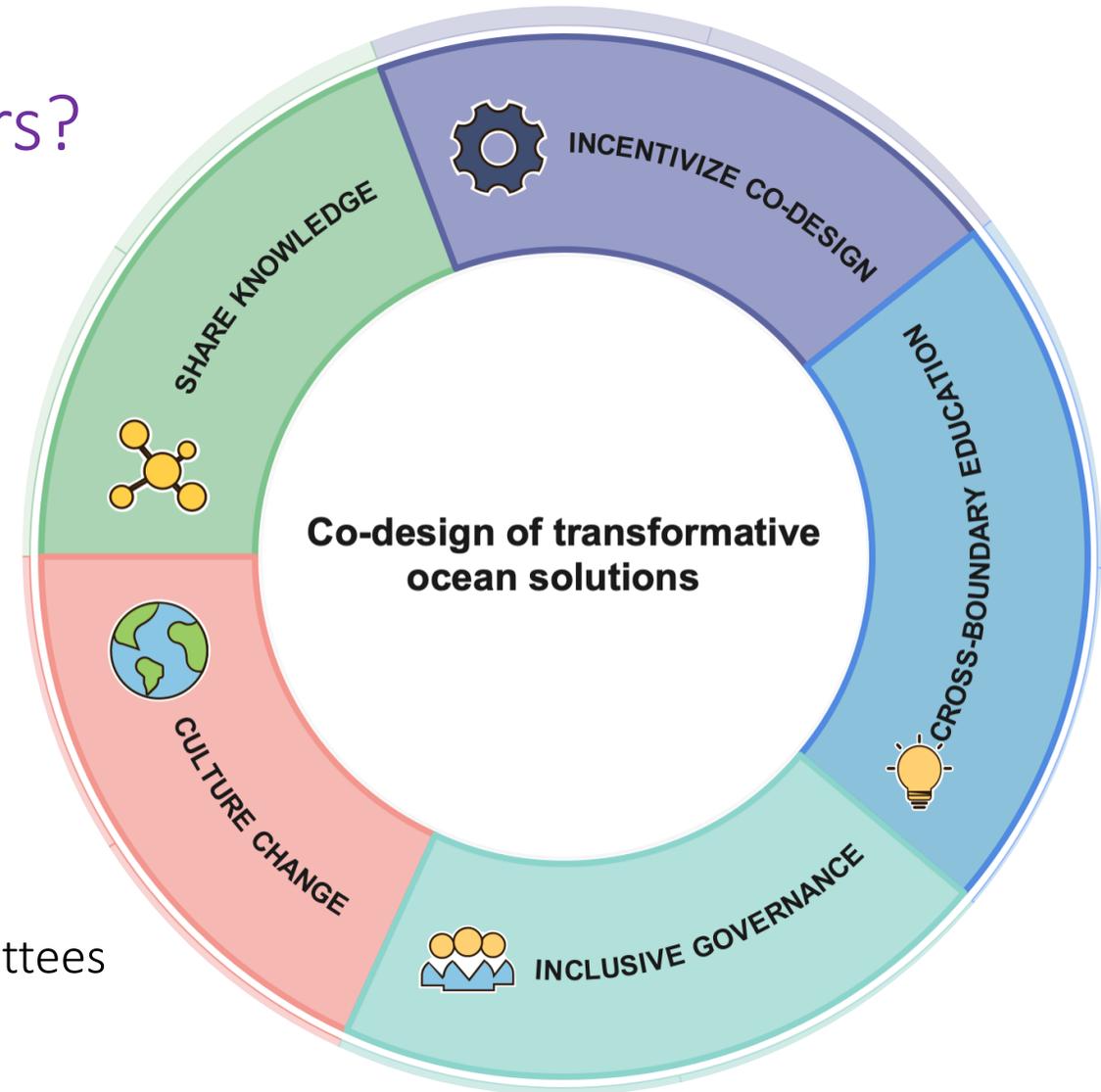
- Networks and mentorship
- Peer-to-peer knowledge sharing

## Cross-boundary education & opportunities

- Education
- Connecting to researcher users – context
- Champion ECRs in decision-making

## Inclusive & participatory governance structures

- Democratise organisations and networks
- Embed earlier career stages within boards and committees
- Think beyond typical hierarchical systems...



# Leadership training

## CMS Future Ocean Leaders Course 2023

ECR-led and developed

Knowledge transfer e.g. senior leadership panel session

Peer-to-peer learning and mentoring

3 modules:

1. Styles of leadership (DISC)
2. Personalities and leadership
3. Values-based leadership



Co-developed with Dr Rebecca Shellock

# Interdisciplinary research training

## CMS Interdisciplinary Spring School 2023

### *Inter- and transdisciplinary approaches for sustainable marine futures*

- One-week course
- Diverse topics - systems thinking, epistemology, working across cultures, co-design, etc.
- Lectures and workshops
- Team project
- Working with stakeholders - interdisciplinary project proposal summary doc
- Student diversity



# Interdisciplinary project design

CMS Future Seas 2030



Focus on positioning and mentoring ECRs

Intentions v's reality...

Reflections and research



**NITRO-Oceania**

*NITRO-Oceania Strategic Plan 2023-2025*

**VISION**

**A network of leaders fostering interdisciplinary and transdisciplinary (ITD) research and education within and across organisations.**

**MISSION**

Our mission is inspiring and supporting researchers to achieve transformational impact on global challenges by:

- Fostering attention to grand challenges of particular significance to the Oceania region
- Creating supportive environments and infrastructure
- Developing effective metrics for excellence, impact and return on investment
- Improving funding availability and outcomes
- Supporting next generation organisational leaders
- Providing effective career paths and role models for interdisciplinarians and transdisciplinarians at all levels, and especially to support early-career researchers
- Developing workable transition pathways to implementation of new metrics and effective career paths.



NITRO-Oceania

*NITRO-Oceania Strategic Plan 2023-2025*

**VISION**

**A network of leaders fostering interdisciplinary and transdisciplinary (ITD) research and education within and across organisations.**

**5. Training and support**

- a. Developing future leaders
  - i. Advocating for training for early career researchers/administrators
  - ii. Running workshops on specific aspects of ITD leadership
- b. Mentoring existing leaders of ITD organisations

*How can we position and empower emerging and future interdisciplinary research leaders?*

# Summary

- Developing interdisciplinary ECRs
- Challenges – access, opportunities, career (incl. funding) limitations
- Enablers – occurring across levels from researchers to institutions
- Engaging the next generation of interdisciplinary research leaders...

# Interdisciplinary ECRs

## Perspectives and potential partnerships



Engaging the next generation of interdisciplinary research leaders... a role for NITRO?



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