

The Economic Value of Cultural Ecosystem Services: A Review of Methods Employed with a Focus on Green Care

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Background

- Growing evidence on the health benefits of human-nature interactions and the preventative health potential of nature
- Emergence of **Green Care (GC)**: catch all term for initiatives with the primary aim of improving human health and wellbeing through a conscious interaction with nature
- Limited studies evaluating the **economic value of the health and wellbeing benefits** of GC
- Can be conceptualised as **Cultural Ecosystem Services (CES)** i.e. intangible benefits of nature
- Choice of methods for the economic valuation of CES is not straightforward, context dependent

Aims

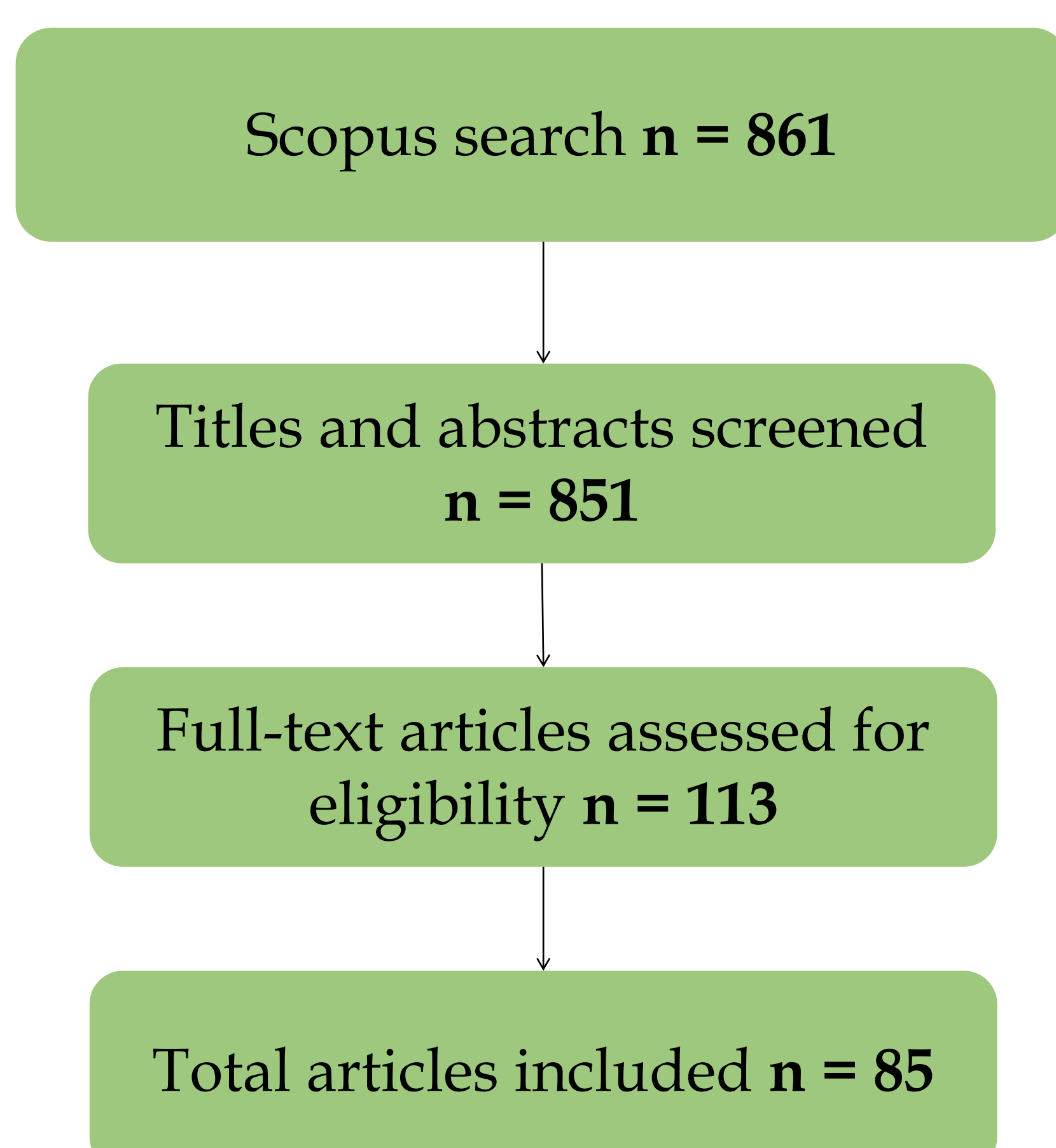
To undertake a comprehensive analysis of the literature on the monetary valuation of CES, with the intention of identifying and evaluating suitable methods for a subsequent valuation of the health and wellbeing benefits produced by Green Care

Methods

Literature search

- **Database:** Scopus
- **Search terms:** ("Cultural service*" OR "Cultural eco-system service*" OR "Cultural ecosystem service*" OR "nature-based intervention*" OR "valuing nature" OR "nature experienc*") AND (economic* OR monetis* OR quantitative) AND (analysis OR evaluation* OR valuation* OR assessment* OR valu* OR cost*)
- **Searched in:** Title, Abstract, Keyword, year 2005-2023
- **Analysis** based on the following extracted information: Methods employed, CES subcategory, study environment, country, scale, unit of output, population if interviewed, focused on CES or broader analysis, brief critical evaluation and relevant points for GC valuation.

Figure 1: Literature review flow chart



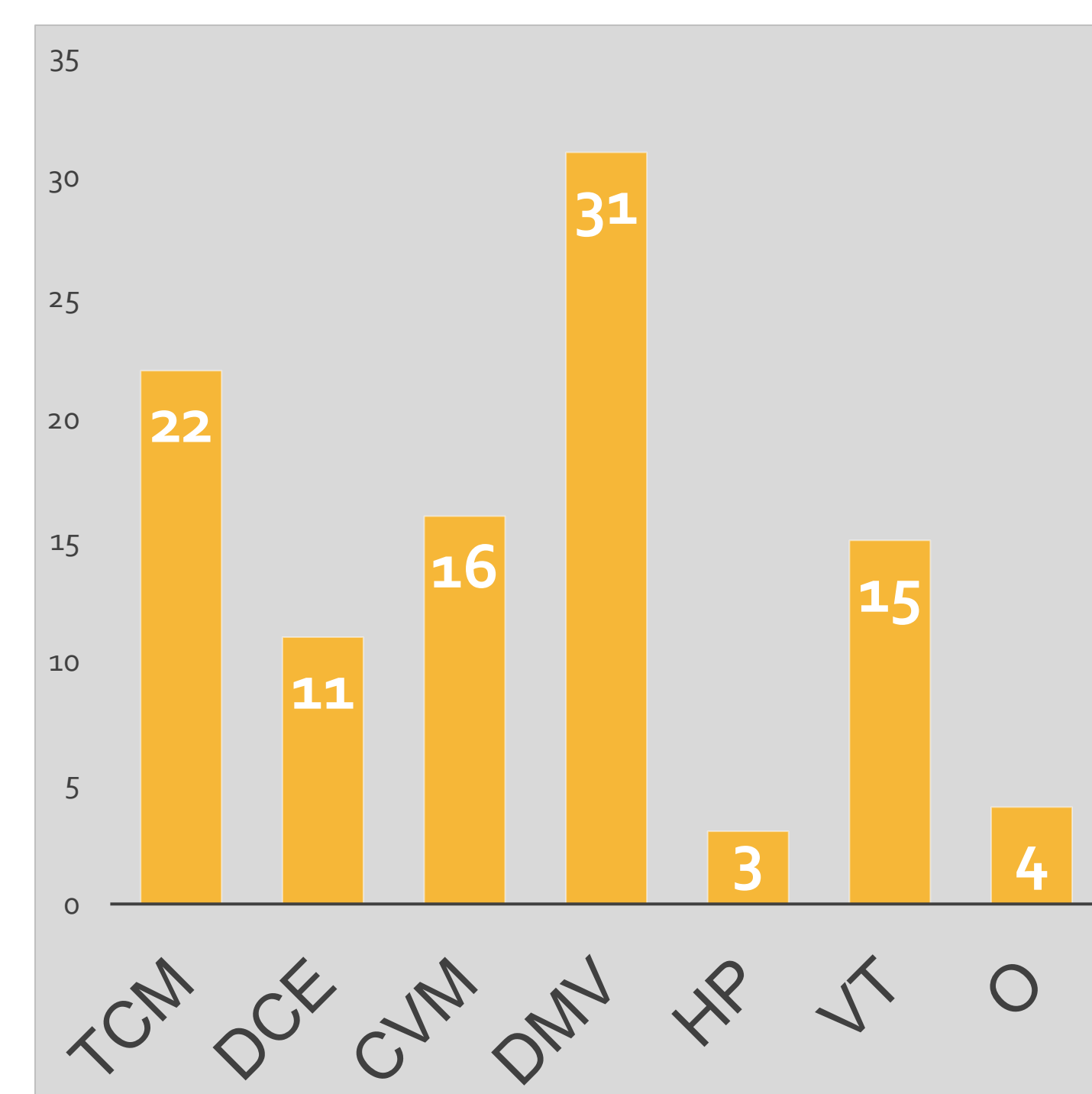
Preliminary Results

Of the 851 unique articles from database search, 85 met the inclusion criteria for further analysis

Analysis identified several **themes** in the literature:

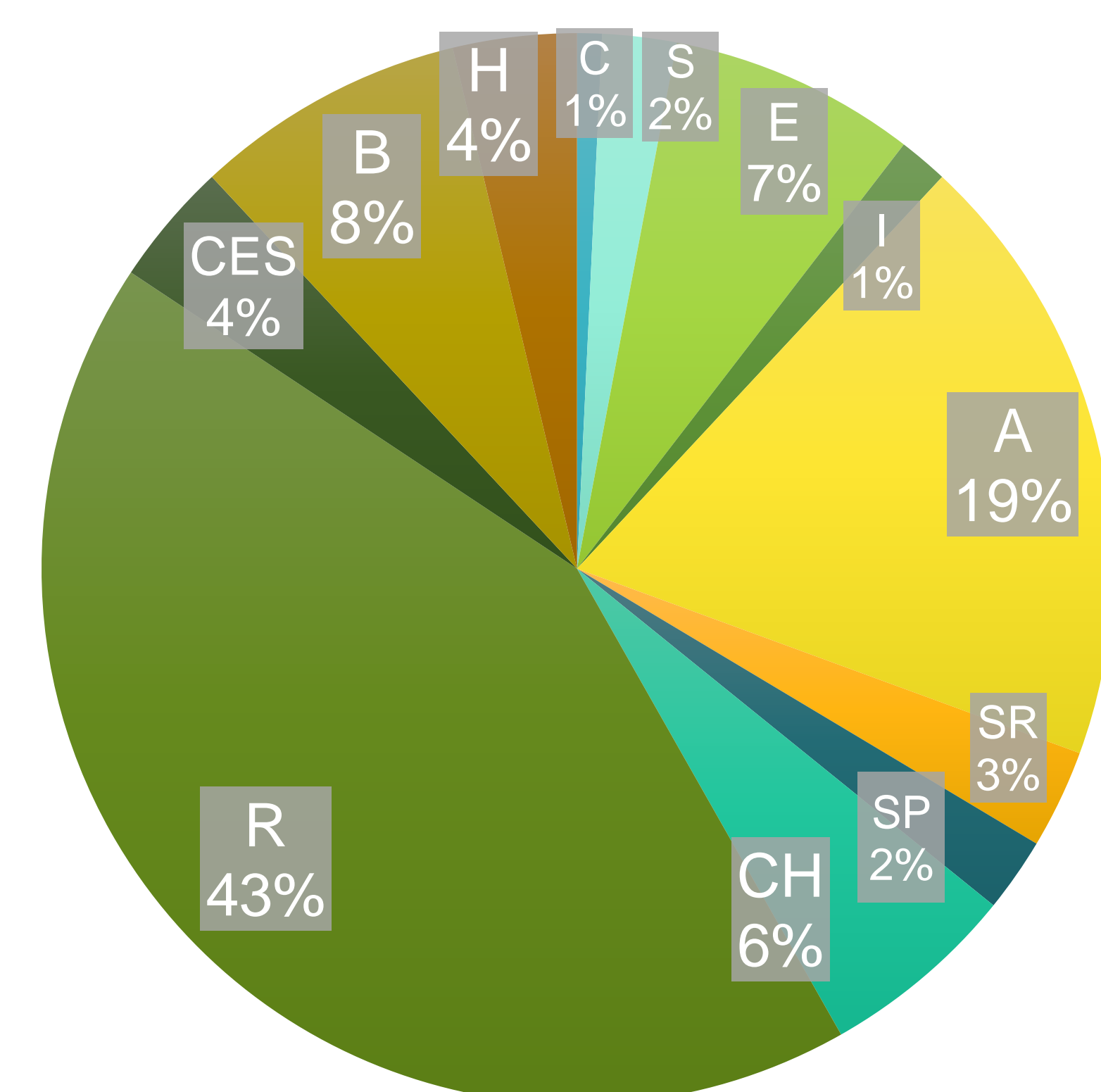
- Use of **mixed-methods**
- **Frequently employed methods:** direct monetary valuation, travel cost method, contingent valuation and value transfer, see Figure 2
- **CES subcategories:** Recreation and tourism (R) are the most studied, followed by aesthetics, see Figure 3
- Health and wellbeing (H) subcategory is poorly represented (4% of studies), see Figure 3

Figure 2: Total number of different methods employed to value CES



TCM - Travel cost method
DCE - Discrete choice experiment
CVM - Contingent valuation method
DMV - Direct Market valuation
HP - Hedonic pricing
VT - Value transfer
O - Other

Figure 3: CES sub-categories evaluated (% of total papers)



C: Cultural diversity
S: Spiritual and religious values
E: Educational values
I: Inspiration
A: Aesthetic values
SR: Social relations
SP: Sense of place
CH: Cultural heritage values
R: Recreation and tourism
CES: General CES
B: Bequest values
H: Health and wellbeing

Discussion & Conclusion

- Conceptualising the health and wellbeing benefits from GC as CES can aid in their economic valuation
- Health and wellbeing is seldomly evaluated as a CES
- In the context of GC valuation, the TCM, CVM, DCE and DMV methods have potential, it is unlikely that the HP and VT methods will be suitable
- We recommend the **use of mixed-methods** and combination of market and non-market methods
- The work presented here represents **preliminary results** of this study, and hence will be further developed and **adjusted in future**