

Supplementary material

Table S 1: The SURFACE expert questionnaire

No.	Topics and questions
1	Current situation of land use and land take
1.1	Shortly describe the current situation of land use for residential, industrial, commercial and transportation purposes in your country (in particular recent statistical data about land take). What are the main drivers of land take in your country? Which economic activities / policy sectors are benefiting from land take, which are affected negatively and how?
1.2	Is there an acknowledged or a legally or otherwise binding definition for the term “land take” in your country?
1.3	Given the SDG 15.3 which different forms of land degradation or soil loss (such as erosion, salinization, desertification or contamination) are relevant in your country (if applicable please provide data)?
2	Strategies and political background of land take control (incl. SDGs)
2.1	Is land take a topic in the political and/or professional debate in your country? Is it perceived as a sustainability issue regarding the implementation of the SDGs?
2.2	Are there controversies among different policy sectors / departments with regard to land take and achievement of different SDGs?
2.3	If your country is a member of the EU: Are there interconnections between land take / land development and European strategies and activities that are relevant in your country?
3	Goals/objectives and monitoring
3.1	Are there any targets addressing the problem of land take? If legally binding: Where (i.e. in which law) are they stated? And how do public and private decision-makers have to consider these targets in land development?
3.2	Who is responsible for monitoring and assessing the attainment of land take goals?
3.3	Are there any monitoring programs which help to assess changes in land use, especially structural land use changes and their impacts on environmental objectives? Can you provide information, if and how respective data is provided to and assessed by responsible authorities?
3.4	Based from your experience in your national context: What are suitable indicators for land take that may help to assess progress towards respective political goals?
4	Instruments for the reduction of land take
4.1	Which legal, planning, economic or informational instruments to control land take are applied in your country?
4.2	Which innovative instruments are currently developed / debated in your country?

5	Overall assessment of strategies, goals, and instruments to control land take
5.1	If there are strategies and instruments for controlling land take in your country: How do you assess these approaches? Are there any instruments or legal regulations you would recommend as being particularly effective or innovative? (Please make precise references to your answers in question 2 and 3.
5.2	If there are no strategies and instruments for controlling land take: What are in your opinion the deciding reasons that such strategies and instruments are missing? Is there a lack of political motivation, acceptance or awareness of the problem? Are there any constitutional boundaries that form an obstacle?
5.3	Please give a short appraisal of current or prospective national policy trends regarding the control of land take and related activities to contribute to SDGs 11 and 15.

Table S 2: EU policy / science-policy documents considered (in decreasing order of their release)

Author	Year	Title	Link
EU Ministers	2019	Declaration Budapest - Towards a common framework for urban development in the European Union	https://ec.europa.eu/futurium/en/system/files/ged/2019-06-14_bucharest_declaration_en.pdf
European Commission	2019	Commission Staff Working Document: Guidance on a strategic framework for further supporting the deployment of green and blue infrastructure	https://ec.europa.eu/environment/nature/ecosystems/pdf/SWD_2019_193_F1_STAFF_WORKING_PAPER_EN_V4_P1_1024680.PDF
European Environment Agency (EEA)	2019	The European environment – State and outlook 2020	https://www.eea.europa.eu/publications/soer-2020
Eurostat	2019	Sustainable development in the European Union. Monitoring report on progress towards the SDGs in an EU context. 2019 edition	https://ec.europa.eu/eurostat/documents/3217494/9940483/KS-02-19-165-EN-N.pdf/1965d8f5-4532-49f9-98ca-5334b0652820
Joint Research Centre (JRC)/EEA/ENV	2019	Strategic Green Infrastructure and Ecosystem Restoration	http://publications.jrc.ec.europa.eu/repository/bitstream/JRC113815/jrc-eea-env_joint_report_final_online2.pdf
ESPON	2018	COMPASS - Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe	https://www.espon.eu/sites/default/files/attachments/1.%20COMPASS_Final_Report.pdf
Eurostat	2018	Sustainable development in the European Union. Monitoring report on progress towards the SDGs in an EU context. 2018 edition	https://op.europa.eu/en/publication-detail/-/publication/409ff6a3-cc38-11e8-9424-01aa75ed71a1/language-en
IPBES	2018	Assessment Report on Land Degradation and Restoration	https://www.ipbes.net/system/tdf/2018_ldr_full_report_book_v4_pages.pdf?file=1&type=node&id=29395
UN Habitat	2018	Metadata on SDGs Indicator 11.3.1	https://unhabitat.org/sites/default/files/2020/07/metadata_on_sdg_indicator_11.3.1.pdf
Corbane et al. / JRC	2017	Land Use Efficiency User Guide	https://ghsl.jrc.ec.europa.eu/documents/LUE_User_Guide.pdf
Ecologic	2017	Soil Inventory Report	https://www.ecologic.eu/sites/files/publication/2017/2576-soil_inventory_report.pdf
FAO	2017	Voluntary Guidelines on Sustainable Soil Management	http://www.fao.org/3/a-bl813e.pdf

OECD	2017	Governing Land-use in OECD countries	http://www.oecd.org/regional/regional-policy/the-governance-of-land-use-in-oecd-countries-9789264268609-en.htm
Orr et al. / UNCCD-SPI	2017	Scientific Conceptual Framework for Land Degradation Neutrality	https://www.unccd.int/sites/default/files/documents/2019-06/LDN_CF_report_web-english.pdf
UN Habitat	2017	Metadata on SDGs Indicator 11.3.1	https://unhabitat.org/sites/default/files/2020/07/metadata_on_sdg_indicator_11.3.1.pdf
EEA	2016	Land recycling in Europe	https://www.eea.europa.eu/publications/land-recycling-in-europe
EEA	2016	Urban Sprawl in Europe – EEA Report No. 11/2016	https://www.eea.europa.eu/publications/urban-sprawl-in-europe/at_download/file
EU Ministers	2016	Pact of Amsterdam – Urban Agenda for the EU	https://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf
European Commission	2016	Next steps for a sustainable European future	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0739&from=EN
United Nations	2016	UN Habitat III New Urban Agenda	http://habitat3.org/wp-content/uploads/NUA-English.pdf
EU Ministers	2015	Declaration towards the EU Urban Agenda	http://www.ectp-ceu.eu/images/stories/PDF-docs/Riga_Declaration_agreed_10062015.pdf
FAO / ITPS	2015	Status of the World's Soil Resources	http://www.fao.org/3/i5199e/i5199e.pdf
Kompil et al. / JRC	2015	European cities: Territorial analysis of characteristics and trends	https://publications.jrc.ec.europa.eu/repository/handle/JRC100001
UN Habitat	2015	International Guidelines on Urban and Territorial Planning	https://unhabitat.org/books/international-guidelines-on-urban-and-territorial-planning/
BIO by Deloitte	2014	Study supporting potential land and soil targets	https://op.europa.eu/it/publication-detail/-/publication/fdbdf00a-87ac-4c85-8eab-ef60118963c5
European Commission	2014	The urban dimension of EU policies – key features of an EU urban agenda	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0490&from=en
Bartke / European Commission's DG Environment	2013	Science for Environment Policy: Brownfield Regeneration / Thematic Issue 30	https://ec.europa.eu/environment/integration/research/newsalert/pdf/39si_en.pdf

European Commission	2013	Green Infrastructure (GI) – Enhancing Europe’s Natural Capital	https://secure.ipex.eu/IPEXL-WEB/dossier/files/download/082dbcc53dbcb74e013e79e78b782b05.do
European Parliament & Council	2013	EU Environment Action Programme to 2020 (7 th EAP)	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013D1386&from=EN
Lavalle et al. / JRC	2013	Land use related indicators for resource efficiency. Part I Land Take Assessment	https://op.europa.eu/en/publication-detail/-/publication/4e6500a9-5367-4919-a936-3e84af794241
European Commission	2012	Commission Staff Working Document: Guidelines on best practice to limit, mitigate or compensate soil sealing	http://ec.europa.eu/environment/soil/pdf/soil_sealing_guidelines_en.pdf
JRC	2012	The State of Soil in Europe	https://publications.jrc.ec.europa.eu/repository/bitstream/JRC68418/lbna25186enn.pdf
EU Ministers	2011	Territorial agenda of the EU 2020	https://ec.europa.eu/regional_policy/sources/policy/what/territorial-cohesion/territorial_agenda_2020.pdf
European Commission	2011	Our life insurance, our natural capital: an EU biodiversity strategy to 2020	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0244&from=EN
European Commission	2011	Roadmap to a Resource Efficient Europe	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0571&from=EN
JRC	2010	The State of Soil in Europe. A contribution of the JRC to the European Environment Agency’s Environment State and Outlook Report	https://publications.jrc.ec.europa.eu/repository/bitstream/JRC68418/lbna25186enn.pdf
Urban Development Ministers	2010	Toledo Declaration	https://ec.europa.eu/regional_policy/archive/newsroom/pdf/201006_toledo_declaration_en.pdf
EEA	2006	Urban Sprawl in Europe. The ignored challenge	https://www.eea.europa.eu/publications/eea_report_2006_10/eea_report_10_2006.pdf/view
European Commission	2006	Thematic Strategy for Soil Protection	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52006DC0231&from=EN
EEA	2005	The European environment – State and outlook	https://www.eea.europa.eu/about-us/documents/soer2005files
European Commission	2005	Thematic Strategy on the sustainable use of natural resources	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52005DC0670&rid=7

European Commission	2005	Thematic Strategy on the Urban Environment	http://aei.pitt.edu/38667/1/COM_(2005)_718.pdf
European Soil Bureau Network, European Commission	2005	Soil Atlas of Europe	https://esdac.jrc.ec.europa.eu/Projects/Soil_Atlas/Download/Atlas.pdf
European Commission	2004	Towards a thematic strategy on the urban environment	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52004DC0060&rid=1
European Commission	2002	Towards a Thematic Strategy for Soil Protection	https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2002:0179:FIN:EN:PDF
European Commission	2001	A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development (Commission's proposal to the Gothenburg European Council)	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52001DC0264&from=EN
Council of Europe	2000	European Landscape Convention	https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680080621
EU Ministers	1999	European Spatial Development Perspective – Towards Balanced and Sustainable Development of the Territory of the European Union	https://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/sum_en.pdf
European Commission	1998	Sustainable Urban Development in the European Union: A Framework for Action	https://op.europa.eu/en/publication-detail/-/publication/9ee272dd-f478-44d5-88a1-95a101904ab9/language-en
European Commission	1997	Towards an urban agenda in the European Union	https://ec.europa.eu/regional_policy/sources/docoffic/official/communic/pdf/urban/urban_197_en.pdf