

Motivations and perceived benefits predict citizen scientists' level of engagement

Speed talk session “Citizen engagement”

ECSA Conference 5th June 2018, Geneva



Imperial College
London

Gaia Agnello, ECSA gaia.agnello@mfn.berlin
Ans Vercammen, Imperial College London
Andrew Knight, Imperial College London



EUROPEAN
CITIZEN SCIENCE
ASSOCIATION



Programme Evaluation

Mainly focused on scientific outputs:

- Quality of data collected by non-professionals vs. experts
- Project outcomes e.g. number of publications and impacts

Need to explore alternative approaches of evaluating:

- Understand volunteers' perspectives and decision making processes
- What really motivates and satisfies the volunteers?

>> There are different motivations and multiple benefits from CS

>> How to improve engagement, recruitment and retention?



Research aims and scope

1. Captur differences in motivations

Accounting for differences between volunteers can help organisations to optimise their recruitment.

2. Identify which benefits volunteers perceive

Engagement strategies that meet volunteers' needs will help to increase satisfaction and retention.

3. Examine whether motivations and benefits explain differences in level of engagement

Designing and delivering activities strategically to optimise overall impact of the programme.



Framework

Functional approach to motivation

Methods developed for evaluating volunteers programmes in the social service to explain pro-social behaviour were adapted to the conservation context.



Psychological theory of functionalism:

*People can present similar
attitudes in response of
psychological functions e.g.
individual needs (Katz, 1960)*

“



The **Volunteer Function Index (Clary & Snider, 1998)**

- Analytical framework for understanding processes that initiate and sustain volunteerism
- Measures 6 motivational functions:

Values, Understanding, Career, Ego-protection, Ego-enhancement, Social

>> Satisfaction depends on the degree to which motivation is met.



How these aspects influence effectiveness of programmes?

The frequency of volunteering is related to the benefits perceived from participation (Miles, 1998).



Online questionnaire

Based on Volunteer Function Inventory (Clary & Snider, 1998) and its adaptation for the conservation context (Wright et al. 2015), using factor analysis:

1. Motivations grouped into

5 factors

- Focus on/connection with nature
- Social interaction
- Self-actualisation/development
- Value expression
- Knowledge sharing and development

2. Perceived benefits

- Fulfilling personal goals
- Making a meaningful contribution
- Being part of a well-run organisation

3. Advocacy

- For the programme
- For conservation in general

4. Individual commitment, effort and outputs



174

Responses

53% over 60

33% retired

70% university educated

57% men & 43% women



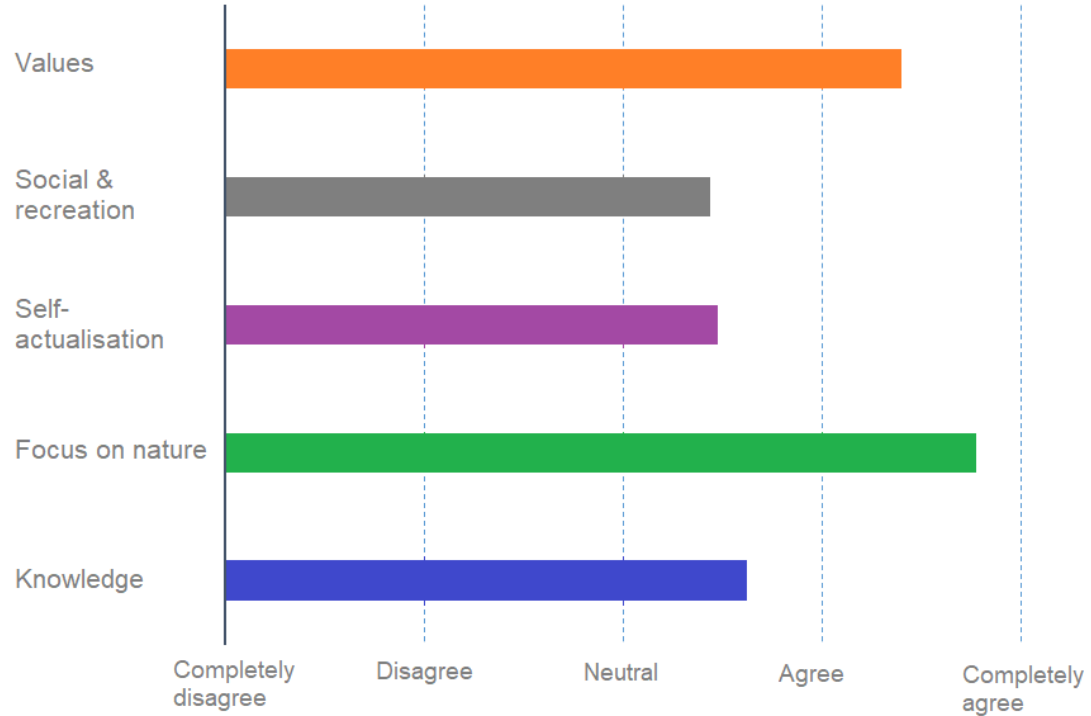
Surrey Biodiversity
Information Centre



Tower Habitats
Wildlife for people

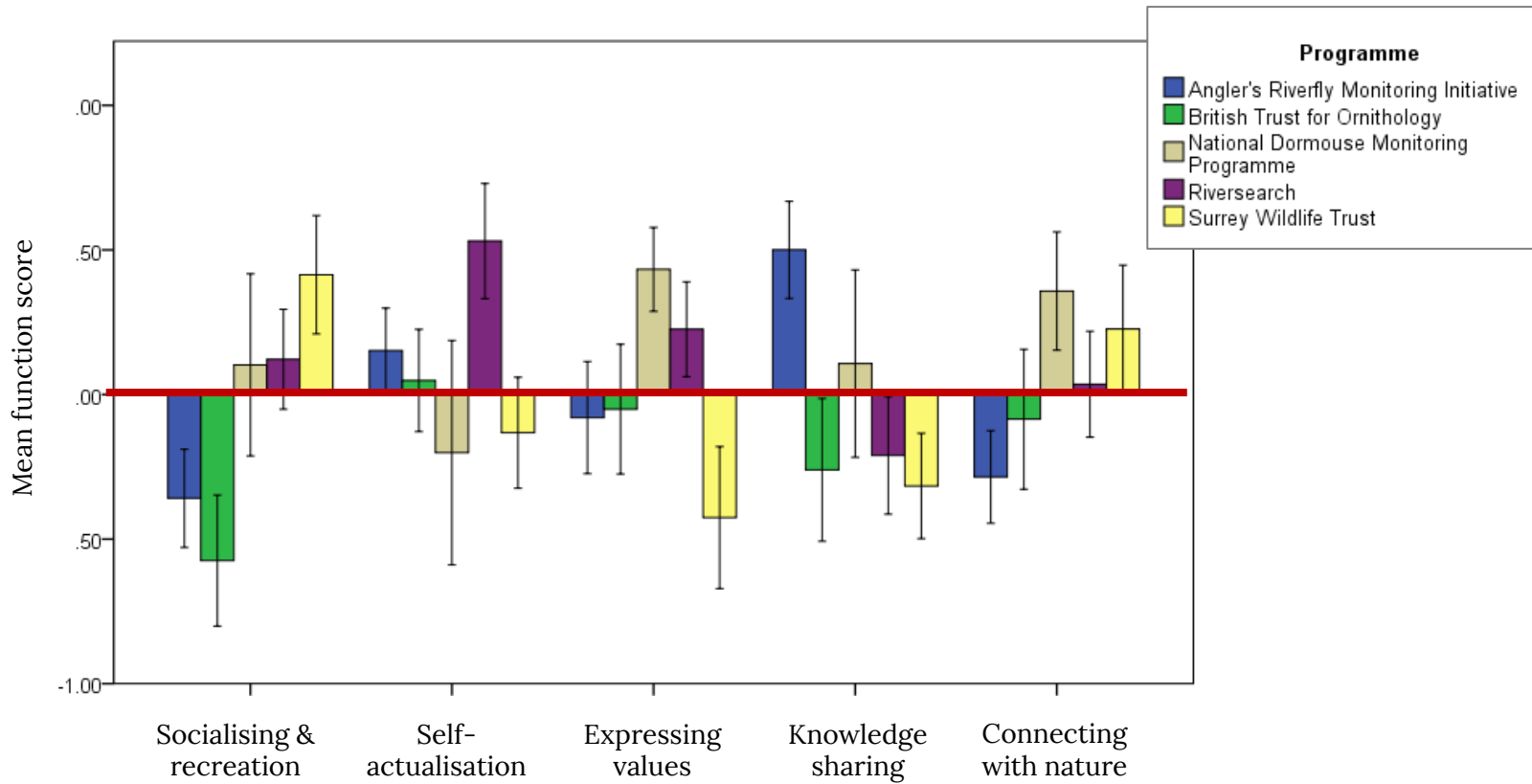


Across the different programmes, most agree with statements reflecting concern for nature (values) & wanting to be outdoors and learn about nature (focus on nature)



Volunteers value nature





Motivational functions vary among programmes





Motivations and perceived benefits predict the level of engagement



ReverSearch, SWT, UK

1. Volunteer effort

- Those motivated by **social interaction** >> longer days, more time/month and get involved in more activities
- Those motivated by **knowledge** >> more time/month and do more activities
- Getting a sense of **personal fulfilment** >> longer days and do more activities

2. Advocacy

- Those wanting to express **pro-environmental values** or looking **for knowledge** >> better advocates for the programme and conservation
- Feeling that you are **making a meaningful contribution** >> better advocates for the programme and conservation



Conclusions

Understanding motivations to influence programme design and recruitment strategies.

Delivering benefits through volunteering – for volunteers is not quantity or accuracy of data.

Surveying volunteers when **designing** and **evaluating** can reveal:

1. What is required to maintain benefits;
2. The likely returns from volunteers.

Different programmes appear to attract different 'types' of volunteers

*E.g. in this study "**Making a meaningful contribution**" is the most common.*

Motivation and perceived benefits predicts effort and advocacy.

● **Thanks!**

Any **questions** ?

gaia.agnello@mfn.berlin

Acknowledgement

Citizen scientists & CS programme managers

Andrew Knight & Ans Vercammen, Imperial College London

Grand Challenge in Ecosystems and Environment, Imperial College London



**Imperial College
London**