

# Exploring alternative development futures for the Martuwarra (Fitzroy River) catchment through participatory scenario planning

## Scenario planning info sheet

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There are various development plans for the Martuwarra (Fitzroy River) catchment. Proposals for new developments include irrigated agriculture, increasing livestock production, carbon farming, extraction of mineral resources, nature and cultural tourism and many others. But how do we balance increased productivity, traditional uses and nature conservation? We are at an intersection where major decisions (from local to national levels) will be made regarding the future use of land and water resources. This requires a conversation about different development pathways for the region.

Making good decisions requires exploring possible development options and having a sound understanding of their social, economic and environmental outcomes. It also requires identifying the broader social, economic and political environment that could facilitate or hamper different development options.

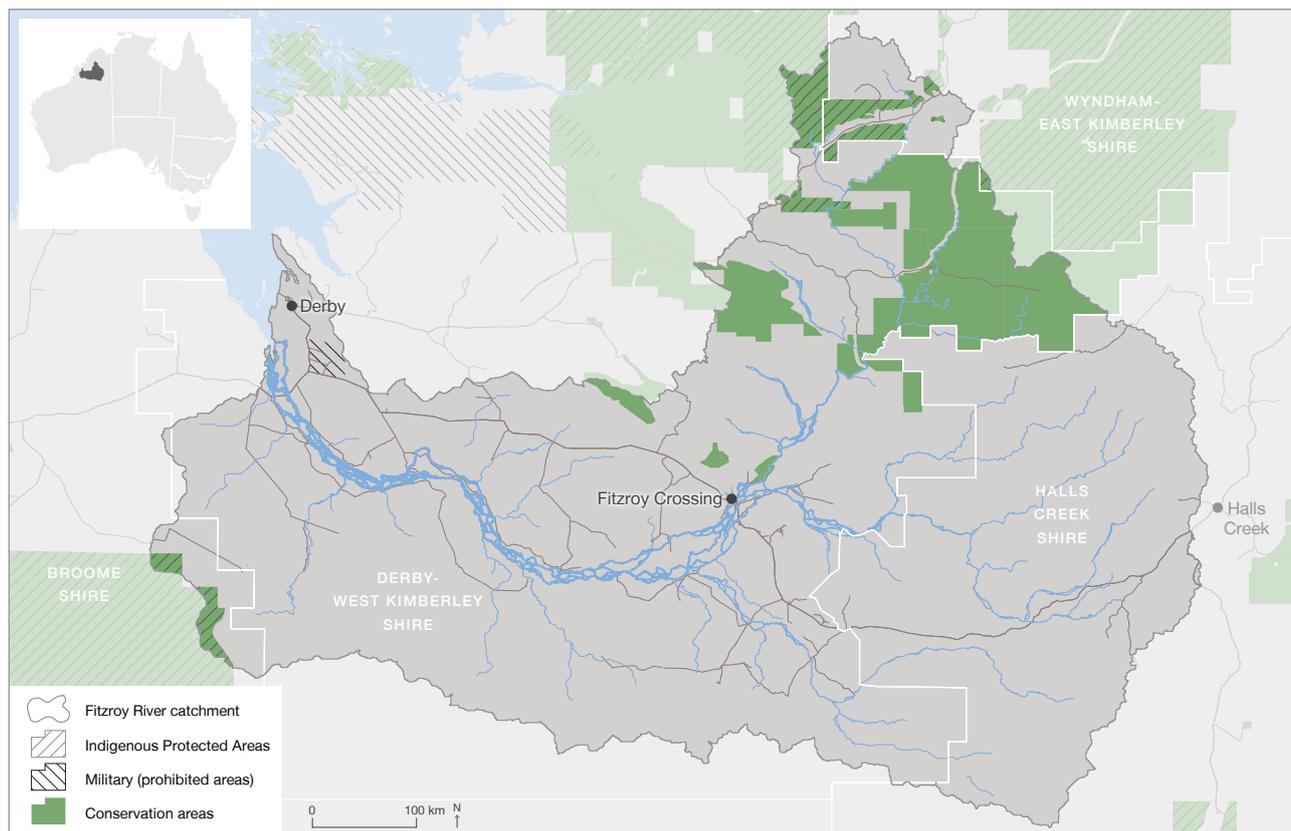
A critical examination of the possible futures of the region can support effective planning for development and conservation of the region's

nationally and globally significant cultural and natural values.

To support these discussions, this project guided a participatory scenario planning exercise to construct and assess the outcomes of alternative development scenarios. Major components of this exercise included exchanging views about development, imagining possible futures and exploring their potential outcomes. This information sheet explains key aspects of the scenario planning process and main outputs of the process.

### *Goal of scenario planning*

The scenario planning exercise aimed to create a shared space for constructive and objective conversations about the future development of the Fitzroy River catchment. Through this process the project contributed to developing common understandings about different development options for the region and systematically explored the possibilities, as well as the potential outcomes of different development trajectories.



*Fitzroy River catchment, Kimberley region, Western Australia.*



Michael Douglas.

### *What are scenarios?*

Scenarios are narratives or stories that consider how alternative futures might unfold. In this case, they allowed stakeholders of the region to consider and discuss their perceptions and aspirations for the future, as well as exploring opportunities and risks associated with different pathways. Examples are the environmental, social and economic outcomes associated with alternative land and water use options. The main goal of creating the scenarios was to help everyone understand key uncertainties about the future, as well as opening up thinking about the need for change.<sup>1</sup>

### *Why scenario planning?*

Constructing scenarios allows stakeholders with diverging opinions to see the world from the point of view of those with different perspectives. In this project, they allowed people to think not only about scenarios that they accept, but those that they reject. The process also aimed to change understandings and intentions, create empathy and build trust, which together can lead to

changes in individual and collective actions that will shape the future.

Participatory scenario planning is useful when different people and organisations see the situation they are in as unacceptable, unstable or unsustainable (now or in the future), but disagree over what the future should look like. In this case, it was clear that individual groups could not transform the situation on their own or by working only with allies or like-minded people. Finally, the broader social, economic and political system was too complex, had too many interest groups and was highly unpredictable for a single group or individual to understand and shape.

*Through scenarios, people can see possible futures they are not willing to accept because they continue an unacceptable present, destroy an acceptable present, or fail to realize the potential of the present.<sup>2</sup>*



Michael Douglas.

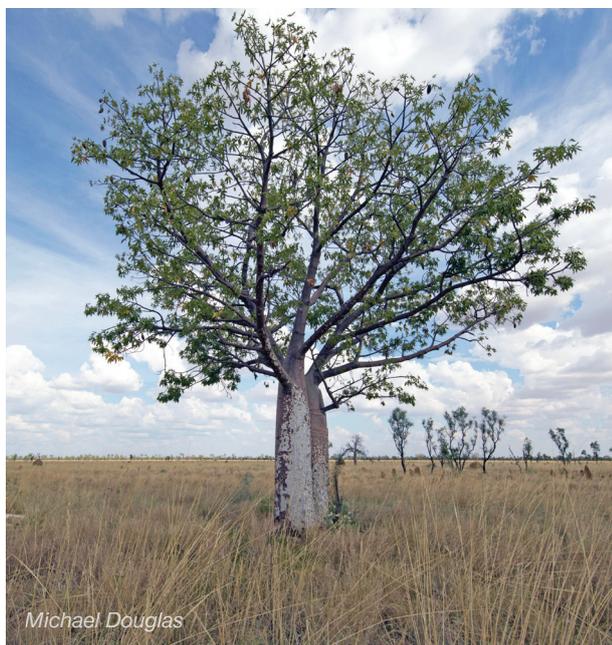


### *Who participated in the scenario planning activities?*

Following the identification of key interest groups in the region and discussions with local organisations, researchers assembled a scenario planning team. The team included people with varied backgrounds who understand the perspectives of one or more key groups (e.g. Traditional Owners, pastoralists, government, industry) and organisations with a stake in the region. It included people from organisations making or influencing decisions about land use and management in the catchment. The team included people with knowledge and expertise in areas such as the cultural and natural values in the catchment, land-use planning, agriculture, water management, tourism, mining, enterprise planning, and service provision, among others. The team was small enough to allow effective discussions, thus it was constrained to 35–40 people, including a small group of researchers.

### *What were the main stages and outputs of the scenario planning process?*

The scenario planning process included sharing views on development, exploring alternative development options, creating narratives of possible futures, creating land-use maps that represent these narratives, and assessing their potential outcomes. The process provided opportunities to share knowledge



and ideas, including with people with diverging perspectives.

Initially, researchers interviewed scenario team members to gather information about their main concerns and aspirations around development in the region, as well as to discuss expectations, perceptions and suggestions regarding the research process. Following that, team members participated in three workshops, one for each main stage of the scenario planning process. Each workshop, conducted in the region, involved 2–3 full days of work.

#### **Creating shared understandings of the situation**

The first workshop involved a series of activities to help scenario team members get to know each other, strengthen relationships, and build trust – all critical elements of the participatory scenario planning approach. This work built on a review of existing planning exercises and relevant literature, as well as on the interviews with team members. Researchers presented a summary of their findings as a starting point for conversations during the first workshop. This supported participants in creating shared understandings of what is happening in the system they are part of and which they want to shape.

An important goal of the workshop was to create a ‘common language’ to discuss what development in the region could mean and to build shared understandings of what is happening in the region that could shape development. This included a discussion about the diverse views on development. Before exploring the future, the group looked back into the past. They created a timeline for the Fitzroy, identifying the events and forces that have shaped how the catchment looks today and could drive development in the future.

#### **Exploring and understanding development options**

Also during the first workshop, the team identified the driving forces that can cause major shifts in development trajectories in the region. This included identifying and unpacking drivers of land-use change (e.g., policies, markets) and discussing their relevance to the catchment, strength, and possible variations. Finally, the group discussed the main development initiatives (e.g. irrigated agriculture, nature and cultural tourism, mining, carbon farming) that could happen in the catchment and identified additional initiatives for consideration during the next workshop.



Jaana Dielenberg



Michael Douglas



Michael Douglas



Glenn Campbell

There are many options for development in the Fitzroy River catchment.

### Creating stories about the future

During the second workshop, the team built on outputs from the first workshop to develop the structure of four possible futures for the region. During the workshop, the team used the lists of drivers of land-use change and development initiatives identified during the first workshop to develop logical, clear, and convincing scenarios describing possible and contrasting futures for the development of the Fitzroy catchment. The group identified the most influential and uncertain driving forces of development in the region, described possible end-states of selected drivers, and identified four possible future scenarios (Figure 1).

*Shared stories can open up thinking and possibly shape future decisions.*

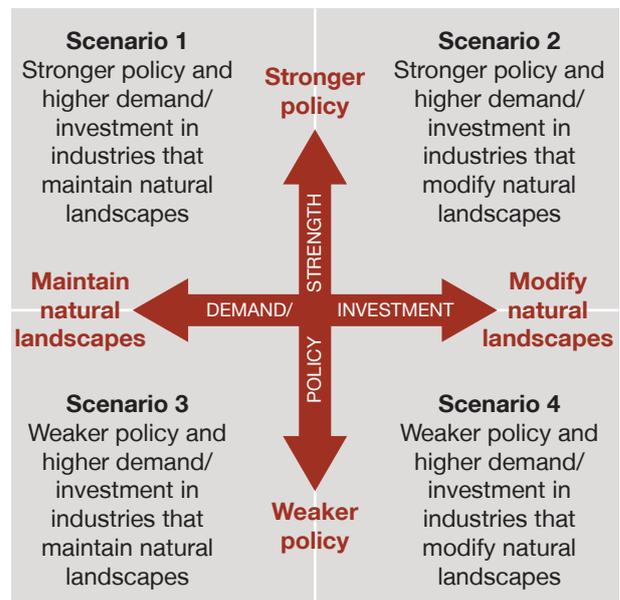
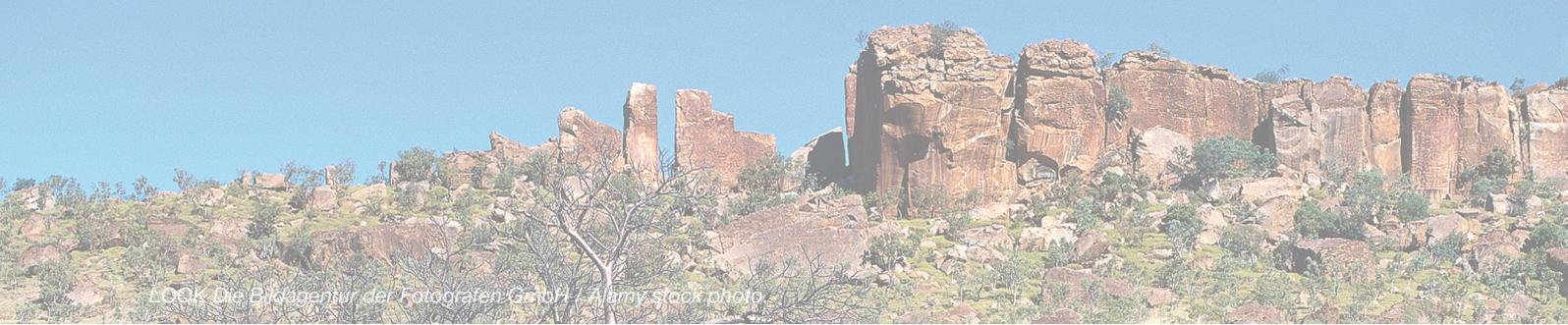


Figure 1. Logic of the four scenarios defined based on variations for two primary drivers: policy strength and major demand-investment.



LOOK Die Bildagentur der Fotografen GmbH - Alamy stock photo

### *Mapping, comparing and assessing the outcomes of scenarios*

Based on the narratives created by the team, researchers worked with available information, including maps and computer mapping tools, to represent each scenario spatially. This was informed and guided by published research and information provided by team members. The land-use maps describe one possible configuration of major development initiatives across the catchment for each scenario. During the third workshop, the maps and the process followed to create them were presented and future improvements discussed.

Before the scenario assessment workshops, researchers worked with an Indigenous interpreter to do a cultural translation of the material that was used to undertake the scenario assessment with Traditional Owners. The scenario assessment aimed to understand how changes associated with future scenarios could affect (positively or negatively) different aspects of wellbeing of people who live in the catchment.

The research team also presented and discussed possible landscape changes and broad socio-economic indicators under alternative scenarios to support the assessment of their environmental and socio-economic implications on wellbeing. In addition to the land-use maps, graphical representation of the scenarios were used to convey key differences and to highlight major land-use changes associated with different development pathways (see Figure 2, next page).

The last stage of the project involved discussing and assessing the possible outcomes of alternative scenarios. To do this, the scenario team systematically explored possible likely changes in people's wellbeing under each scenario during two workshops: a multi-stakeholder workshop with the team who developed the scenarios, and a workshop with nine Traditional Owner groups from the catchment. Researchers asked participants to describe how people currently satisfy nine categories of wellbeing in the catchment including, for example, enough food and

water to drink, strong family and community relationships, and knowledge of country and culture. Then, they scored the worsening or improvement of each wellbeing category in each scenario against the current situation. The preliminary results showed that participants' scores varied significantly, but they followed a similar pattern in both workshops with scenarios. Strong policies that protect important values in the region were generally (but not always) associated with potential wellbeing improvement. Researchers identified different discourses that help to explain these results.

### **Important information about the scenario planning process**

- Participants didn't talk about what they predict will happen or what they believe should happen, only about what they think could happen.
- Participants did not have to agree on creating a shared vision about the future development of the catchment.
- Participants were encouraged to think not only about futures that they accept, but those that they reject.
- The process aimed to facilitate seeing development from the point of view of others that may have opposite or diverging perspectives and thus was a learning process for everyone.
- Throughout the process, participants became aware of and critically reviewed the way they think about the past, present and future of development in the region.
- Ultimately, the scenario planning process was about working together cooperatively and creatively to have a better understanding of how alternative futures may unfold.

**Disclaimer:** Researchers took great care in designing the project to ensure that scenario planning activities were as inclusive as possible, actors with different views were included and the process was not driven by or for the benefits of any one organisation, party or sector.

1. Peterson et al. 2003. Scenario planning: a tool for conservation in an uncertain world. *Conservation Biology* 17(2): 358-366
2. Kahane. 2012. Transformative scenario planning: Working together to change the future. Berrett-Koehler.

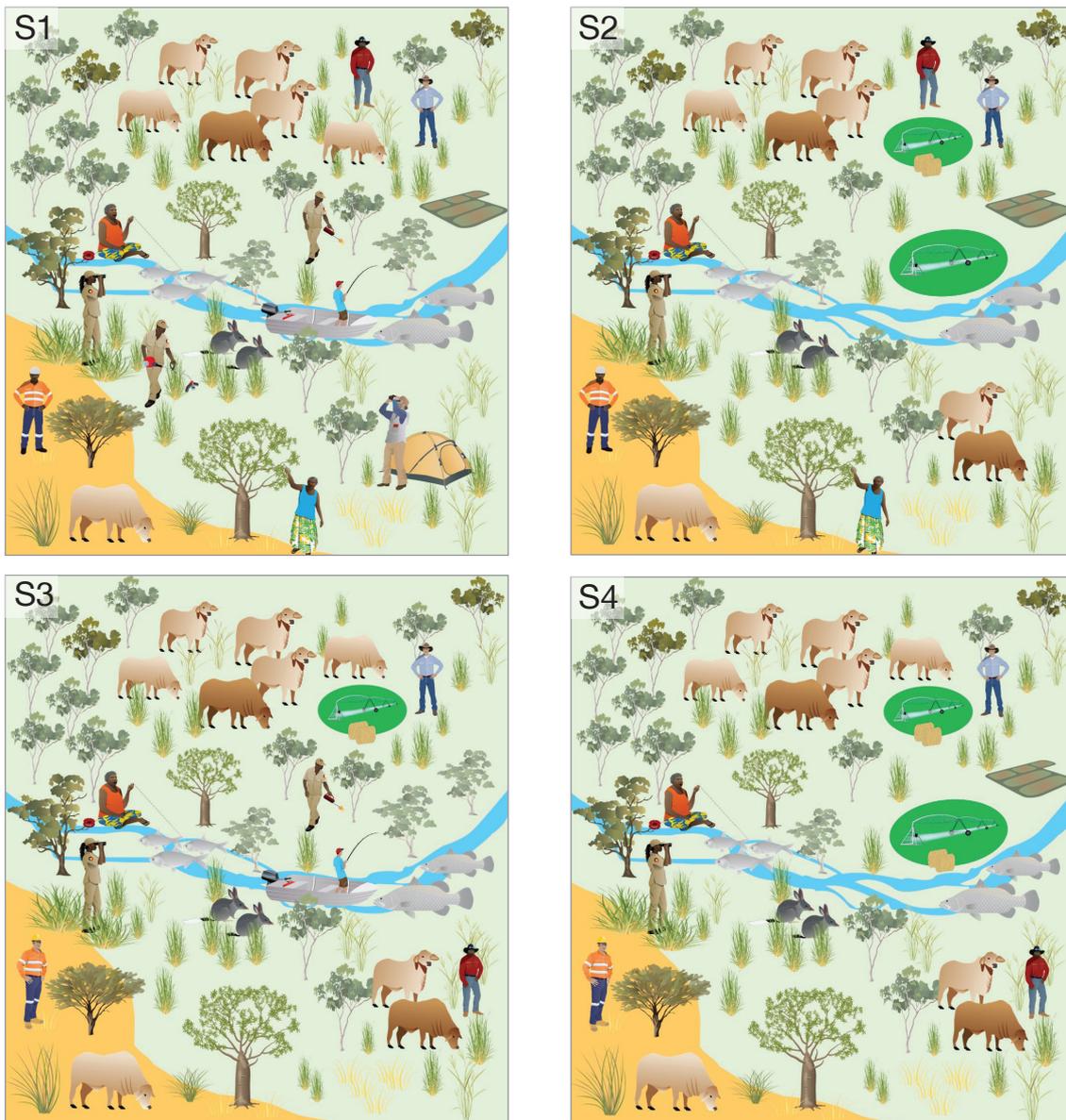


Figure 2. Illustration of the Fitzroy River catchment scenarios (see description in Figure 1). Scenarios were described using maps representing possible distribution of land uses, selected broad indicators (e.g. gross value of production, employment for Indigenous/non-Indigenous people, surface and groundwater use), and illustrations such as this one showing key differences between scenarios.

## Further information

Contact project leaders, Jorge Álvarez-Romero, [jorge.alvarezromero@jcu.edu.au](mailto:jorge.alvarezromero@jcu.edu.au) or Bob Pressey, [bob.pressey@jcu.edu.au](mailto:bob.pressey@jcu.edu.au)

For further information and updates, visit the project webpage at [nespnorthern.edu.au/projects/nesp/multi-objective-planning-northern-australia](http://nespnorthern.edu.au/projects/nesp/multi-objective-planning-northern-australia)



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