



# atlas

UNDERSTANDING DEEP ATLANTIC ECOSYSTEMS



## Valuing deep sea ecosystems across Europe and North America

**ATLAS General Assembly 2020**

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 678760 (ATLAS). This output reflects only the author's view and the European Union cannot be held responsible for any use that may be made of the information contained therein.

[www.eu-atlas.org](http://www.eu-atlas.org)

**Mingulay (Scotland)**

**LoVe (Norway)**

**Aims**

- 1. Do the general public value protection in the marine environment?**
- 2. Does this value differ between territorial waters and the high seas?**

**Azores (Portugal)**

**Flemish Cap  
(International Waters)**

# Mingulay

Scottish respondents

# LoVe

Norwegian respondents

## Research Questions:

1. Are people willing to pay to protect deep sea wildlife in high seas
2. What factors influence this willingness to pay?
3. Is there a distance decay effect?

Canadian respondents

**Flemish Cap**

## HEALTHY FISH STOCKS

- High: > 80% of commercial stocks have healthy stock levels
- Moderate: 40 to 80% of commercial stocks have healthy stock levels
- Low: < 40% of commercial stocks in have healthy stock levels

## SIZE OF PROTECTED AREA

- 1% of the Sea of the Hebrides (current management)
- 6% of the Sea of the Hebrides 10% of the Sea of the Hebrides
- 15% of the Sea of the Hebrides

## Management plan: based on discussion of GES

## MARINE LITTER

- Poor (5 to 8 items of litter per mile<sup>2</sup>)
- Moderate (2 to 4 items of litter per mile<sup>2</sup>)
- Good (0 to 1 item of litter per mile<sup>2</sup>)

## MARINE ECONOMY JOBS

- + 20 jobs,
- + 40 jobs,
- No employment change

1. Introduction

2. Scenario setting:  
why are we asking  
you this?

3. Information about  
Flemish Cap

4. Statement  
questions

5. Introduction to  
choice experiments

6. Additional  
information about  
attributes

7. Eight choice tasks

8. Further statement  
questions and socio  
demographic  
questions

## SCOTLAND'S SEAS AND WILDLIFE SURVEY

Get involved in shaping the future of new marine management options off the coast of Scotland.



This online survey has been launched to find out more about what people know about Scotland's seas and wildlife and how they would like this to be managed in the future.

### WHAT IS THE SCOTTISH MARINE SURVEY?

Researchers from across the UK and Europe are involved in an internationally funded project with scope to examine the marine biology and the economic management of the deep sea in the North Atlantic.

Click here for complete project details [ATLAS](#)

### CHOICE EXPERIMENT

The Scottish Government are responsible for delivering new plans on how best to manage Scotland's deep seas and wildlife. As part of this scientists are assessing the "health" or the environmental quality of the deep sea, including the Mingulay Reef Complex, with regard to:

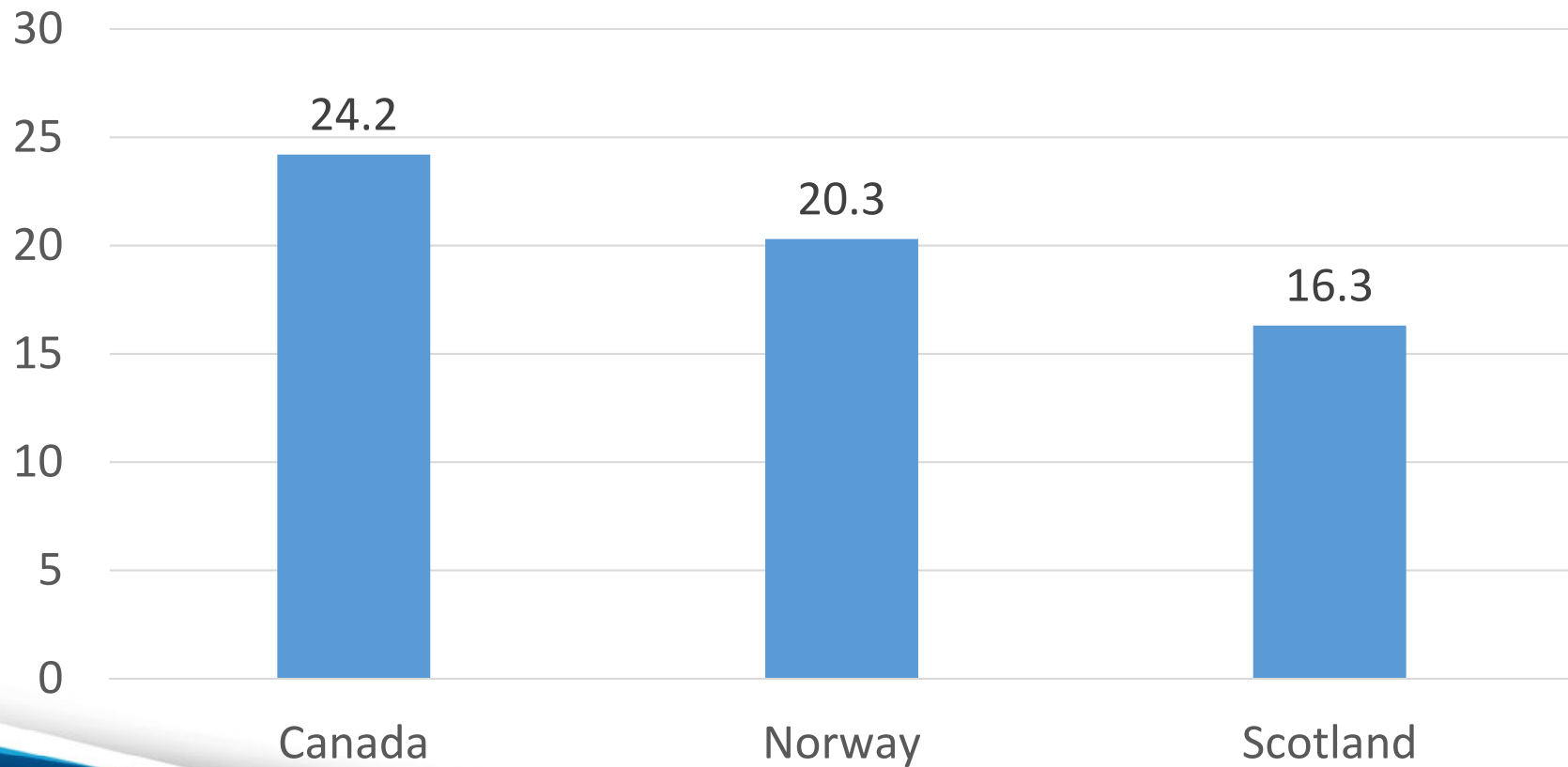
- Health of fish stocks
- Amount of marine litter
- Size of area that is protected
- Creation of new marine jobs

Different levels of each of these can be delivered as part of the management plan: i.e. more or less jobs, more or less marine litter, healthier fish stocks and a larger protected area. We would like you to think about different "bundles" of these aspects of management and as a tax payer how much you would be willing to pay for these different management aspects.

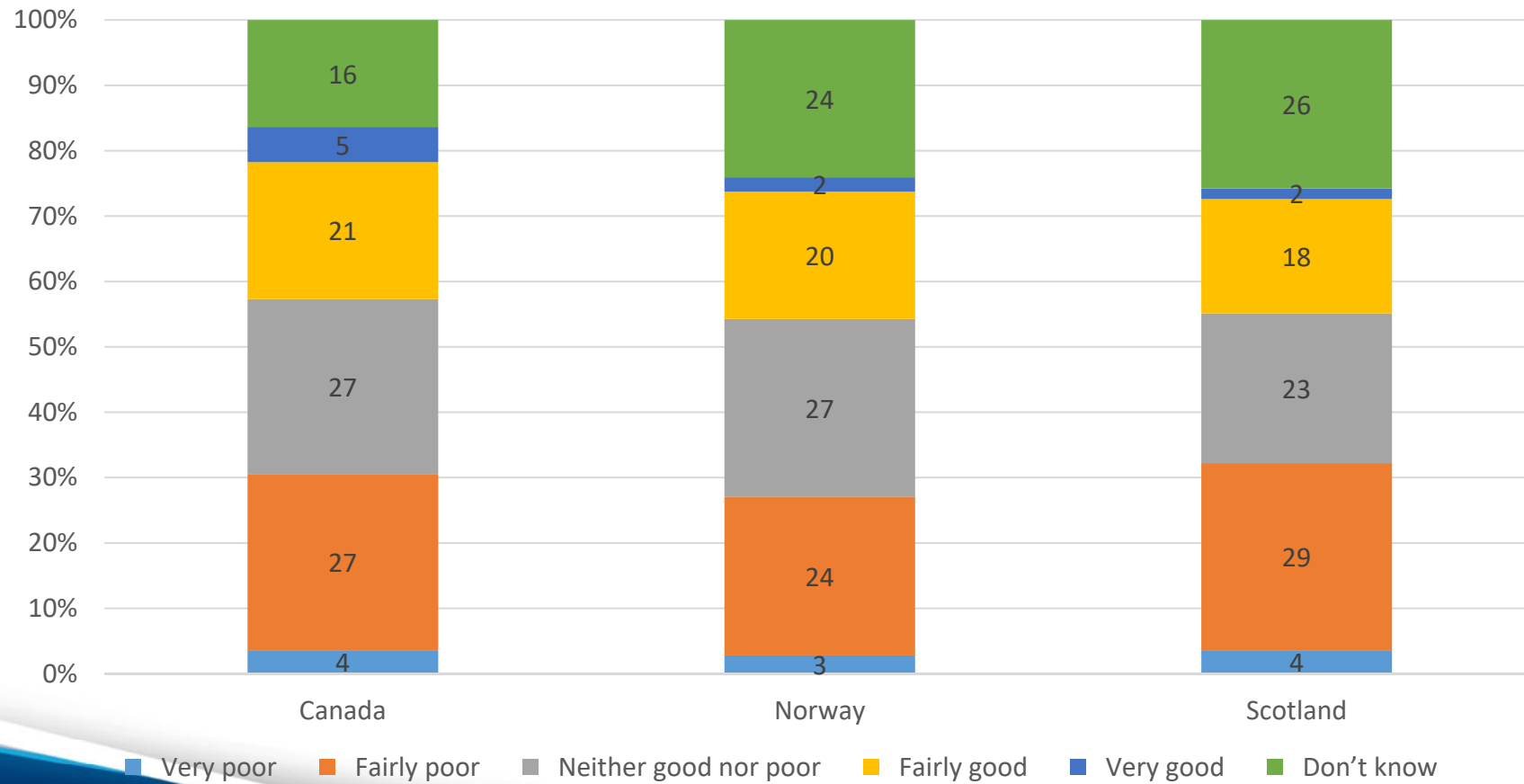
Any changes from the status quo would need to be funded by the Scottish taxpayer. This would take the form of an increase to annual personal income tax rates over a 10 year period and 'ring-fenced' into a secure marine fund.



## Results: Heard of Flemish Cap (%)

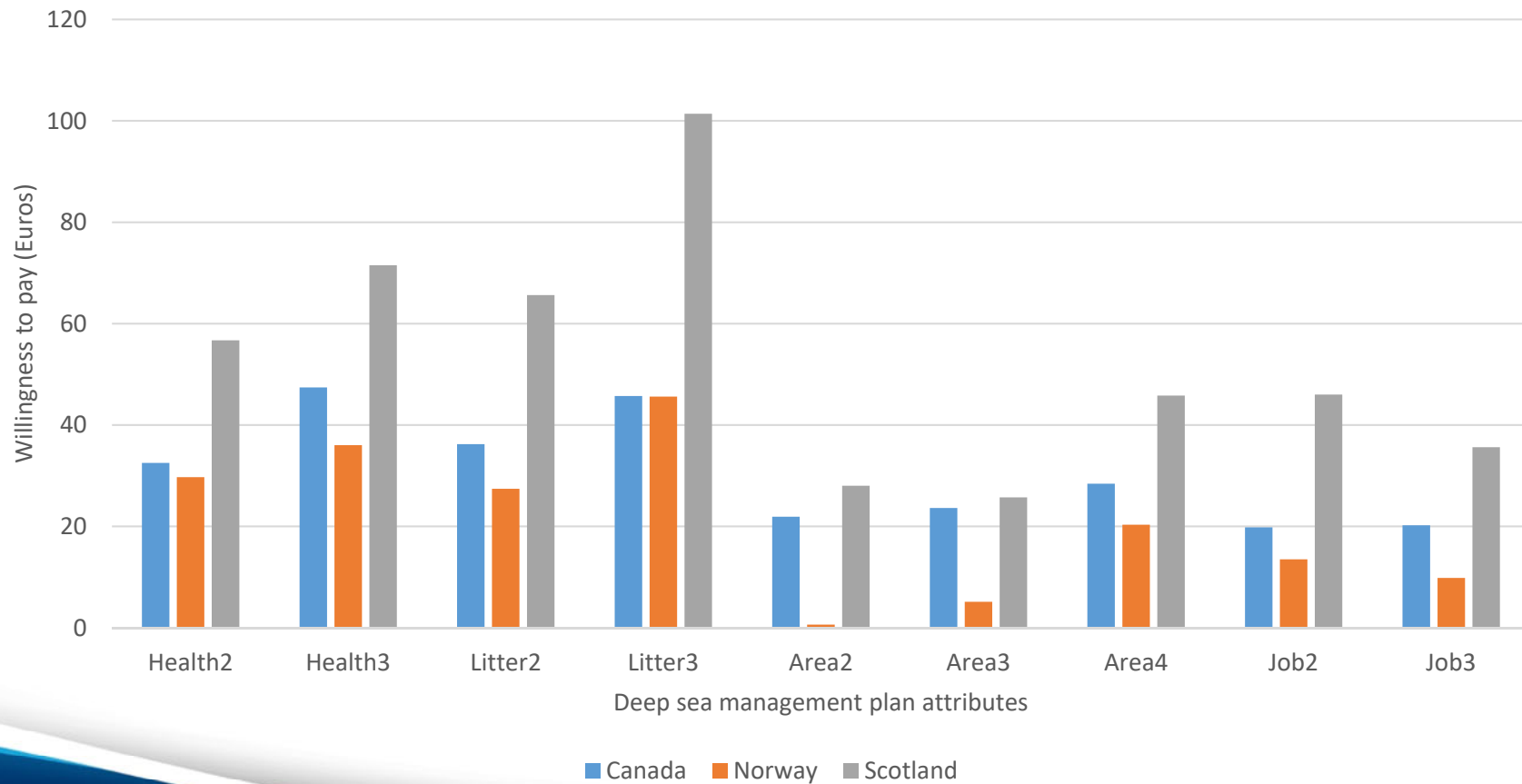


## Results: Perceived deep sea condition





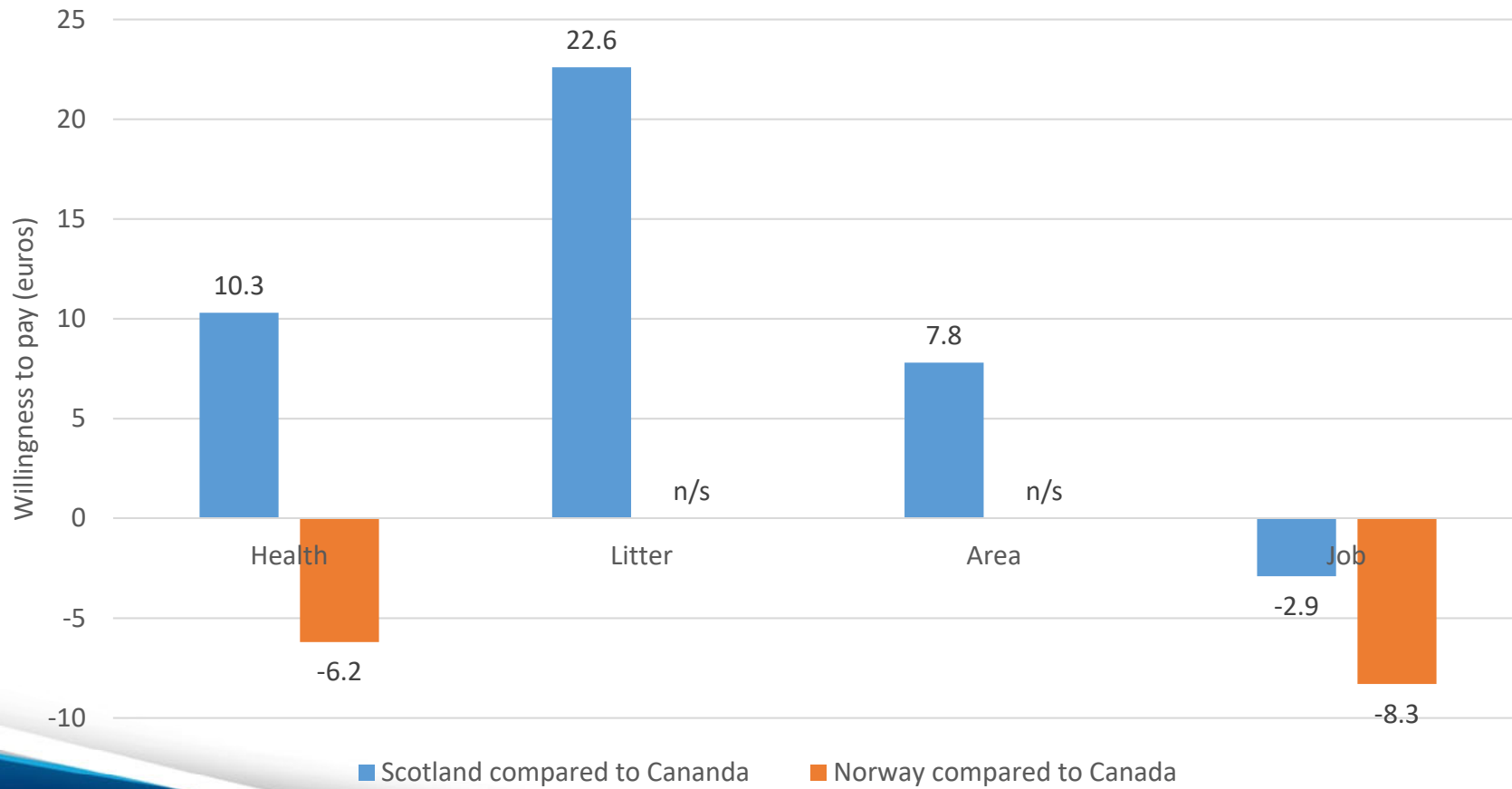
## Willingness to pay: comparison across countries





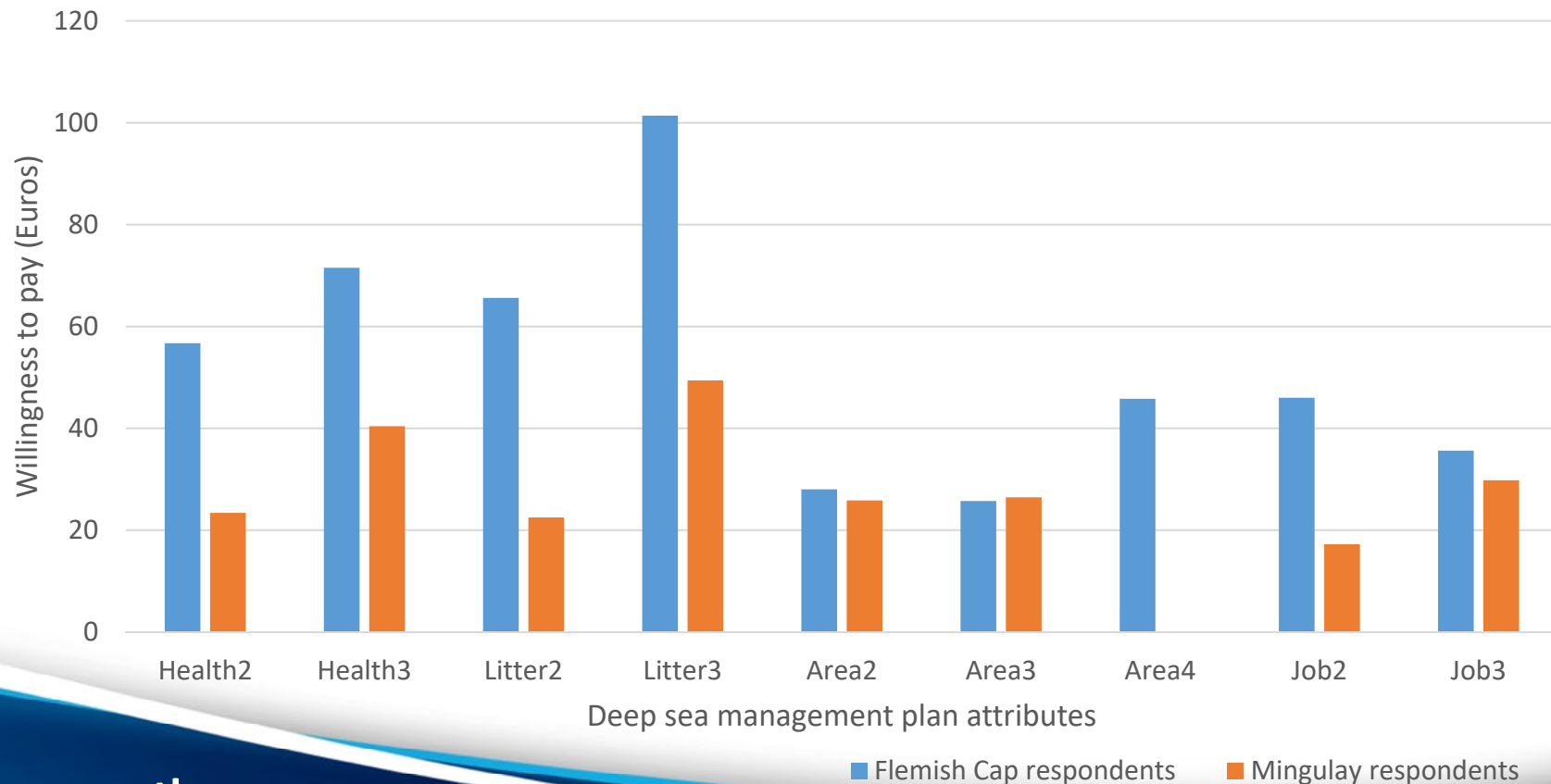


## Willingness to pay: comparison across countries





## Willingness to pay: comparison of Flemish Cap with Mingulay (Scotland respondents only)





## Key conclusions

1. General public do value management of the deep sea in international waters
2. Most proffered attribute is clean up of marine litter, followed by healthy fish stocks, size of MPA and finally job creation
3. Scottish respondents have consistently higher WTP across all attributes compared to Canadians and Norwegians
4. Results suggest Scottish respondents report higher WTP for deep sea protection in International waters compared to home waters (still being analysed)



# Thank You!

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Image credit: BGS