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## PAGE 1: CONTACT FOR FURTHER INFORMATION

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<b>Q2: Country?</b>	Germany
<b>Q3: Jurisdiction / Organisation</b>	Federal Environment Agency (UBA)
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**Q5: What does the term BROWNFIELD mean in your country?**

There are various definitions of brownfields, but there is no official or legal one. Definitions always describe land that was previously used. Such brownfields which should be redeveloped for ecological reasons, urban development goals or social reasons etc.. However, sites where the existing potential was hampered by conditions, typical for brownfields. Brownfield redevelopment means restoring the usability of brownfield sites.

**Q6: Is the presence of contamination essential for a site to be considered a brownfield site?**

No

**Q7: Are brownfields managed through the normal processes applying to land development, or are there are alternative processes or laws that are specific for managing (and developing) brownfields? Please detail the legal framework that is used/applied for managing brownfields. If this is different from the framework normally applied, please detail the key differences.**

As long as brownfields do not have any contamination they can be handled easily under the German Construction Code. Within the construction code a land protection clause is implemented which prescribes that communities have to carefully check each construction plan claiming new land reducing open Spaces or sealing further land. The obligation to compensate infringements on nature is supposed to reduce land consumption. German Construction Code enables an application of new planning instruments which make brownfield redevelopment easier. In case of contamination the Federal Soil Protection Act and the Federal Soil Protection and Contaminated Sites Ordinance (BBodSchV) improve legal certainty for brownfields with residual contamination and enable more cost-efficient and ecologically more effective measures to detect and clean up the contamination. Accordingly construction law and soil protection law have to be applied in parallel in case of contamination at brownfields.

**Q8: Is there a specific inventory of sites that meet the above definition of a brownfield (as opposed to inventories / registers of contaminated sites)?**

No

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**Q9: Please provide details such as a web link.***Respondent skipped this question*

**Q10: How often is the brownfields inventory updated and by which authorities/organisation(s) (e.g. national – Department or Ministry, specific organisation [e.g. land registry/ site inventory, public development enterprise, etc.], regional – regions, provinces, states, autonomías, etc., local – municipality)?**

*Respondent skipped this question*

**Q11: What is the extent of brownfields in your country (e.g. number of hectares)?**

Due to different responsibilities and criteria it is hard to say, but an estimate from 2005 gave a number of approx. 150.000 to 176.000 hectares.

**Q12: Is this a very minor percentage or a significant percentage of the total land that is being developed?**

Significant percentage

**Q13: Of the potentially available Brownfields, what percentage is being developed over the next 5 year period?**

Between 20-30%

**Q14: Is there any evidence that the extent of brownfield land is growing, stable or reducing over time?**

Stable,

Please give details  
Due to the political target from a National Sustainability Strategy the increasing trend of land consumption is not stopped yet but is slowed down. The political target was set with 30 ha/day in 2020. Coming from 140ha/day in 2000 currently we have around 70ha/day. Due to this tendency the reuse of brownfields is rising as a side effect.

**Q15: What is the typical time taken for developing a brownfield site?**

Between 5 and 10 years

**Q16: Is this different from the time taken for developing large areas of greenfields land? If there is significant difference, why is this?**

No,

If there is significant difference, why is this?  
Whenever a contamination requires remediation measures or funding, this will slow down the process. This is relevant especially in case of any demands caused by financial obligations under the 'polluter pays' principle.

#### PAGE 5: Further details

**Q17: If there is a law/policy/regulation regarding brownfields, what are the key principles of this (e.g. integration with land planning legislation / regulation, fit for use vs. land uses, management tools such as restriction of uses)?**

As mentioned before construction code as well as soil protection law are applicable. The remediation plan (Part of the German Soil protection law) might be an option to speed up the process. Due to the fact that contaminated land management is the bottleneck for regulators as well as for investors, the remediation plan could provide certainty for the remediation action as well as for cost calculation.

Secondly we have a research project on tradable land use certificates (first pilot projects) in order to create incentives for those municipalities who reduce land consumption and to make land uptake more expensive for the others.

**Q18: Are there legal, policy or regulatory imperatives that require brownfields redevelopment / reuse, or limit the amount of development that can take place on greenfield sites?**

Yes,

If yes please give details

The most important one is the national sustainability strategy, which actually is not a legal binding imperative. The German policy is trying to support this by several accompanying measures and to initiate the public awareness and discussion. The obligation in the Federal Building Code, to use primarily pre-used sites, should also be mentioned here. <http://www.bodenbuendnis.org/local-land-soil-news/> (among European cities) <http://www.stmuv.bayern.de/umwelt/boden/flaechensparen/index.htm> (Bavaria) <http://mvi.baden-wuerttemberg.de/de/planen-bauen/flaechenmanagement/> (Baden-Wuerttemberg)

**Q19: Are there financial incentives (such as tax breaks, or grants, national / regional special funds) that encourage brownfields redevelopment? For example: State of Wisconsin (United States) Ready for Reuse Grant and Loan Program Ready for reuse loans and grants are used for environmental cleanup of hazardous substances or petroleum at brownfields throughout Wisconsin. Loan and grant funds can be used for eligible costs incurred during the grant or loan agreement period for cleanup of contamination from hazardous substances or hazardous substances commingled with petroleum. Loans. All loans are zero interest and are for long-term projects. Applicants should give strong consideration to applying for larger loan amounts (\$250,000 or greater). Grants. The maximum grant amount is \$200,000 per site. Grants will be awarded to projects that can be completed in two years. Grant applicants must own the property. Financial requirements. Loan and grant applicants must provide a minimum of 22 percent of the requested funds as a match contribution. Other state or local (but not federal) grants may be used as match "provided that the grant and loan periods overlap, the grants are for eligible cleanup activities and those activities will be incurred during the same time period." Source: Kovalick, Walter W., Jr.; Montgomery, Robert H.. 2014. Developing a Program for Contaminated Site Management in Low and Middle Income Countries. World Bank Group, Washington, DC. © World Bank.**

Yes,

If yes please give details

On the federal level we do not have special programs. Being responsible as site owner the government is following the principles to reduce land consumption and the consequent reuse of brownfield sites. (Examples as UBA in Dessau was build up on a brownfield site, the Laender are doing the same (Land Brandenburg use former barracks for the several agencies. On the Laender level we have several programs to support this issue: e.g. Nordrhein-Westfalia : <http://www.allianz-fuer-die-flaeche.de/> The conditions are divers and depending on the site specific situation. Some Laender implemented an award for exemplary projects. There is also financial support through European programs.

**Q20: If the brownfields involve land or groundwater contamination, can the future uses of land or groundwater be restricted for an area or precinct of land, so as to reduce the level of remediation / clean up that is required? For example: a. Can land be zoned to a less sensitive use such as commercial or park that requires less remediation? b. Can groundwater extractive use be prohibited so that the groundwater does not need to be cleaned up / remediated for extractive use? c. Can development of the land have a restriction as to the a particular type of building (eg buildings with water proof and vapour proof basements or floor slabs) to limit the requirement for clean-up / remediation?**

Yes, for all mentioned examples, however this is based on regulations of the soil and groundwater protection law. The principle enshrined in the BBodSchG for contaminated land management is hazard prevention having regard on proportionality. The options mentioned above are always options if technical measures are not or not longer proportional. Secondly remediation and the required effort are always oriented on future use (as for option a). Furthermore within the planning process they are possibilities to create zones with more or less sensitive future use.

**Q21: Are financial mechanisms [e.g. bonds, warranty, insurance, financial guarantee, etc.] required to ensure that remediation / clean-up will be carried out to the level required, or to address any problems that might appear later? If possible, please detail the existing financial tools and/or give reference/weblink.**

We had some insurance products some years ago, however the market was not big enough and the fee for these insurances policies was too high - today we do not have any specific insurance products on the market. Often this situation is controlled in the permitting process under IPPC. Then remediation requirements are becoming part of operators permit for specific installations.

Some Laender support the idea, to claim financial guarantees for those cases, but so far not legal binding.

**Q22: If the brownfields involve land contamination, is the design of a brownfield redevelopment plan determined on the basis of locating less sensitive land uses on contaminated ground, and more sensitive land use on land that is not contaminated or is less contaminated?**

In general yes. As mentioned under Q20 the principle enshrined in the regulation is hazard prevention. So, the authority cannot claim for a remediation on an higher standard. However in practice an attractive site might be developed to a higher intent This will depend for developers on the lump sum of remediation and construction costs in relation to a realistic amount of the sales revenue.

**Q23: How is community consultation involved in determining the design of the development?**

First of all via neighbors rights are implemented in our building law. Bigger projects may be in line with the planning process and the binding EIA and the German environmental information law related to the Aarhus Convention. Project specific a more comprehensive community consultation might be possible, especially if public money will be spent.

**Q24: Does your jurisdiction have any particular brownfield sites that are good examples of how brownfield sites can be restored to more productive use? (provide a link to case study or no more than half a page summary of the site and approach taken).**

In inner cities we will find a huge number of these examples with commercial interests. However UBA in Dessau is a very positive example without a real commercial interest. (<http://www.umweltbundesamt.de/en/the-uba>)

## PAGE 6: CRUCIAL DEVELOPMENTS IN THE FUTURE

**Q25: Are there any particular problems associated with developing brownfields (particularly those that involve land and groundwater contamination) that need to be improved/addressed (e.g. funding, liability management, organisational issues, achieving closure on land or groundwater remediation / clean up)?**

Yes,

If yes please give details  
Whenever groundwater plumes leaving the site, the loss of liability due to bankruptcy, absence of financial mechanisms for category 3 sites and the competition among municipalities, regions and states to advertise for financially strong investors and investments. Also to be mentioned: uncertainty about the presence and the extent of the contamination. A solution could be that the authorities release the new owner / redeveloper from the remediation costs – in total or exceeding a certain amount.

**Q26: If it is apparent that there are solutions to these problems and work is being undertaken to address these problems, please advise the nature of this.**

A real success story with regard to German unification and brownfield redevelopment was an instrument that authorities exempt investors from the liability and costs for any environmental damage caused prior to 1 July 1990, in accordance with the Environmental Framework Act and the Obstacles Removal Act. Based on this Federal government and Laender entered into an administrative agreement on the financing of remediation at contaminated industrial sites administered by the German Trust Agency, with the aim of promoting investment at these sites and safeguarding and creating jobs.

**Q27: Are there research and development needs to address the problems arising with brownfields?**

Yes, this is still a topic and Germany is still running a related research program (LAMA)

PAGE 7: REFERENCES

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**Q28: Please give most important references (documents, website, projects, and case studies) that could be relevant for explaining your national approach**

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety:  
<http://www.bmub.bund.de/themen/strategien-bilanzen-gesetze/nachhaltige-entwicklung/strategie-und-umsetzung/reduzierung-des-flaechenverbrauchs/>

Federal Environment Agency <http://www.umweltbundesamt.de/en/topics/soil-agriculture/land-use-reduction>

Research for the Reduction of Land Consumption and for Sustainable Land Management (REFINA) Refina  
<http://www.refina-info.de/>

Federal Ministry of Education and Research "Sustainable Land Management" (LAMA)  
<http://nachhaltiges-landmanagement.de/en/home/>

Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)  
[http://www.bbsr.bund.de/BBSR/DE/Home/bbsr\\_node.html](http://www.bbsr.bund.de/BBSR/DE/Home/bbsr_node.html)

[http://www.bbsr.bund.de/BBSR/EN/RP/GeneralDepartmentalResearch/UrbanDevelopment/InfillDevelopmentPotentials/01\\_Start\\_dossier.html?nn=387184&First=true&docId=795984](http://www.bbsr.bund.de/BBSR/EN/RP/GeneralDepartmentalResearch/UrbanDevelopment/InfillDevelopmentPotentials/01_Start_dossier.html?nn=387184&First=true&docId=795984)

German Institute of Urbanization (Difu) <http://www.difu.de/themenfelder/umwelt-nachhaltigkeit/fl-chenutzung-fl-chenkreislaufwirtschaft.html>

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