Exploring possible development futures for the Fitzroy catchment through participatory scenario planning
Multi-objective planning in northern Australia

- Create a toolkit to guide planning and management that supports multiple uses of land and water
- Guide participatory scenario planning to assess the outcomes of alternative development scenarios in the Fitzroy River catchment
- Create narratives and associated land-use maps and set up GIS-based tools for scenario evaluation
- Develop a network of stakeholders engaged in planning and contributing to better informed government planning processes

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Project leaders

David Pannell  Milena Kim  Michael Douglas  Ro Hill  Mark Kennard  Alaya Spencer  Vanessa Adams
Fitzroy River catchment, Kimberley, WA
The project covers the full area of the Fitzroy River catchment, mainly pastoral use (~48 pastoral stations), protected areas, IPAs, etc.
Includes eight Native Title Determinations and seven registered claims.

Native Title Determinations (Aboriginal Corporations):
- Bunuba (Bunuba Dawangarri)
- Gooniyandi (Gooniyandi)
- Kurungal (Tiya)
- Ngurrara (Yununjarra)
- Nyikina-Mangala (Walalakoo)
- Wajina-Wunggurr Wilinggin (Wajina-Wunggurr)
- Yi-Martuwarra Ngurrara (Yununjarra)
- Yungngora-Noonkanbah (Yungngora)

Registered claims:
- Bunuba (Bunuba #2 Part B)
- Gooniyandi (Giniljawarrmi Yoowaniya Riwil)
- Jaru
- Kija (Yurriyangern Taarn)
- Ngarrawanji
- Warlanguuru
- Warnwa (Warnwa Combined)

NTD data source: Native Title Register (April 2018)
Fitzroy futures

All care about the future of the Fitzroy and the people

• Different people
• Different goals
• Different futures
• Different plans
Why scenarios?

Useful when people are in situations that…

• Are complicated and uncertain, possible surprises
• Want to change, but disagree on how to do it or how the future should look
• Cannot be changed unilaterally and need others to move forward
• Require flexible and long-term planning
Create a shared space for constructive and objective conversations about different development pathways for the Fitzroy River catchment and their outcomes.
Outline

1. What is scenario planning
2. What are we trying to achieve
3. How are we planning to do it
4. Stages and timeline
5. Who will participate
6. Detail of activities and outputs
7. What are the benefits
Outline

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Scenario planning is about…

Creating stories that tell us what **could** happen in and around the region that shape the future development of the catchment.

Imaginary alternative development scenarios from a participatory scenario planning exercise in eastern Europe (Hanspach et al. 2014)
Sharing stories can open up thinking and possibly shape future decisions

*Kahane. 2012. Transformative scenario planning: Working together to change the future*
Scenarios

Short stories that tell different versions of what **could happen** in an area (and around it) and how that would shape the future.

**Characters**: people, groups playing roles in the story

**Setting**: where are we today, why, what’s happening

**Plot**: events, decisions, relations

**Ending**: where could we end up

Scenarios need to be **plausible**, not fiction stories!

Workshop 1
+ review

Workshop 2
+ interviews

Workshop 3
Participatory scenario planning is about…

• Working together to explore alternative futures

• Thinking about the futures that we reject, not only those that we like, prefer or accept

• Seeing the situation from other people’s perspectives

Photos: tourism (Alamy Stock), agriculture (J. Alvarez-Romero), savanna burning (Glenn Campbell), pastoral (M. Douglas), mining (The West Australian)
Scenario planning is NOT…

• **Not** talking about what we believe **should** happen or **predict** will happen, *it’s about what we think **could** happen*

• **Not** pushing our own interests or goals, or those of our organization, community or group, *it’s about bringing our knowledge and insights*

• **Not** stopping us from supporting or opposing activities or projects related to developments in the region

• **Not** about creating consensus and having to agree on creating a shared vision about the future
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Objectives

Systematically examine possible futures for the region to…

1. Build shared understandings of what is happening in and around the region that can influence the future of the catchment

2. Explore and understand different development initiatives, including drivers, opportunities and constraints

3. Develop narratives describing alternative development paths for the region, including events, decisions and uncertainties

4. Build maps representing land-water uses based on narratives and assess possible changes (biophysical and socioeconomic)

5. Identify potential effects (positive and negative) in the wellbeing of residents of the catchment associated with alternative futures
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Participatory scenario planning

Assemble team

Interviews

Understand system

Facilitated workshops

Explore options
- Driving forces
- Opportunities
- Constraints

Build maps

Assess scenarios

Changes in biophysical & socioeconomic indicators associated with each scenario

Imagine futures

Synthesis

Explore options

World-class research to support sustainable development in northern Australia
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### Stages of the participatory scenario planning process

<table>
<thead>
<tr>
<th>Stage</th>
<th>Method(s)</th>
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<tbody>
<tr>
<td>1. Identify current and future land/water use and development issues</td>
<td>Desktop and interviews</td>
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<tr>
<td>2. Identify and map current land and water “values”</td>
<td>Desktop</td>
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<td>3. Explore development options and create narratives of future</td>
<td>Scenario workshops 1-2</td>
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<tr>
<td>development scenarios, including…</td>
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<tr>
<td>a) Sharing views on development</td>
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<td>b) Identifying driving forces</td>
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<td>c) Exploring development initiatives</td>
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<td>d) Creating scenario narratives</td>
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<tr>
<td>4. Map potential distribution of future land-water uses based on</td>
<td>Desktop in consultation with team members and experts</td>
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<td>scenario narratives and exploration of development initiatives</td>
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<td>5. Evaluate the outcomes of scenarios (including co-benefits and</td>
<td>Scenario workshop 3 and assessment workshops with TOs and pastoralists</td>
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<td>trade-offs among environmental and socioeconomic objectives)</td>
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You can download a [summary table](#) with more details on the process.
Timeline

I. Assemble team and interviews (Jan-Apr 2018)
   Collect and summarize the views of team members

II. Scenario planning workshops (Jul 2018-Apr 2019)
   1. Set the scene and understand the system
   2. Imagine alternative development futures
   3. Create and assess maps representing scenarios

III. Residents’ responses to scenarios (May 2019)
    Workshops with pastoralists and traditional owners
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Scenario Planning Team

- Varied backgrounds bringing the perspectives of different sectors and stakeholder groups
- Land/water use, NRM, resources, enterprise planning
- View the future from alternative perspectives
- Comfortable talking in large and mixed groups
- Work with others, listen, reflect on diverse viewpoints
- Communicate regularly with researchers
- Not an advisory and/or decision-making group

World-class research to support sustainable development in northern Australia
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Workshop 1. Set the scene and understand the system

- Understand the system (looking back to look forward) and explore driving forces of change.
Workshop 1. Set the scene and understand the system

- Understand the system and explore driving forces of change
- Explore potential development initiatives
Workshop 2. Imagine alternative development futures

THE SCENARIO DEVELOPMENT PROCESS

Define Focal Issue, Question, or Decision and Relevant Timeframe
Review Past Events & Alternative Interpretations

Identify Driving Forces
Identify Critical Uncertainties
Develop Plausible Scenarios
Discuss Implications & Paths

Source: www.scenarios2strategy.com
Workshop 2. Imagine alternative development futures

What’s in the stories? Drivers, opportunities and constraints, particularly those that are most important (create big changes) and uncertain (can go in very different directions)

Events: changes in international demand for agricultural or mineral resources, major investments in some industries, etc.

Decisions: reforms of national policies regarding energy, changes in legislation regarding land tenure, etc.

Governance arrangements: strong or weak environmental governance, alliances within and among different groups, etc.
Workshop 2. Imagine alternative development futures

Example of development drivers in the Great Barrier Reef coast

**FDFM**: Foreign demand for food & mining

**DES**: Demand for environmental services

**FDT**: Foreign demand for tourism

**ITA**: Innovation & technological advances

**PCL**: Preference for coastal lifestyle

Augé et al. 2016. Spatially explicit scenario planning of development in the Great Barrier Reef coastal zone
Between workshops 2 and 3 create maps representing scenarios

- Use computer programs and maps of climate, soils, terrain, tenure, vegetation, infrastructure, etc. to build maps of future land uses

- Define rules for possible transitions (changes) between land uses based on identified opportunities and constraints
Workshop 3. Assess changes associated with scenarios

How could changes associated with the scenarios affect the wellbeing of different stakeholders?

Assess based on…

- Stories (narratives)
- Land-water use maps
- Changes in biophysical & socioeconomic indicators (agriculture production, biodiversity protection, carbon storage, tourism activity, number of jobs, etc.)
Knowledge and Heritage  
Food and clean water  
Meaningful occupation  
A good time with family and friends
Residents’ responses to scenarios

Additional workshops with pastoralists and Traditional Owners (together with NESP project 5.4) to assess positive/negative effects of changes in residents’ wellbeing

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<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
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Benefits and outcomes of the process

- Space for conversations
- Support planning
- Shared understandings
- Develop networks
- Changes & outcomes
Inform land-water use planning, including conservation and development
This work is supported through funding from the Australian Government’s National Environmental Science Program

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