

## APPENDIX 4

### Lists of ecosystem services by experts

#### A4.1 Expert survey method used

The experts who participated in the survey received the following instructions:

##### Experts reading the scenarios

*After reading through the attached description of the case study area, the three scenarios and the table of scenario contrasts, we would like to know what You think are the 5-10 most relevant ecosystem services to assess in our case study region. Write only one list, that considers the Upper Thukela region under the three different scenarios (i.e. don't write one sheet for each scenario). Don't be constrained by what services you perceive would be impossible or difficult to assess due to data availability, time or resources.*

##### Experts not reading the scenarios

*After reading through the attached description of the case study area, we would like to know what You think are the 5-10 most relevant ecosystem services to assess in our case study region. Don't be constrained by what services you perceive would be impossible or difficult to assess due to data availability, time or resources.*

The experts filled out a form where they stated the services, an optional definition of the service, and a motivation to their choice of each service. The answers from the experts were compiled in to two lists, experts reading the scenarios and experts not reading the scenarios, respectively. First, some of the ecosystem services mentioned by the experts were renamed or grouped for consistency. For example, we used the broad category of water quantity for more specific processes mentioned such as water infiltration, or runoff. The services were then listed and got a score for each expert mentioning that service, hence the lists consists of the total number of services mentioned and ranked according to scores (Table A4.1). The experts reading the scenarios resulted in 20 different services and the experts not reading the scenarios mentioned in total 15 services (Table A4.1).

**Table A4.1.** Lists of ecosystem services compiled by experts. Total score is the number of experts who mentioned that service in the survey.

Experts reading scenarios	Total score	Experts not reading scenarios	Total score
Crop production	8	Water quantity	8
Erosion regulation	8	Biodiversity	6
Water quantity	8	Crop production	5
Livestock production	7	Cultural identity	5
Pollination	5	Livestock production	5
Tourism	5	Tourism	5
Carbon sequestration	4	Erosion regulation	4
Cultural identity	4	Nutrient regulation	4
Nutrient regulation	3	Carbon sequestration	3
Scenic beauty	3	Other materials	3

Water quality	3	Scenic beauty	2
Biological pest control	2	Water quality	2
Biodiversity	1	Biofuel	1
Biofuels	1	Fire	1
Climate moderation	1	Flood regulation	1
Disease control	1		
Flood control	1		
Fodder production	1		
Other material	1		
Wild foods	1		