Ningaloo

Collaboration Cluster

Socio-economics of Tourism: the Ningaloo Destination Model

Scientists have developed a scenario planning tool for tourism development that estimates the social, economic and environmental impacts of tourism management and planning decisions. It is called the Ningaloo Destination Model.

Planning for Ningaloo Reef

The future of the Ningaloo Reef, and the communities and businesses that live in the region, relies on good planning. However planning conducted by an industry or government agency in isolation from other plans for the region is unlikely to succeed.

The Ningaloo Destination Model captures the complexity of the tourism system and integrates data from a variety of sources. It is a world-leading "computer simulator" tool for decisions that relate to tourism and can help managers, businesses and communities set and achieve goals. The model relies on local residents and managers to identify key tourism scenarios, which are then used to focus the modelling on their key concerns.

Integrated planning

The model has been developed through a series of workshops with people from the region and Perth and has provided an excellent mechanism for promoting a common understanding of issues in the region and the value of modelling for understanding the diverse impacts of tourism.

It will assist managers, businesses, communities and visitors on the Ningaloo coast with four key tasks:

1. assess the impacts of future projects and decisions
2. monitor the effectiveness of decisions
3. help prepare for the future
4. facilitate negotiations of trade-offs between interest groups.

The Ningaloo Destination Model has a broad range of uses for planning and management as it can provide a range of future scenarios for discussion and comment. Through assessing different development strategies the model will inform decision making and enhance public participation. The information and detail of the model can be modified for specific tasks.

Ningaloo Destination model in action

The Destination Model has been used to compare the consequences of the current land-use plan with a number of other development options.

The three graphs demonstrate the differences between the current land-use plan for the region (the Ningaloo Coast Regional Strategy) and a large marina-style development. While the marina brings more tourists, jobs and visitor expenditure (fig. 1), it also uses significantly more resources, including large increases in activity hours and more demands for water and electricity (fig. 2). Linking this model with an ecological model of the region developed by CSIRO, shows that installation of a marina also could cause a decline in the population of a range of plant and animal species (fig. 3).

Fig. 1

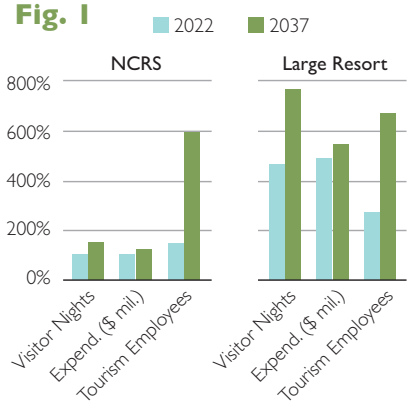


Fig. 2

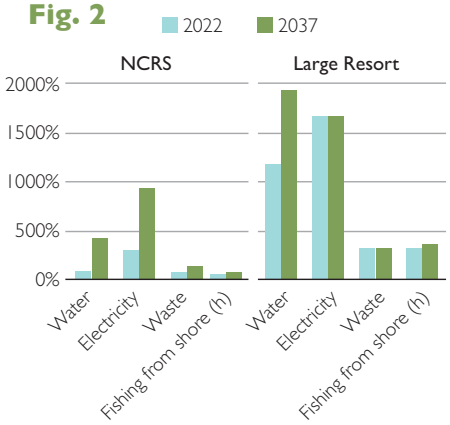
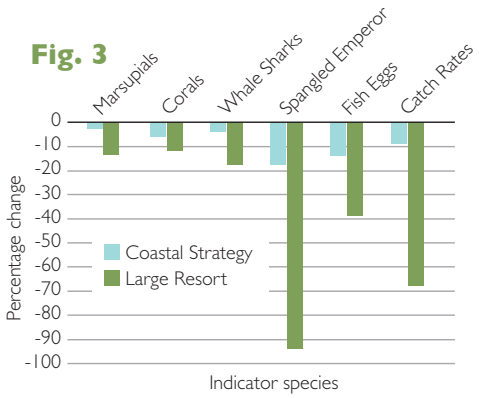


Fig. 3



Other applications

The model may also be particularly relevant for reviewing:

- the Ningaloo Coast Regional Strategy (the overarching land-use planning framework for the region)
- protected area planning (especially the impacts of future growth)
- strategic planning for local government
- estimating the impacts of specific developments
- management decisions and master plans.

The process of developing the model and integrating modelling into destination management are also ways of encouraging participation in planning and improving decision making.

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