

Appendix 2.7: Research providing evidence of nature’s contributions to people (NCP) trends in Europe and Central Asia (ECA)

List of references providing evidence about increasing, constant, decreasing and mixed trends for each NCP and sub-regions of Europe and Central Asia over the period 1960-2016.

Nature’s Contributions to People (NCP)	Trends (1960-2016)			
	Increase	Constant	Decrease	Mixed
Habitat creation and maintenance	Western Europe ^{1,2}		ECA ^{3–13} Western Europe ^{14,15}	ECA ¹³
Regulation of air quality	ECA ^{16,17} Western Europe ¹⁸ Central Europe ¹⁷		Western Europe ¹⁹	
Regulation of climate	Western Europe ^{20,21} Eastern Europe ^{22–26} Central Asia ^{27,28} For Western, Central and Eastern Europe also multiple reports from UNFCCC (1992-2011)	ECA ²⁹	ECA ^{29–32} Western Europe ³¹ Central Europe ³³ Eastern Europe ^{34,35} Central Asia ^{28,36,37}	
Regulation of ocean acidification	In the Arctic Ocean ^{38–40}		ECA ^{7,41–44}	
Regulation of freshwater quantity and flow	<u>Freshwater provision</u> Western Europe ^{45,46} Central Europe ⁴⁵ Eastern Europe ⁴⁷ <u>Water flow regulation</u> Western Europe ^{48–51} Central Europe ⁵¹ Eastern Europe ⁵²	<u>Freshwater provision</u> Central Asia ^{53–56} <u>Water flow regulation</u> Central Europe ^{57,58}	<u>Freshwater provision</u> ECA ^{18,47,59,60} Western Europe ^{45,47,61–64} Central Europe ^{47,65,66} Eastern Europe ⁶⁷ Central Asia ^{47,54,68,69} <u>Water flow regulation</u> ECA ^{18,51} Western Europe ^{48–51,63,70–72} Central Europe ^{45,49,73} Eastern Europe ^{50,51}	<u>Freshwater provision</u> Western Europe ^{71,74} Central Europe ⁷⁴ Eastern Europe ⁷⁴ Central Asia ⁴⁷ <u>Water flow regulation</u> ECA ^{49,50,59,75} Western Europe ^{51,73} Central Europe ^{49–51} Central Asia ^{68,69}
Regulation of freshwater and coastal water quality	ECA ^{76,77} Western Europe ^{78–80} Central Europe ^{81,82}	ECA ^{83,84} Western Europe ⁸⁵ Central Europe ⁵²	ECA ^{59,86–92} Western Europe ^{88,90,93–99} Central Europe ^{100–102} Eastern Europe ⁷⁸	

Formation and protection of soils	<p><u>Erosion control</u> ECA ^{18,103} Western Europe ^{18,103} Central Europe ^{18,104}</p> <p><u>Soil quality</u> ECA ^{24,60,105} Western Europe ^{60,106} Central Europe ^{24,105} Eastern Europe ^{24,105} Central Asia ^{36,107}</p>	<p><u>Erosion control</u> Central Asia ¹⁰⁸</p>	<p><u>Erosion control</u> ECA ^{109–113} Western Europe ¹⁰⁹ Central Europe ^{109,114–117} Eastern Europe ^{109,110,112,118,119} Central Asia ^{109,111,113,120}</p> <p><u>Soil quality</u> ECA ^{31,60,106,109,121–126} Western Europe ^{31,60,106,109,121–129} Central Europe ^{109,130} Eastern Europe ¹⁰⁹ Central Asia ^{36,109,111,131,132}</p>	<p><u>Erosion control</u> ECA ¹³³ Western Europe ¹³³</p> <p><u>Soil quality</u> Western Europe ^{129,134,135} Central Asia ³⁶</p>
Regulation of coastal and fluvial floods	<p>ECA ^{136,137} Western Europe ^{52,137–140} Eastern Europe ⁵² Central Asia ⁵²</p>	<p>Western Europe ^{141–143} Central Europe ¹⁴² Central Asia ¹⁴⁴</p>	<p>ECA ^{141,144–151} Western Europe ^{144,148,152,153} Central Europe ^{102,141,144,154–156} Eastern Europe ^{144,149,150,157} Central Asia ¹⁵⁷</p>	<p>ECA ^{158–162} Western Europe ¹⁵²</p>
Removal of animal carcasses by scavengers	<p>Western Europe ^{163–170} Central Europe ^{166,171–173}</p>		<p>Western Europe ^{174–179} Central Europe ¹⁸⁰</p>	
Material NCP	Increase	Constant	Decrease	Mixed
Food and feed	<p>Western Europe ^{57,104,181–183} Central Europe ^{184,185} Eastern Europe ^{186,187} Central Asia ^{27,188–190}</p>	<p>Eastern Europe ¹⁸⁷ Central Asia ^{27,190,191}</p>	<p>Western Europe ^{57,104,183,192–200} Central Europe ^{184,201,202} Eastern Europe ^{187,203–205} Central Asia ^{27,188–190}</p>	<p>Western Europe ²⁰⁶ Eastern Europe ^{186,203} Central Asia ^{27,189,190,207}</p>
Biomass-based fuels	<p>Western Europe ^{208–212} Central Europe ^{209,210} Eastern Europe ²¹³</p>	<p>Eastern Europe ²¹¹</p>	<p>Central Europe ^{214,215}</p>	
Materials	<p>ECA ^{216–220}</p>	<p>ECA ²²¹</p>	<p>ECA ^{218,222,223}</p>	
Non-material NCP	Increase	Constant	Decrease	Mixed
Learning and inspiration	<p><u>Formal learning and knowledge generation</u> Western Europe ^{93,224–228}</p> <p>Askerlund et al. (2012)</p>	<p><u>ILK</u> Central Europe ^{229,230}</p>	<p><u>ILK</u> ECA ^{231–234} Western Europe ^{94,235–246} Central Europe ^{193,229,234,247–254} Eastern Europe ^{255–258} Central Asia ²⁵⁶</p>	

Physical and psychological experiences	<u>Recreation experiences</u> ECA ^{59,259,260} Western Europe 94,224,259,261–267 Central Europe ^{267–269} Eastern Europe ²⁷⁰	<u>Recreation experiences</u> ECA ^{271,272} Western Europe ^{93,224,273} Eastern Europe ²⁷⁴ <u>Aesthetic experiences</u> Western Europe ^{224,275}	<u>Recreation experiences</u> ECA ^{59,234,276} Western Europe 271,272,277,278 Central Europe 234,261,271,278–280 Eastern Europe ^{257,261,281} <u>Aesthetic experiences</u> Western Europe 276,278,282–286 Central Europe ²⁷⁸	
Supporting identities	ECA ²⁸⁷		ECA ^{288–290}	

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