# Factor analysis of the statements measuring general environmental attitudes and place identity perception[[1]](#footnote-1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rotated Component Matrix** | Component | | | |
| 1 | 2 | 3 | 4 |
| We are approaching the limit of the number of people the earth can support | .260 | .076 | .081 | **.721** |
| Humans have the right to modify the natural environment to suit their needs (reverse coded) | .163 | **.654** | .007 | -.023 |
| When humans interfere with nature it often produces disastrous consequences | **.554** | .156 | .036 | .214 |
| Human ingenuity will ensure that we do not make the earth uninhabitable (reverse coded) | -.027 | **.677** | -.026 | .193 |
| Humans are severely abusing the environment | **.622** | .166 | .062 | .294 |
| The earth has plenty of natural resources if we just learn how to develop them (reverse coded) | -.429 | **.456** | -.040 | .433 |
| Plants and animals have as much right as humans to exist | **.693** | .121 | .155 | .005 |
| The balance of nature is strong enough to cope with the impacts of modern industrial nations (reverse coded) | .235 | **.695** | .024 | .170 |
| Despite our special abilities humans are still subject to the laws of nature | **.542** | .082 | .171 | .042 |
| The so-called “ecological crisis” facing humankind has been greatly exaggerated (reverse coded) | .406 | **.550** | .072 | .119 |
| The earth is like a spaceship with very limited room and resources | .290 | .059 | .070 | **.761** |
| Humans were meant to rule over the rest of nature (reverse coded) | .340 | **.622** | .058 | -.083 |
| The balance of nature is very delicate and easily upset | **.552** | .153 | .192 | .366 |
| Humans will eventually learn enough about how nature works to be able to control it (reverse coded) | -.001 | **.680** | -.002 | .022 |
| If things continue on their present course, we will soon experience a major ecological catastrophe | **.607** | .201 | .068 | .402 |
| I think peatlands are part of Scotland’s identity | .399 | -.006 | **.552** | .131 |
| I have strong bonds with Scotland | .031 | .014 | **.920** | .027 |
| I strongly identify with Scotland | .012 | .006 | **.919** | .023 |
| I like to spend time enjoying the Scottish landscape of which peatlands are a very important part | .299 | .028 | **.589** | .063 |
| Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations. | | | | | |

1. The factor analysis points to the independence between the responses provided to the statements supporting general environmental attitudes and place identity beliefs. While the analysis suggests the existence of multiple dimensions underlying the NEP statements, we also acknowledge that it is of limited use to inform our choices regarding the modelling, as explained in more detail in Section 3.5.2 of the revised manuscript. Hence, instead of considering multiple dimensions for the NEP scale, we opted for considering that all statements measure one unique construct (general environmental attitudes). This is a conservative approach, justified by prevailing positions in the psychology literature, where there is agreement that the NEP scale is a robust measure of general environmental attitudes, while there is disagreement regarding the existence (and number) of multiple underlying sub-dimensions (Dunlap et al. 2008). The consideration of one unique dimension for all 15 statements is also supported by a high Chronbach’s alpha coefficient (0.83 for NEP statements and 0.79 for place identity statements), indicating high consistency between the items associated with each latent trait and suggesting high scale reliability. Even though the Chronbach’s alpha statistic is designed for continuous variables, it is commonly used also with ordinal data. Despite there being limited information on how well (or how badly) the Chronbach’s alpha performs in the presence of ordinal variables, [Zumbo et al. (2007)](https://digitalcommons.wayne.edu/cgi/viewcontent.cgi?referer=https://www.google.co.uk/&httpsredir=1&article=1121&context=jmasm) found that in the presence of Likert-type data the coefficient alpha gives at least a lower bound estimate of the true reliability of a scale, with the coefficient alpha approximating its theoretical value as the number of possible response options on the Likert scale increases and approaches six. [↑](#footnote-ref-1)