



Foto: André Künzelmann

Governing land take in Germany & the research project **SURFACE**

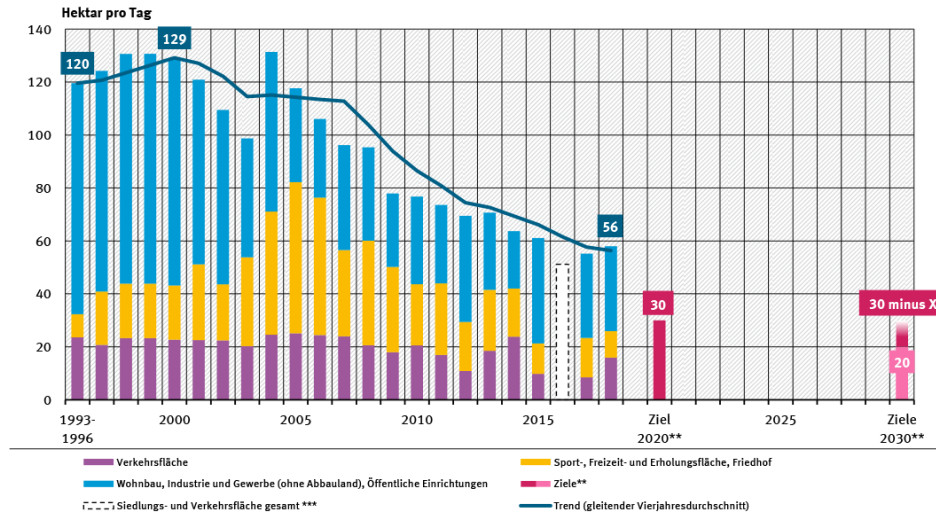
Dr. Jana Bovet

Dr. Lisa Marquard

Governing land take in Germany: National Sustainable Development Strategy sets quantified target for land take confinement

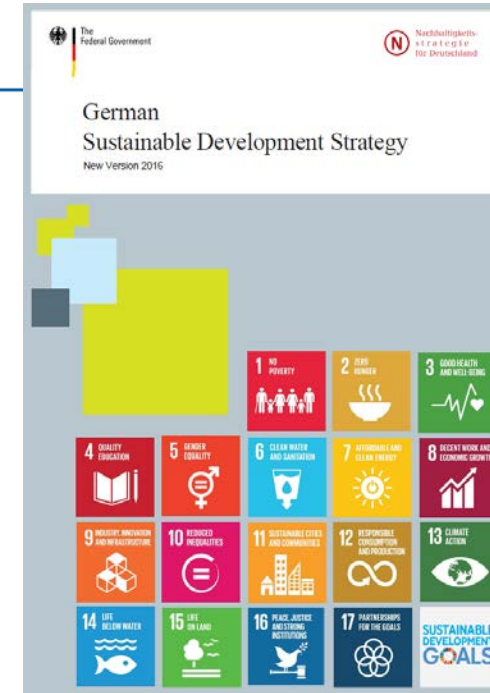
- Target: Reduction to **30ha/d until 2020** (2002), updated to **< 30ha/d until 2030** (2016)

Anstieg der Siedlungs- und Verkehrsfläche*



* Die Flächenerhebung beruht auf der Auswertung der Liegenschaftskataster der Länder. Aufgrund von Umstellungsarbeiten in den Katastern (Umschlüsselung der Nutzungsarten im Zuge der Digitalisierung) ist die Darstellung der Flächenzunahme ab 2004 verzerrt.
 ** Ziel 2020: "Klimaschutzplan 2050", Ziel 2030: "30 minus x" Hektar pro Tag; "Deutsche Nachhaltigkeitsstrategie, Neuauflage 2016", 20 Hektar pro Tag; "Integriertes Umweltprogramm 2030"
 *** Ab 2016 entfällt aufgrund der Umstellung von automatisierten Liegenschaftsbuch (ALB) auf das automatisierte Liegenschaftskataster-Informationssystem (ALKIS) die Unterscheidung zwischen "Gebäude- und Freifläche" sowie "Betriebsfläche ohne Abbauland". Dadurch ist derzeit der Zeitvergleich beeinträchtigt und die Berechnung von Veränderungen wird erschwert. Die nach der Umstellung ermittelte Siedlungs- und Verkehrsfläche enthält weitgehend dieselben Nutzungsarten wie zuvor. Weitere Informationen unter www.bmu.de/WS2220R10929.

Quelle: Werte aus Statistisches Bundesamt 2020, Fachserie 3 Reihe 5.1. 2018. Bodenfläche nach Art der tatsächlichen Nutzung vom 15.11.2019, ergänzt 07.05.2020



Transport infrastructures

Recreational areas

Buildings and associated open spaces, industrial and commercial sites (without mining areas)

Governing land take in Germany: **Challenges**

- Increase in dwelling area per capita due to higher living standards and the "remanence effect" (empty nesters; elderly in single households after life partner has died)
- Municipalities strive to develop more areas in order to attract (financially strong) residents and investors
 - (hoping) to increase tax revenues
- Esp. small municipalities in rural areas designate residential and commercial areas
 - despite a declining population

Governing land take in Germany: Legal framework

- Under Art. 28 II of the German constitution municipalities have strong rights of self-government and planning sovereignty
- Inner development is much more complex for municipalities than allowing building in the undeveloped outer zones – which drives land take
- Quite well elaborated legal planning and approval framework BUT...
 - Specifications for soil protection are only one criterion for consideration (among others)
 - The set of legal instruments is not related to the quantitative 30ha-target
 - Rules to restrict greenfield development of settlements have been relaxed in 2017 (BauGB §13b)



Governing land take in Germany: Initiatives and research on instruments for reducing land take

- Internet portal 'Aktion Fläche' compiles relevant news, events, case studies, ...
- Several infrastructure cost calculators are available
- Regional (non-binding) targets have been set by some of the German federal states (Referendum in Bavaria with the aim of setting a (binding) quantified land saving target)
- Law and constitution offer the possibility to set quantified target for municipalities
 - => Possibility to implement a system of tradable planning permits
 - => Scheme of tradable land planning permits successfully tested with ~ 100 municipalities



SURFACE: Standards and Strategies for the Reduction of Land Consumption

Duration: 2017-2021

Funding: German Federal Environment Agency

The logo of the Umwelt Bundesamt (German Federal Environment Agency) is displayed. It consists of a green square containing the text "Umwelt Bundesamt" in white, with a small green circular icon featuring a white stylized figure to the right of the word "Umwelt".

Umwelt
Bundesamt

Aims:

- Comparing land-take trends and land-take confinement strategies across different (EU) countries
- Identifying promising approaches to combat land take (policies, instruments)
- Building / reinforcing an international and interdisciplinary network of land take experts & fostering knowledge exchange

Methods:

- 2 International expert surveys
- 4 Workshops
- Literature review



SURFACE: The two international expert surveys

1st survey: Focus on **steering instruments** for the reduction of land take

- **Aim:** better understanding of national situations + approaches
- 25 questionnaires completed by experts (21 countries)



2nd survey: Focus on land take within **Environmental Impact Assessment (EIA)**

Article 3

1. The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:

- (a) population and human health;
- (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- (c) land, soil, water, air and climate;

- **Aim:** better understanding of national transposition + implementation of EU-directive
- Does the inclusion of the factor land make any difference?
- 22 questionnaires completed by experts (11 EU countries)

SURFACE: 1st survey - Focus on instruments for the reduction of land take

Results of the 1st survey

- **Terminological issues:** „Flächeninanspruchnahme“ (German), „artificialisation“ (French), „urbanizacion“ (Spanish), „land take“ (English) at the EU level: land consumption / land take → Conceptual clarifications needed
- **Implementation deficits** are widespread, but nationally heterogeneous (e.g., unstable political conditions, corruption, implementation failures, lack of control mechanisms)
- **Promising approaches:** quantified targets, tradable land planning permits, infrastructure cost calculators



SURFACE-Workshop 2019

SURFACE: Terminological issue: Land consumption or land take?

Results of
the 1st survey

Goal 11: Sustainable cities and communities

Target 11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

Indicator 11.3.1

Ratio of **land consumption rate** to population growth rate

EU goal: **No net land take** by 2050



SURFACE: Terminological issue: Land consumption or land take?

Results of
the 1st survey

- For accurate quantifications of trends, do **not use** land consumption and land take **synonymously** (and express land consumption / land take as a rate)
- Consider duly the **limitations of both concepts** (e.g., their **dichotomy**)
- In the EU context, prioritize the term **land take** (where appropriate)

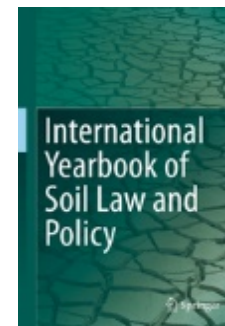
Marquard et al. (2020): Land consumption and land take: enhancing conceptual clarity for evaluating spatial governance in the EU context. Sustainability 12(8269)



SURFACE: Promising approaches Quantified targets

Results of the 1st survey

	Quantified target & year when it was set	Current land take	Previous target	Remark
1a) Selection of quantified targets for land take				
Germany	Less than 30 ha/d until 2030 (2016)	56 ha/d (2018)	30 ha/d until 2020 (2002)	Target relaunched and modified in 2016
Switzerland	No-net soil consumption from 2050 onwards (2020)	407 m ² settlement area/inhabitant (2018)	max. 400 m ² settlement area/inhabitant (2012) (stabilization target)	The target max. 400 m ² artificial surface/inhabitant was removed in 2016
Flanders	3 ha/d until 2025 and 0 ha/d until 2040 (2018)	6 ha/d (2018)		No longer included in the current coalition agreement
Wallonia	6 km ² /a until 2030 and 0 km ² /a until 2050 (2019)	10.7 km ² /a (between 2015 and 2018)		Included in the strategic master plan 2019 not yet in force
1b) Selection of former quantified targets				
Austria	2.5 ha/d until 2010 (2002)	11.8 ha/d (between 2017 and 2019 yearly averaged)		Removed in 2010; mentioned in the governmental programme 2020–2024 but without implications
Luxemburg	1 ha/d until 2020 (2010)	0.5 ha/d (2019)		Removed in 2019



Bovet & Marquard (forthcoming): Quantified targets, tradable land planning permits & infrastructure cost calculators: Three examples of instruments addressing land take in Europe

- **2014:** EU amended the **Environmental Impact Assessment (EIA) Directive** (2014/52/EU, Art. 3)
 - ❖ “Land” added to the list of factors
 - ❖ “Land take” mentioned
- **2017:** Deadline for Member States to transpose the amended Directive in to domestic law
- **2020: SURFACE research:** Does the amendment of the EIA Directive affect how land take is addressed in the EU?
 - ❖ Have the EU Member States transposed the amended EIA Directive?
 - ❖ How have they implemented the new factor “Land”?
 - ❖ Does this have an impact also on SEAs?
 - ❖ How are “land” and “land take” operationalized in EIA / SEA practice?

**Does this
make a
difference?**

SURFACE: 2nd survey - Focus on land take within Environmental Impact Assessment (EIA)

Methods

- **Scoping** meeting with German experts (2019)
- **Questionnaire** sent via email to 70 experts in 14 EU countries and the UK
- **Sample**: 22 completed questionnaires (response rate ~ 30 %; **11 countries**, 1-5 experts / country)
 - ❖ Austria
 - ❖ Belgium (Flanders / Wallonia)
 - ❖ Czech Republic
 - ❖ Estonia
 - ❖ France
 - ❖ Germany
 - ❖ Italy
 - ❖ Poland
 - ❖ Portugal
 - ❖ Sweden
 - ❖ and England/UK

SURFACE: 2nd survey - Focus on land take within Environmental Impact Assessment (EIA)

Preliminary findings

- **All 11 EU countries** have implemented the amended EIA directive into domestic law
 - In 8 of these countries, this has led to a change in the list of factors
 - In 3 countries (Czech Republic, Italy, Sweden), no such change – but “land” already considered before
- Operationalization: small differences in terminology can result diverging interpretations:

	Official EU translation of ‘land, soil’ in Art. 3 I c)	Terms in national law
Austria	Fläche, Boden	die in Anspruch genommenen Flächen, der Boden land take (pl.), soil
Estonia	maa, muld	maa, pinna land, soil
Poland	grunty, gleby	gleby, powierzchni ziemi soil, earth’s surface
Portugal	terra, solo	o território, o solo land, soil

- In most of these countries, “land” has to be considered also **during SEAs**
- Differentiating factor ‘land’ from
 - **Landscape** being the ecological, cultural-historical and aesthetic value of a specific area
 - **Soil** being associated with qualitative aspects (and factor ‘land’ is mostly covering quantitative aspects)
=> Considering quantitative aspects of land take in the EIA requires a **quantified benchmark** for the applicant (municipalities / regions) which is missing
- In conclusion, most interviewed experts **don’t perceive the inclusion of the factor ‘land’ as having a major effect or as a break-through for tackling land take more effectively**

Thank you



- Marquard, E., Bartke, S., Gifreu Font, J., Humer, A., Jonkman, A., Jürgenson, E., Marot, N., Poelmans, L., Repe, B., Rybski, R., Schröter-Schlaack, C., Sobocká, J., Sørensen, M.T., Vejchodská, E., Yiannakou, A., **Bovet, J.**, (2020): Land consumption and land take: Enhancing conceptual clarity for evaluating spatial governance in the EU context *Sustainability* **12** (19), art. 8269
- Bovet, J., Marquard, E. (2020): Quantified targets, tradable land planning permits & infrastructure cost calculators: Three examples of instruments addressing land take in Europe. In: International Yearbook of Soil Law and Policy 2019 (forthcoming)
- Bovet, J., Marquard, E., Schröter-Schlaack, C.: International Expert Workshop on Land Take, 4-5 April 2019 in Berlin, Germany. Workshop Report.
https://www.ufz.de/export/data/464/235934_SURFACE%20Workshop%20report_final_2019-11-07.pdf

www.surface-project.de