National Environmental Research Program

TROPICAL ECOSYSTEMS hub

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On the relative 'value' of market and non-market goods and services provided by the GBRWHA

preliminary findings from NERP project 10.2.

Forum : The Reef and its ecosystems – how are they shaping up?

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Australian Government
Great Barrier Reef Marine Park Authority

Australian National University

PROJECT OVERVIEW

Activity A – looking at the 'importance' of various ecosystem services to residents

Activity B – looking at the 'importance' of various ecosystem services to tourists

Activity C – aiming to see if we can pick or 'price' (or other socioeconomic) effects on sediment loads in the Burdekin, after having controlled for rainfall and 'extreme events'.

Today: preliminary analysis of data from Activities A and B

(more sophisticated analysis planned – and required ~ ☺)

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METHODOLOGICAL OVERVIEW

Literature review

Workshops in Cairns, Townsville and Brisbane, to identify

- Variety of different ecosystem services for assessment (and relevant examples)
- Other goods/services to be compared with
- Key management issues/problems for assessment
- Appropriate sampling strategies

Developed draft questionnaires; conducted pre-tests in workshops, amended accordingly

Conducted pre-tests in airport (mainly tourist surveys) plus residential mail-out, only minor adjustments necessary.

Face-to face intercepts for tourists, from Gladstone to Port Douglas, over 12 months, in 3 languages (2081 responses so far)

Large mail-out across 106 postcodes for residents (1006 responses so far), now also working with Indigenous research assistant to help increase response rates

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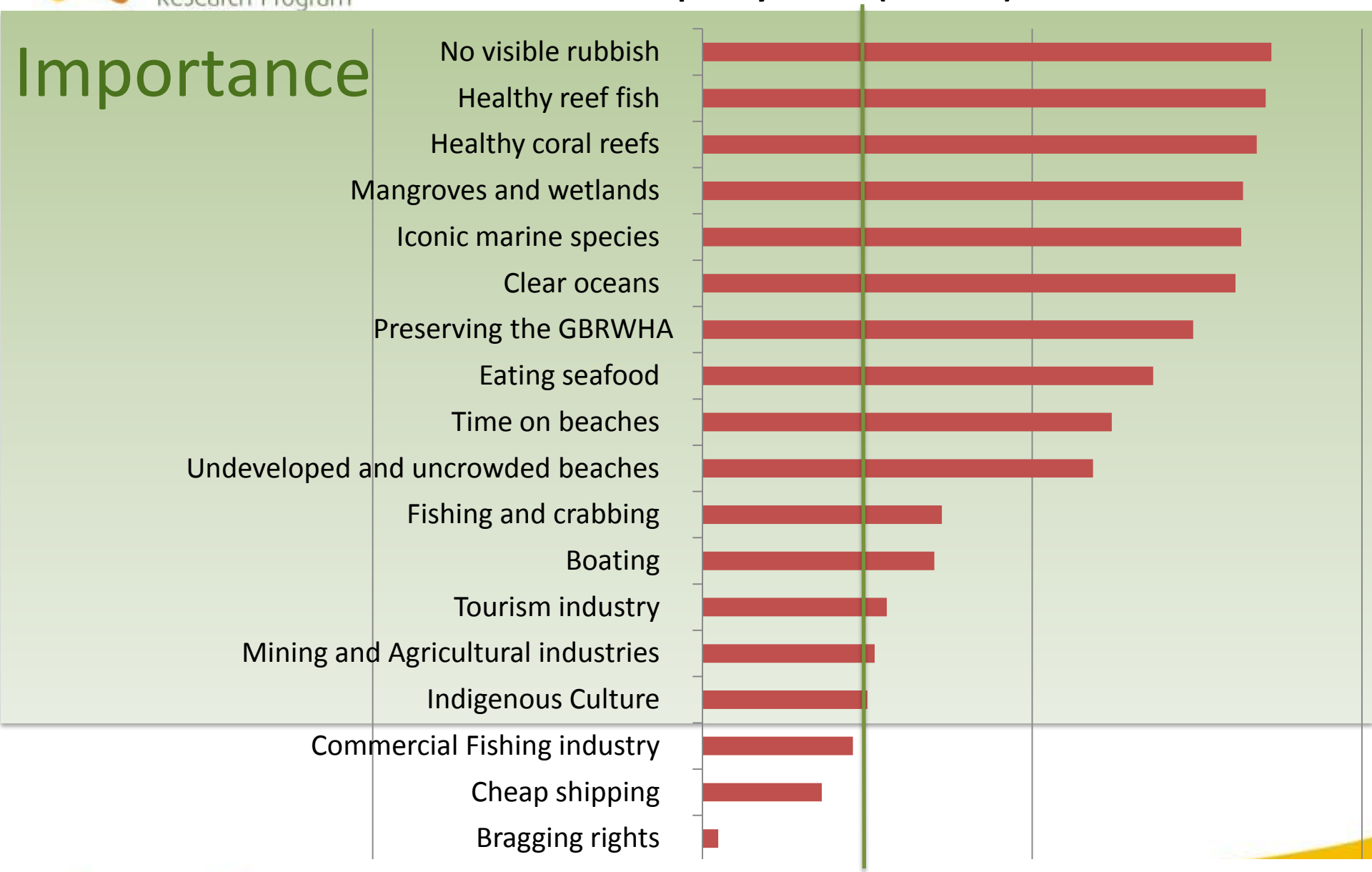
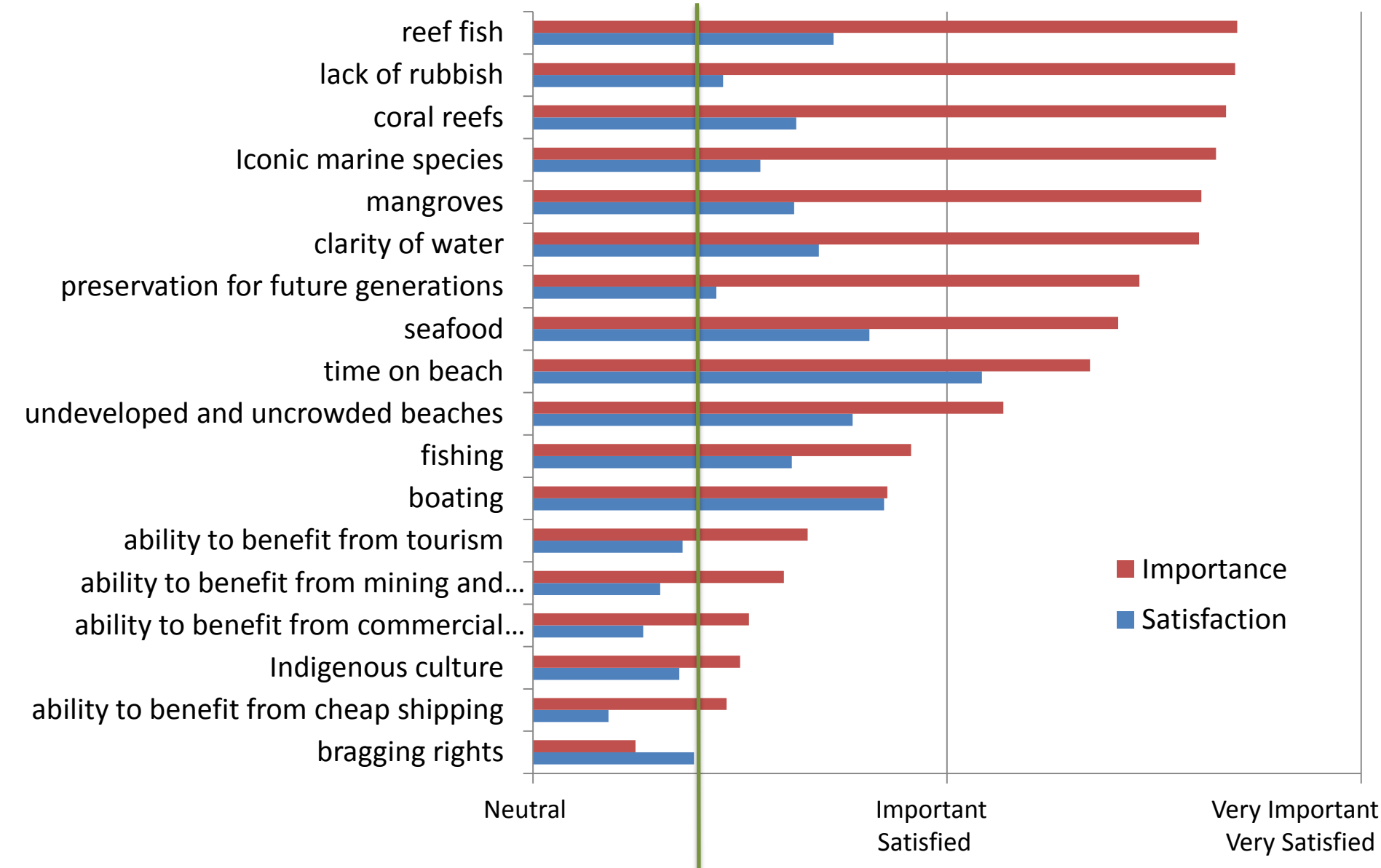
Residents - Importance to overall quality of life (N=1001)

Importance



How important are each of the following to your overall quality of life and how satisfied are you with it? (n=368, residents)



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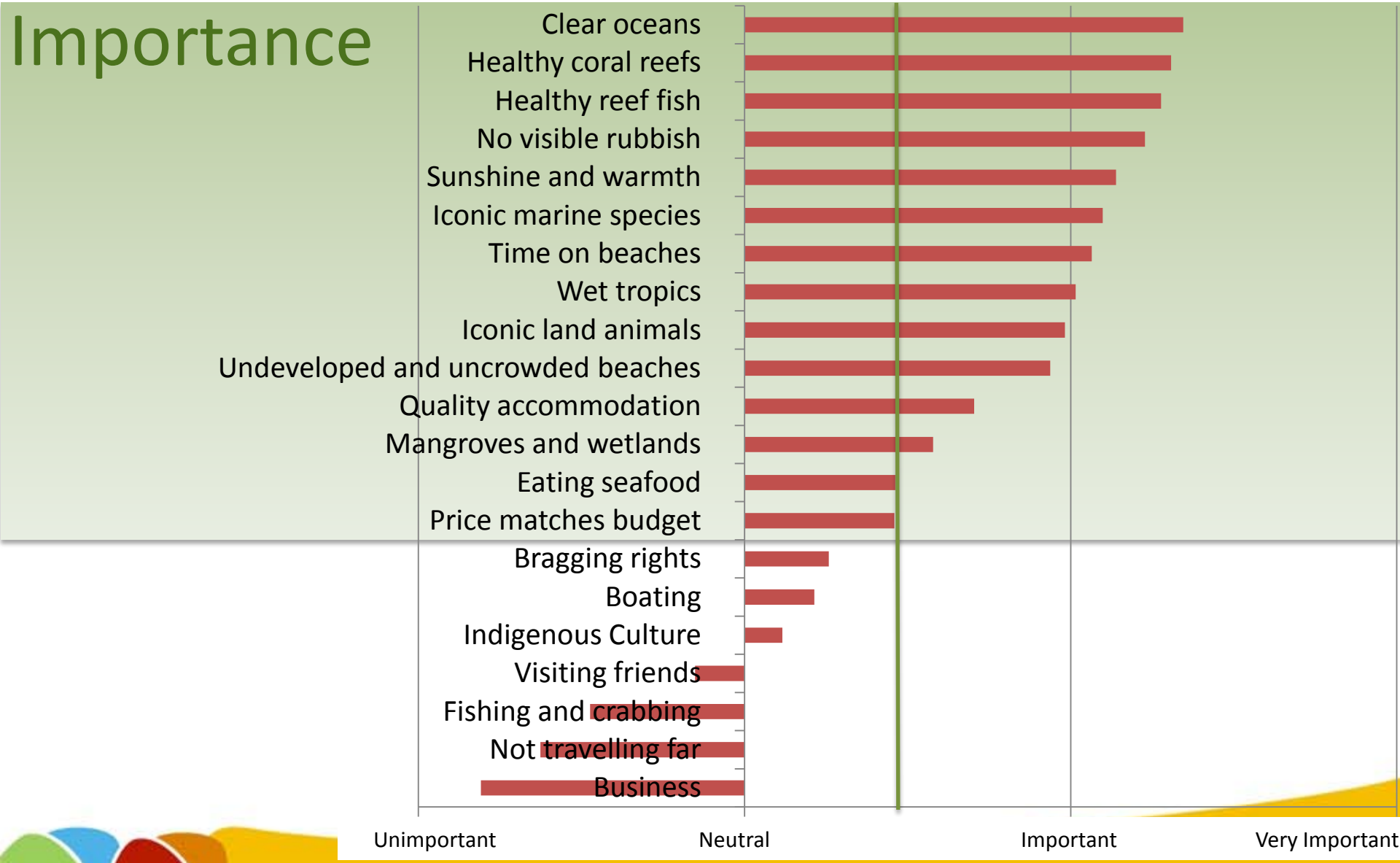
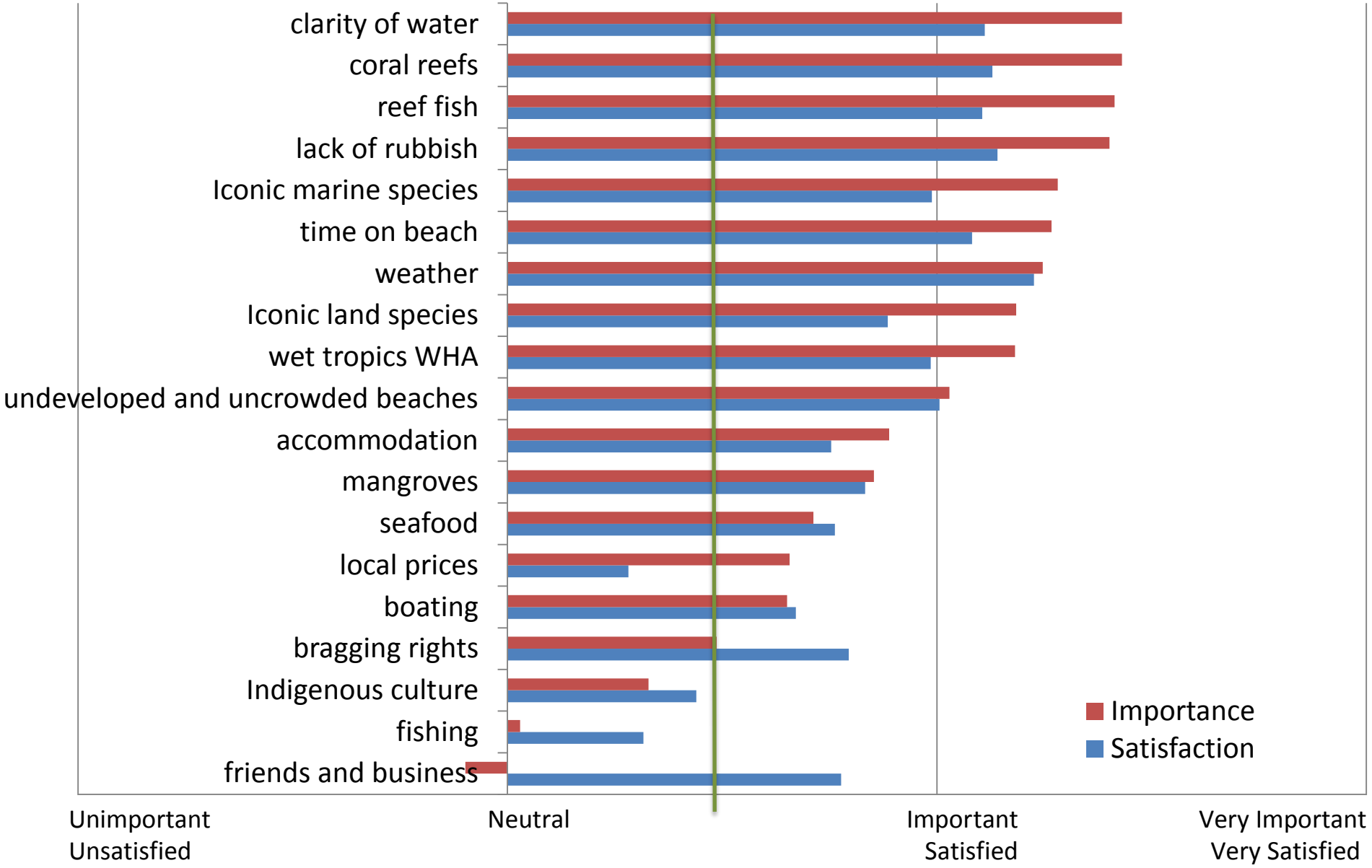
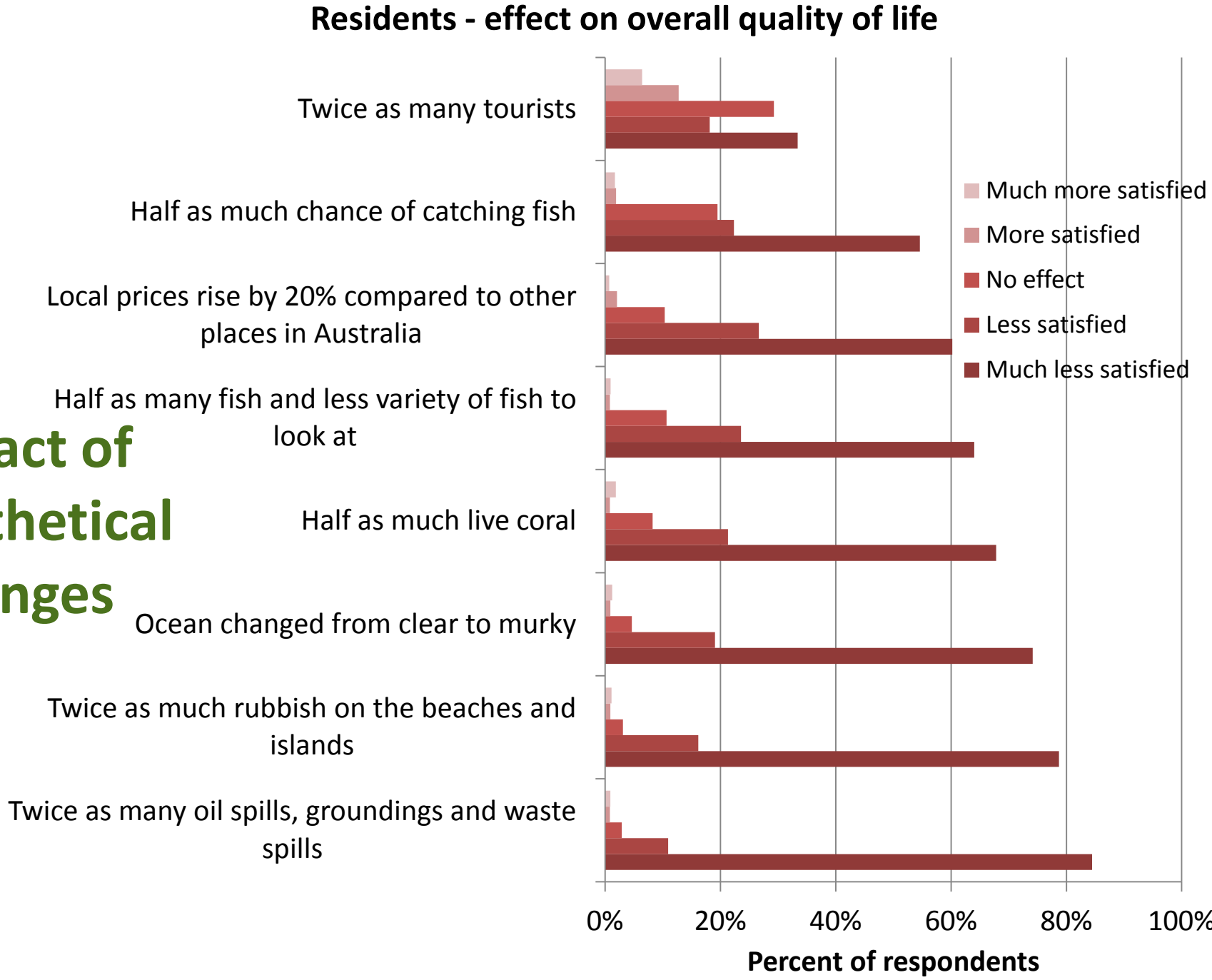
Tourists - Importance as reason for coming to this part of Australia (N = 1539)



How important were each of the following as a reason for coming to this part of Australia and how satisfied have you been with your experience? (Tourists, n = 341)

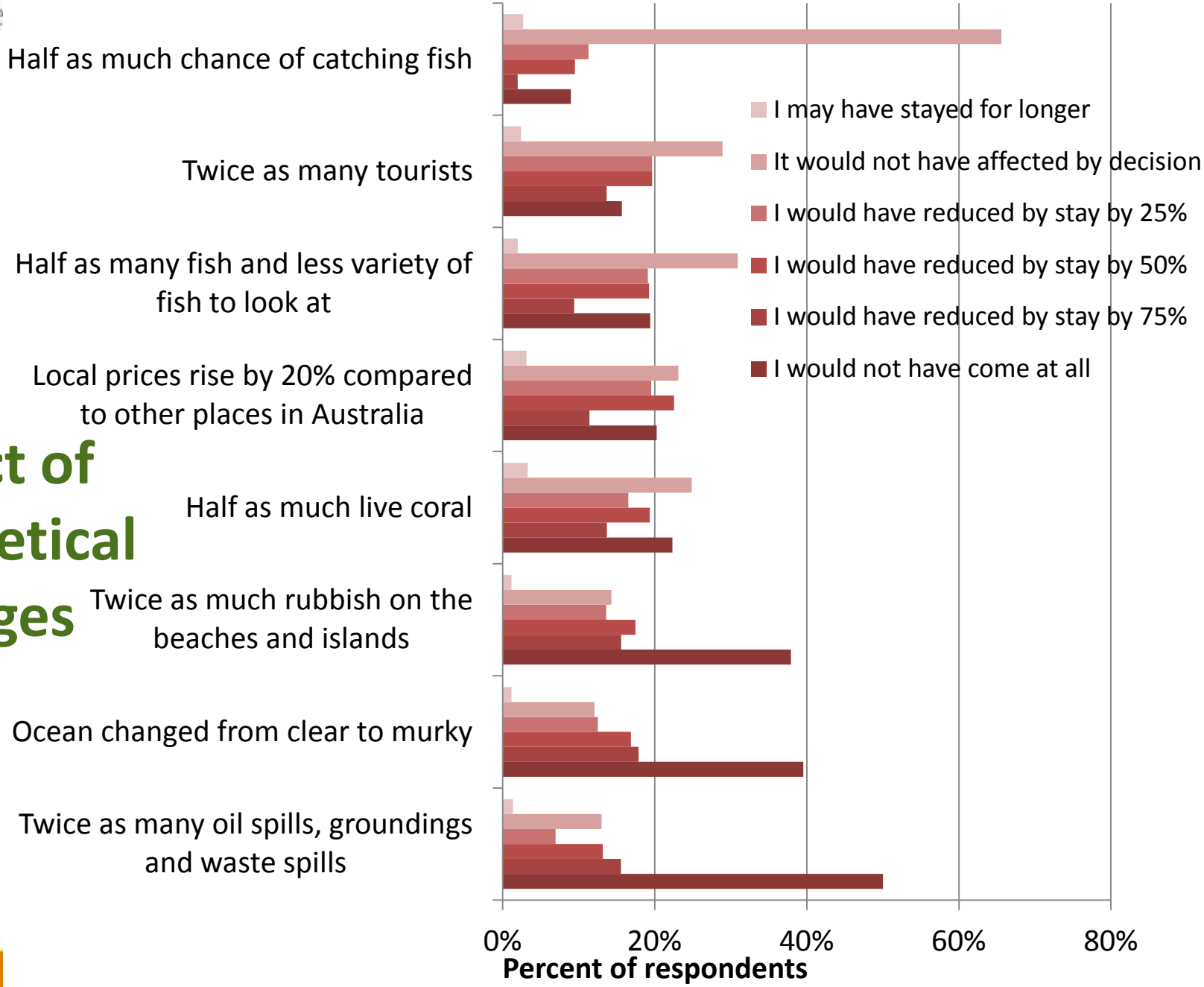


Impact of Hypothetical changes



Impact of Hypothetical changes

Tourists - effect on decision to come to region



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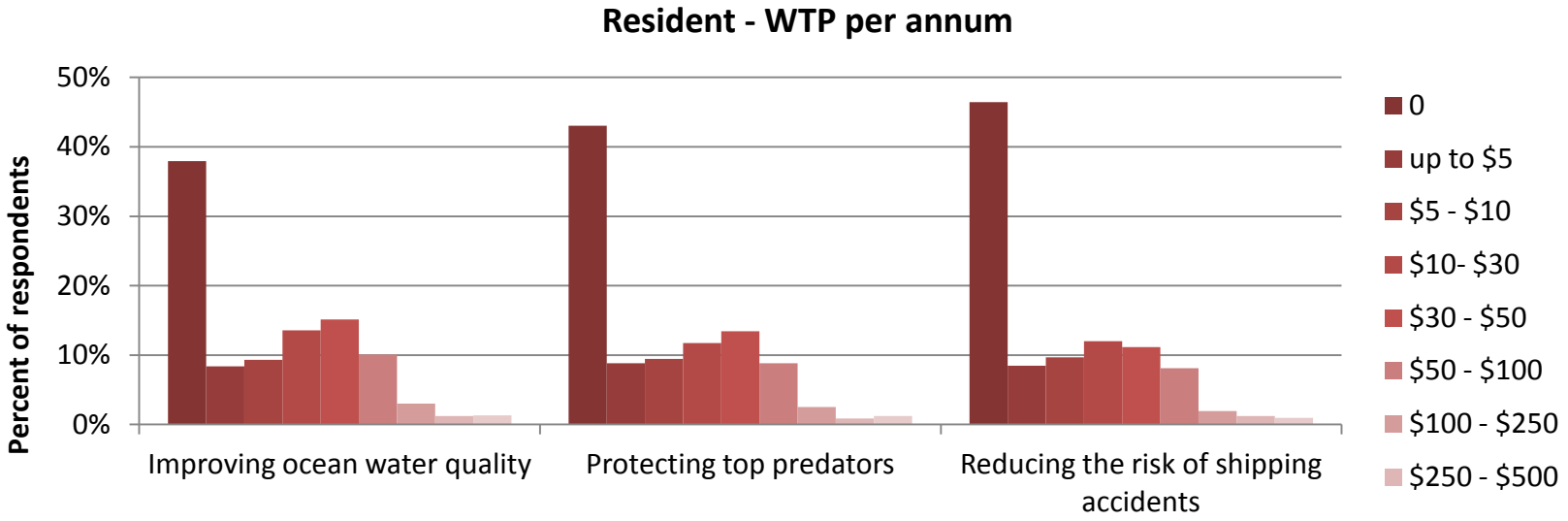
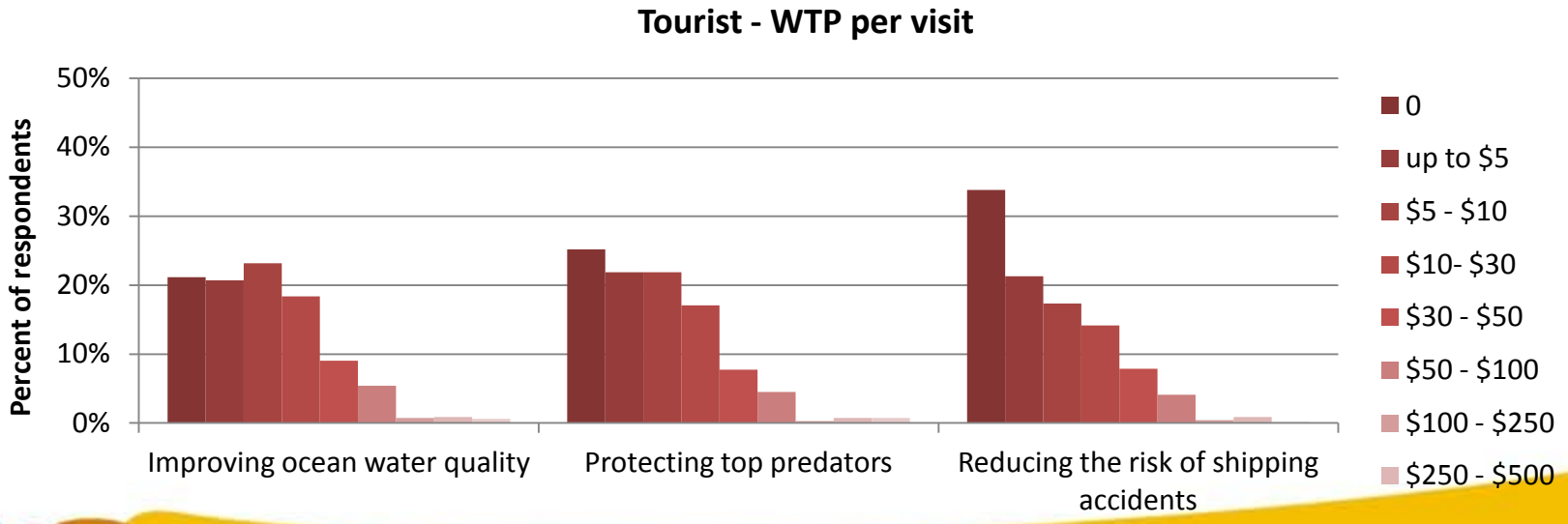
Willingness to pay (WTP):

How much would you be willing to contribute to a fund dedicated to …





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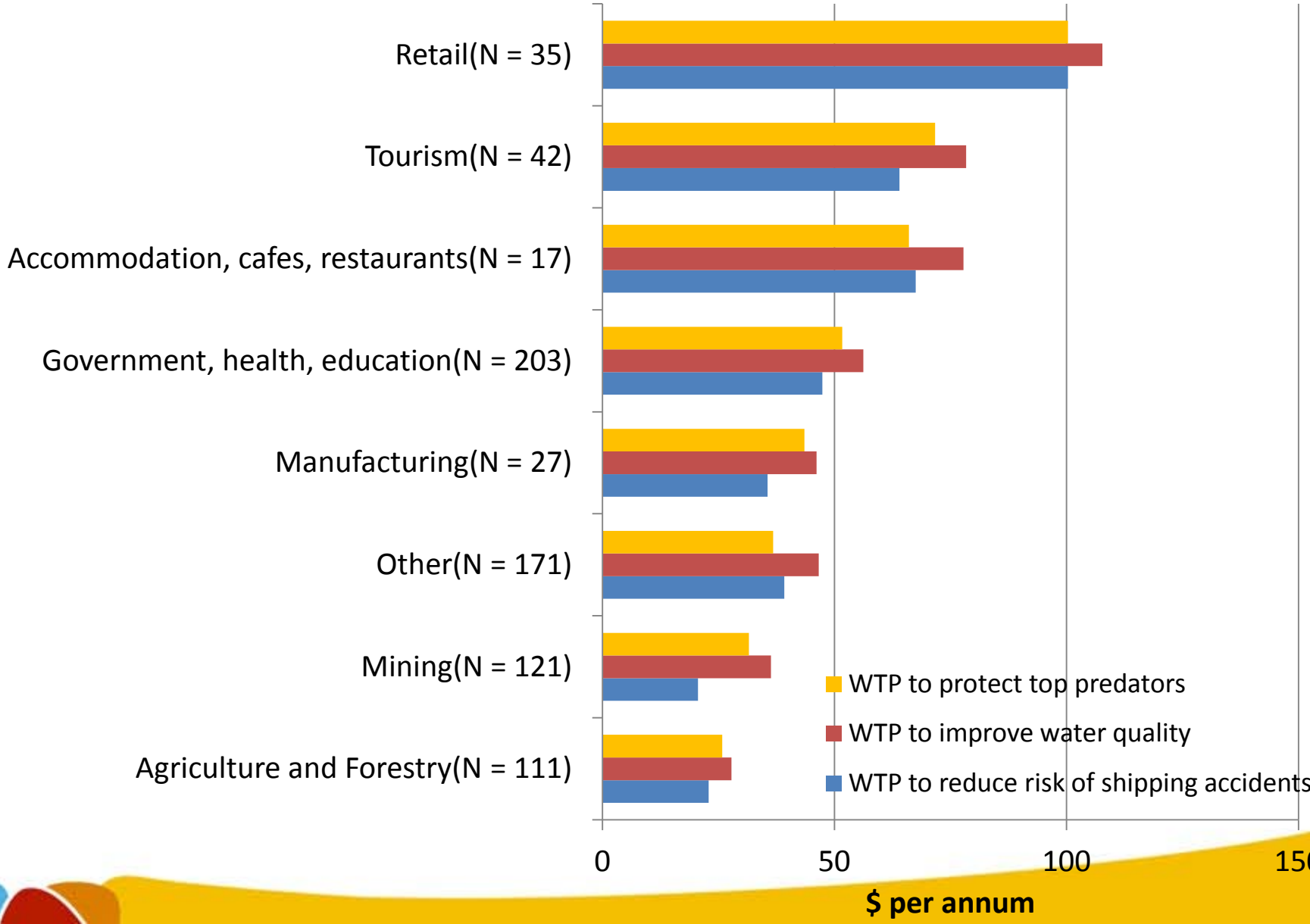
Resident WTP and Industry
(sectors with N < 10 not shown)



NEXT STEPS

- Finish collecting, entering, and cleaning data (preliminary analysis part of process)
- More sophisticated analysis – e.g.
  - Exploring relationships between demographics, economics, location and Importance/Satisfaction/Impacts/WTP
  - Exploring relationships between Importance, Satisfaction, Impacts & WTP
- Work with GBRMPA, SEWPAC, REC Fishers, Tourism organisations, Indigenous engagement working group, etc. to
  - Identify potential issues worthy of more in-depth analysis (beyond those already noted)
  - Determine how best to present information
- Work on scientific papers, reports, factsheets, etc.

POTENTIAL APPLICATIONS

- Identifying priorities of different user-groups (e.g. different types of residents, tourists) in different parts of the GBRCA

  What is perceived a most/least important; are there areas of potential concern?

- Assessing/ranking potential impacts (financial and/or social) of degradation of some ecosystem services

  E.g. reduction in coral cover, fish density, increase in ocean turbidity

- Assessing likely reaction of different user-groups to exercises seeking to

  Improve water turbidity, Protect top predators, Reduce the risk of shipping accidents

- Learning more about possible reasons for reactions (hoping to mitigate problems)

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THANK YOU

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