ESMERALDA Integrated assessment framework

Claire Brown (UNEP-WCMC), Marion Potschin-Young (Fabis Consulting), Abigail Burns and Andy Arnell (UNEP-WCMC)
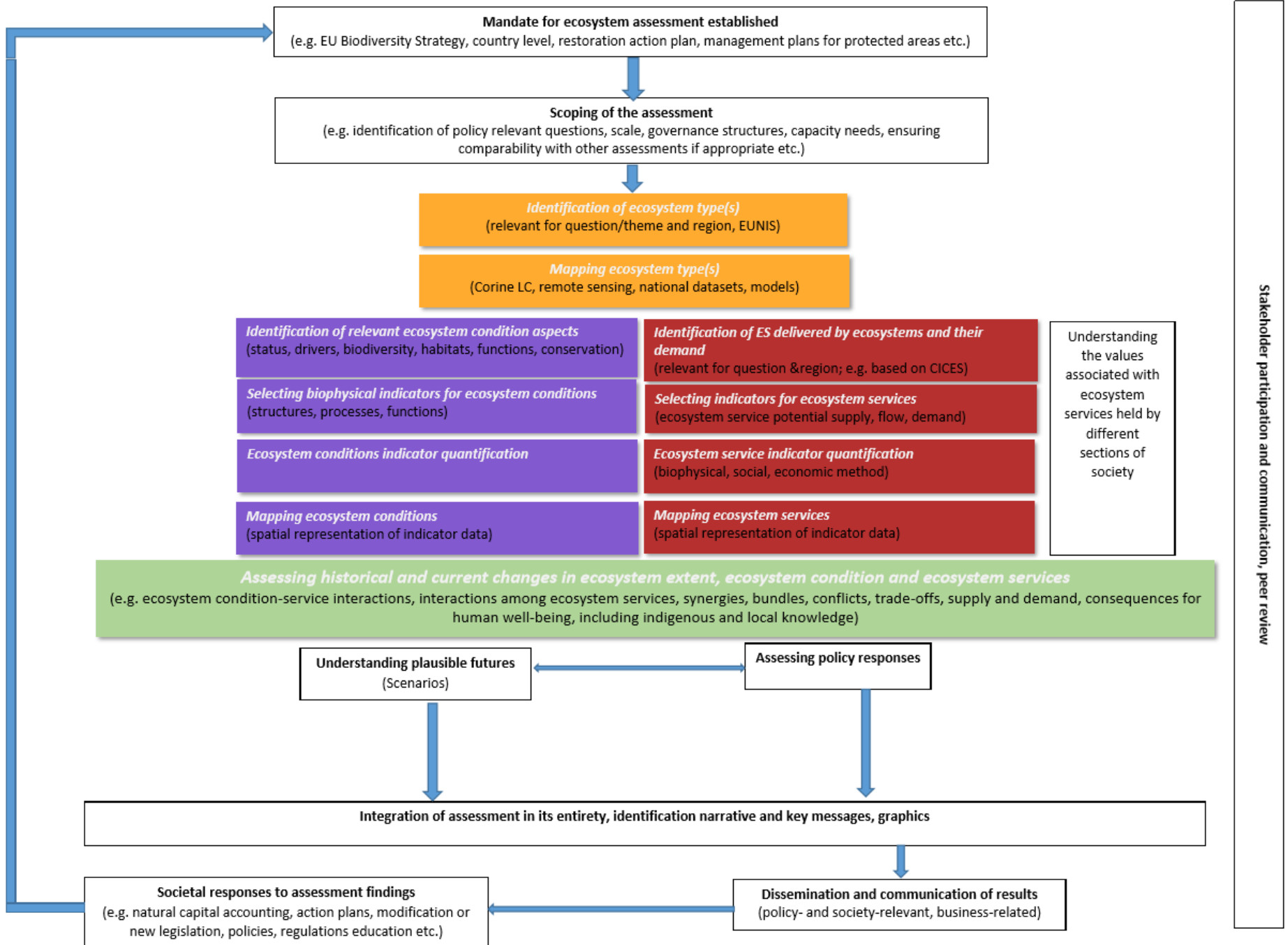

EU Horizon 2020 Coordination and support action

Why was it developed?

- as part of a broader package of guidance and tools being delivered by the ESMERALDA project

- clearly setting out the different activities within the assessment process which utilise the tools from within ESMERALDA

- gives flexibility in where and how integration takes places

Mandate for ecosystem assessment established
(e.g. EU Biodiversity Strategy, country level, restoration action plan, management plans for protected areas etc.)

Scoping of the assessment
(e.g. identification of policy relevant questions, scale, governance structures, capacity needs, ensuring comparability with other assessments if appropriate etc.)

Identification of ecosystem type(s)
(relevant for question/theme and region, EUNIS)

Mapping ecosystem type(s)
(Corine LC, remote sensing, national datasets, models)

Identification of relevant ecosystem condition aspects
(status, drivers, biodiversity, habitats, functions, conservation)

Identification of ES delivered by ecosystems and their demand
(relevant for question &region; e.g. based on CICES)

Understanding the values associated with ecosystem services held by different sections of society

Selecting biophysical indicators for ecosystem conditions
(structures, processes, functions)

Selecting indicators for ecosystem services
(ecosystem service potential supply, flow, demand)

Ecosystem conditions indicator quantification

Ecosystem service indicator quantification
(biophysical, social, economic method)

Mapping ecosystem conditions
(spatial representation of indicator data)

Mapping ecosystem services
(spatial representation of indicator data)

Assessing historical and current changes in ecosystem extent, ecosystem condition and ecosystem services
(e.g. ecosystem condition-service interactions, interactions among ecosystem services, synergies, bundles, conflicts, trade-offs, supply and demand, consequences for human well-being, including indigenous and local knowledge)

Understanding plausible futures
(Scenarios)

Assessing policy responses

Integration of assessment in its entirety, identification narrative and key messages, graphics

Societal responses to assessment findings
(e.g. natural capital accounting, action plans, modification or new legislation, policies, regulations education etc.)

Dissemination and communication of results
(policy- and society-relevant, business-related)

Stakeholder participation and communication, peer review

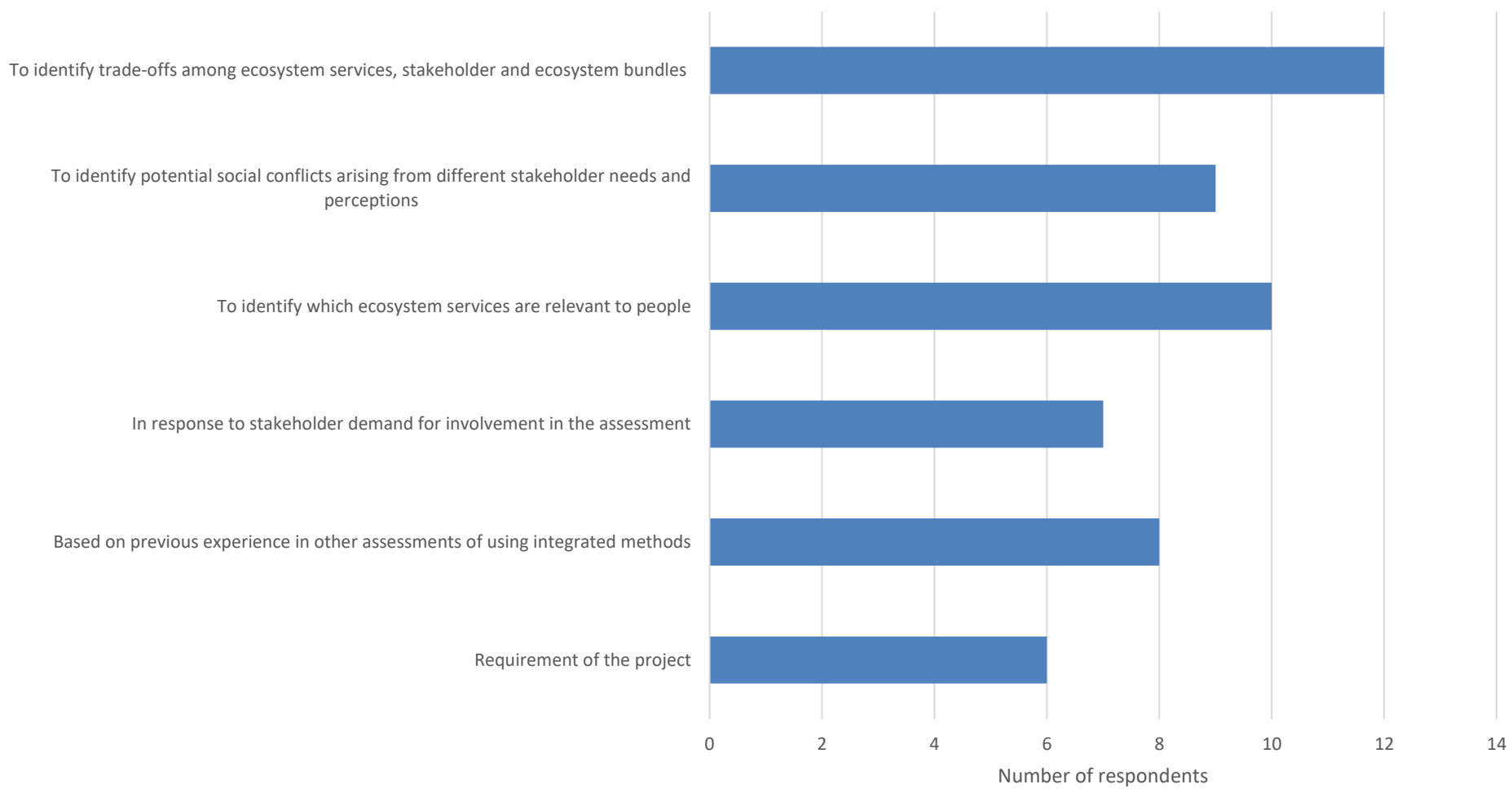# What is integration with in the context of an assessment?

- May focus on biophysical elements, socio-economic parameters and links to human well-being

- Integration of knowledge systems

- Simply refer to the inclusion of stakeholders within the assessment process..
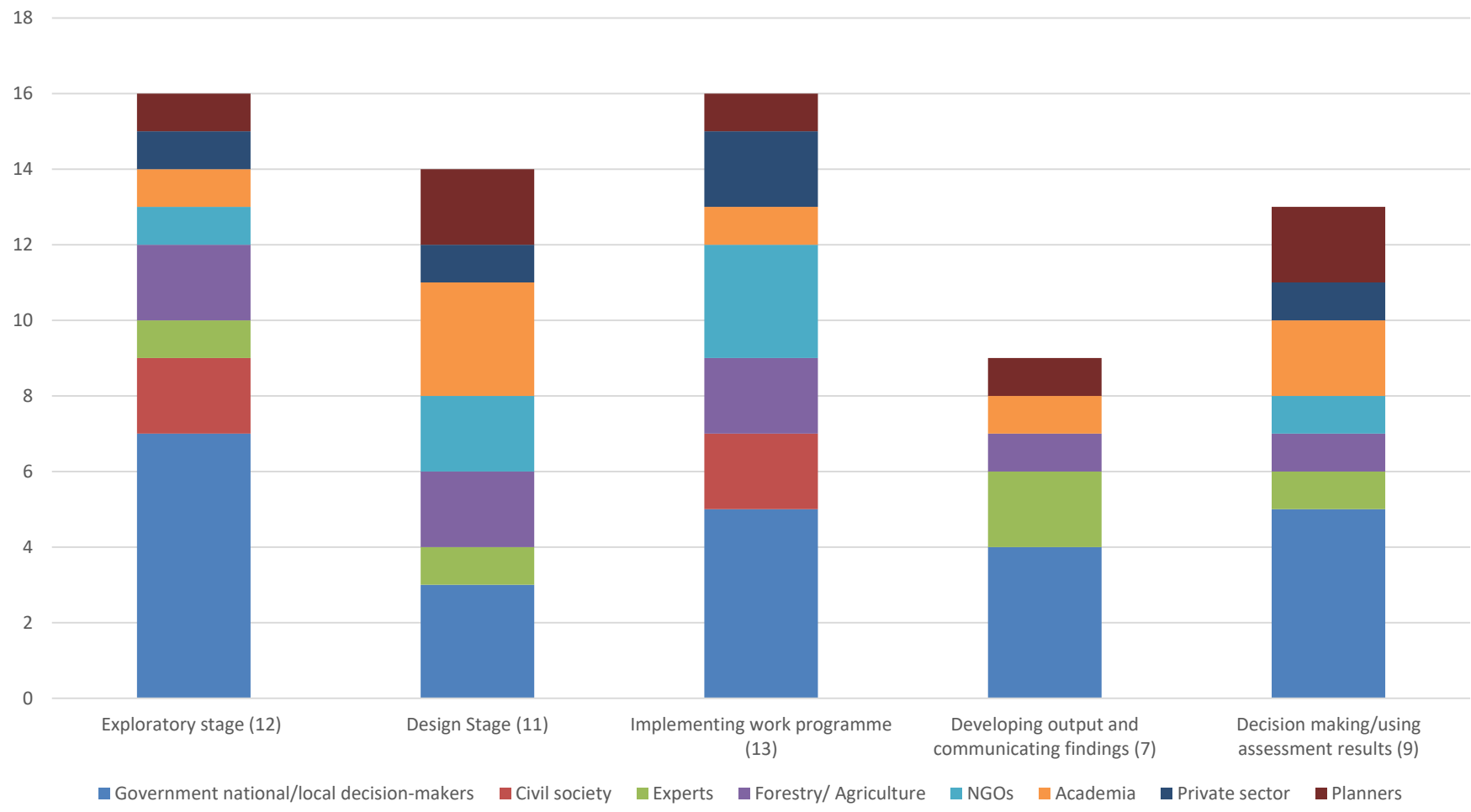
Survey of Assessment Practitioners

Survey questions focused on:

1. Overarching conceptual framework

2. Rationale

3. Description of assessment process
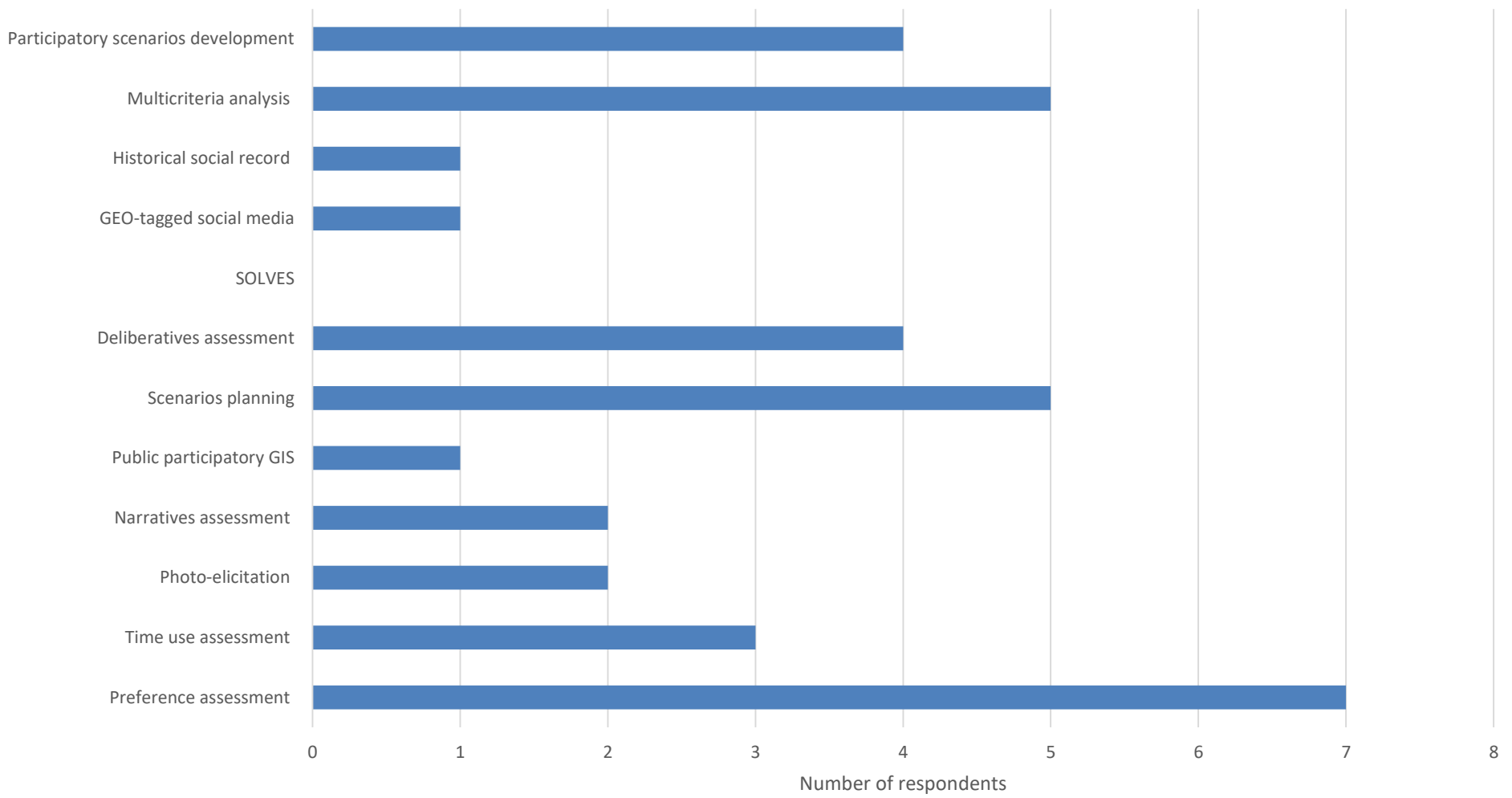
4. Added value of an integrated assessment (vs. non-integrative)

5. Lessons learned

Reasons for integrated approach

To identify trade-offs among ecosystem services, stakeholder and ecosystem bundles	12
To identify potential social conflicts arising from different stakeholder needs and perceptions	9
To identify which ecosystem services are relevant to people	10
In response to stakeholder demand for involvement in the assessment	7
Based on previous experience in other assessments of using integrated methods	8
Requirement of the project	6

Number of respondents

Stakeholders consultation

Tools used to involve external stakeholders

Lessons learned

- Appropriate scoping is important prior to commencing an integrated ecosystem assessment.

- Methods should be chosen that suit the type of integration desired i.e. tools might be chosen that simplify complex ecosystem components or social values.

- Available technical capacity and time should be a key considerations in the design process.

- The assessment should be adaptive and form part of a continuous social learning process

- The policy question(s) must be kept central throughout in order to maintain focus.

- Early engagement of a diversity of stakeholders - mitigate problems and potential conflict

- Good communication is emphasised as a priority throughout the assessment process.

Acknowledgements