

CONNECTEDNESS WITH NATURE SCALES

compiled by Hefler & Cervinka (2009/07/02)

Abbrev.	Tool	Authors	Construct	Items	Quality criteria
CNS	Connectedness to nature scale	Mayer & Frantz (2004)	CN is seen as an individual's trait level of feeling emotionally connected to the natural world	14 Items: [5-point-scale: 1 = strongly disagree to 5 = strongly agree]	Internal consistency ($\alpha = .84$). Test-retest reliability ($r = .79$).
CN-SI	Connectedness with nature – single item	Cervinka (2005)	The CN-SI is a single-item version to operationalize connectedness with nature	1 Item: <i>My Connectedness to nature is</i> [10-point-rating-scale: 1 = very low to 10=very high]	11 weeks test-retest correlation ($r = .432, p = .000, N = 39$)
DCN	Disposition to connect with nature	Brügger et al. (in press)	People's connection with nature is indirectly questioned by evaluative and behavioural statements (implicit measurement)	50 behaviours and evaluative statements: [5-point frequency scale: 1 = never to 5 = very often, and dichotomous: yes/no format]	Separation reliability <i>rel.</i> = .90 ($\alpha = .89; N = 1430$)
EAN	Emotional affinity toward nature	Kals, Schumacher & Montada (1999)	Nature-protective behaviour is measured by behavioural criteria (willingness), emotions and interest (emotional affinity toward nature), and experiences with nature (frequency of present and past time spent in nature)	Various item examples available [6-point Likert-scale: 1 = completely disagree to 6 = completely agree]	Internal consistency ($\alpha = .80$ to $.92$ for "willingness and behavioural decisions"; $.84$ to $.93$ for predictors 1 through 9; $N = 281$)
EID	Environmental Identity Scale	Clayton (2003)	The scale assesses the extent to which the natural environment plays an important part in a person's self-definition	24 evaluative statements: [5-point-scale: 1 = strongly disagree to 5 = strongly agree]	Internal consistency ($\alpha = .93; N = 978$; Brügger et al., 2008)

HARN	Human actions in and reactions toward nature	Beckers (2005)	This measure assesses people's connection with nature indirectly, based on the goal-directed behaviour approach	21 Items: [yes/no-format; two 5-point scales: 1 = never to 5 = very often, and 1 = strongly disagree to 5 = strongly agree]	Reliability ($r = .86$)
INS	Inclusion of nature in self	Schultz (2002)	The scale measures the amount of integration of nature in a cognitive self-representation	1 Item (graph.): A series of seven differentially overlapping circles labelled "self" and "nature"	4-week test-retest reliability ($r = .84$)
NATUR-BILDER	Naturbilder	Kuckartz et al. (2006)	Naturbilder assess ingrained, long-lasting, and mostly naive sentiments & beliefs about nature	1 Item (graph.) with four categories: strapazierfähige, empfindliche, in Grenzen tolerante, unberechenbare Natur	No internal consistency.
NVS	Skala zur Naturverbundenheit	Cervinka & Hefler (under review)	NVS is a German translation and adaptation of the connectedness to nature scale (Mayer & Frantz, 2004)	12 items: [5-point-scale: 1 = strongly disagree to 5 = strongly agree]	Internal consistency ($\alpha = .86$; $N = 428$)
NR	Nature relatedness scale	Nisbet, Zelinski & Murphy (2008)	The scale assesses the affective, cognitive, and experiential aspects of individual's connection to nature via three factors: NR-self, NR-perspective, NR-experience.	21 Items: [5-point-scale: 1 = disagree strongly to 5 = agree strongly]	Internal consistency ($\alpha = .87$; full NR-scale)
PRS	Perceived Restorativeness Scale	Hartig, Kaiser & Bowler (1997)	The instrument measures qualities of restorative person-environment transactions by Kaplan & Kaplan's (1989) four factors being away, fascination, coherence, compatibility	16 Items: [7-point-scale: 0 = not at all to 6 = completely]	Internal consistency: ?, $N = 313$

COMPUTERIZED TEST

IAT	Implicit associations with nature	Schultz et al. (2004)	The test is an attempt to tap unconscious attitudes (primitive beliefs) through the measurement of associations (e.g. between nature and me)	The computerized test measures response times' difference [12 word-pairs with self-related and nature-related words] available at www.singletap.com/research	Consistency measure ($r = .65$, $N = 785$, according to Brügger et al., 2008, p. 17).
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RELATED MEASURES (ECOLOGICAL BEHAVIOUR AND MORE ...)

ECS	Environmental concern scale	Ellis & Thompson (1997a, b)	The ECS assesses general feelings about environmental degradation, limits to economic growth, and potential crises in overpopulation	5 Items: [5-point-scale: 1 = strongly disagree to 5 = strongly agree]	Internal consistency ($\alpha = .77$)
EMS	Environmental motives scale	Schultz (2000, 2001)	The EMS consists of three sub-scales and measures people's biospheric concerns (valuing nature), egoistic concerns (valuing self), and social altruistic concerns (caring for other people)	12 Items : [7-point-scale: 1 = not important to 7 = supreme importance]	Internal consistency ($\alpha = .71$ "egoistic", $\alpha = .64$ "altruistic", $\alpha = .86$ "biospheric", $N = 1010$)
GEB	General ecological behaviour	Kaiser & Wilson (2004)	Ecological Behaviour is operationalized in six domains: recycling, waste avoidance, consumerism, mobility/transportation, energy conservation, vicarious behaviours toward conservation	50 behavioral self-reports [5-point frequency scale: 1 = never to 5 = always, and yes/no-format]	Internal consistency ($\alpha = .83$; $N = 1387$). Separation reliability ($r = .85$).
NEP	New ecological paradigm scale	Dunlap & Van Liere (1978)	The NEP measures environmental concern and pro-environmental orientation	15 Items: [5-point-scale: 1 = strongly disagree to 5 = strongly agree]	Internal consistency ($\alpha = .83$; see Dunlap, 2000)