

Legal regulatory framework of peatland exploitation, draining and restoration in Germany

LIFE Peat Restore

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Reduction of CO2 emissions by restoring degraded peatlands in Northern
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Climate policies

A successful climate policy will lead to the reduction of greenhouse gas emissions. To this effect, policy efforts must be made at all levels, from domestic, European to international policies. Isolated policies to address climate goals are doomed to fail. Therefore, it is important to have a comprehensive perspective when examining climate policies, its drivers and instruments.

Role of Land use, land use change and forestry

*The Land Use, Land Use Change and Forestry sector comprises all soil-bound carbon sources and sinks in woodland, fields, pastures, residential areas and wetlands.*¹ The Paris agreement finally highlighted the need to address emissions produced in the LULUCF sector, by encouraging all Parties to use land use approaches to mitigate climate change and reach climate targets.

This is a welcome development, as the LULUCF sector is unique in its potential to act as a sink with its large natural carbon stores in the soil and in biomass. Thus, significant mitigation can be achieved through the promotion of activities that increase the removals of greenhouse gases from the atmosphere or decrease emissions by sources leading to an accumulation of carbon stocks. In addition, the initiative offers new opportunities for accounting for greenhouse gas mitigation.

Peatland ecosystems are a paradigm of this potential. On the one hand, under natural conditions they serve as valuable carbon sinks to the global climate mitigation efforts. On the opposite spectrum, when degraded, they become powerful sources of greenhouse gases, surpassing emissions rates of even rainforest deforestation.

There are climate policy gaps in the land use sector which can yet make significant contribution to emissions reduction, especially in agricultural activities. In fact, it is timely to promote discussions addressing emissions from the agriculture sector, as the EU is currently preparing programme proposals for the period after 2020.

Policies affecting this sector have a clear and significant impact on the way land use is distributed. This is evident in Germany, where the trends and differences in land use between federal states were linked mainly to changes in the European Common Agricultural Policy (CAP) and Germany's Renewable Energy Act (EEG).

Drainage and Carbon Emissions

Agriculture lacks a comprehensive climate policy target for emissions reduction supported by specific measures. This applies to Germany as well as the European Union. Unsurprisingly, drainage associated with agriculture is also not effectively addressed in domestic or European policies.

Drainage is a major threat to the integrity of peatlands and, subsequently, the climate. *Most bogs and fens in Germany were systematically drained during the 19th and 20th centuries. To date, more than 95 % of Germany's former peatlands have been drained for agriculture*

¹ The German Government's Climate Action Programme 2020

² Strategic framework for setting priorities for restoring degraded ecosystems in Germany

³ Strategic framework for setting priorities for restoring degraded ecosystems in Germany

and forestry and, to a lesser extent, for peat extraction. This means that only 5% of peatland in Germany are in a near-natural or re-natured status.²

The continued drainage for agriculture without appropriate regulation is leading to peat loss, subsidence, climate-damaging gas emissions, loss of function as reservoirs for nutrients and even their complete destruction. Policy efforts to conserve and restore peatlands are urgent; especially when considering the opportunity such policies represent, which can exploit the potential of peatland protection to address climate goals.

Drained peatlands, no longer in a natural state, have considerable climate relevance. They are a *continuous source of emissions, releasing around 41 Mt CO₂e per year and accounting for approximately 39 % of emissions from German agriculture and 4.3 % of Germany's gross total annual GHG emissions.*³ In fact, Germany has the highest total emissions from farming on peatlands in Europe.

Agriculture is the largest land user, covering over 50% of the total area of the country.⁴ It follows that agricultural policies have considerable influence on land use and its associated climate effects. Its climate relevance is even more evident when considering that agriculture is directly responsible for up to 8 % of Germany's total greenhouse gas emissions (11 % if agricultural soils are included).

Despite the high potential for emissions reduction and its cost-efficient mitigation potential, to date agriculture has not played a prominent role in German climate policy. A mitigation strategy for the agricultural sector, with actual targets, does not exist. Such a state of affairs contrasts with the significant progress achieved in the energy sector, with concrete strategies to promote bio-energy.

The regulation of the agricultural use of the environment as well as the effects of its use is fragmented.⁵ According to the German Environment Agency, the environmental requirements for agriculture set out throughout the fragmented legislation are yet insufficient to *'effectively steer agriculture towards a more sustainable use of natural resources and allow environmental quality objectives for water, soil, air and the climate to be achieved'*. Based on such negative conclusions, the Agency recommends *'that environmental considerations in agricultural law should be further strengthened'*.⁶

Fortunately, there are signs that policy makers will expect more intensive climate change mitigation efforts from agriculture as well. Especially when considering that there are relatively cost-effective options available to reverse the damaging effects of land use change, including effects from draining. In fact, rewetting drained soils can generate high long-term savings potential of around 35 Mt CO₂e per year.

² Strategic framework for setting priorities for restoring degraded ecosystems in Germany

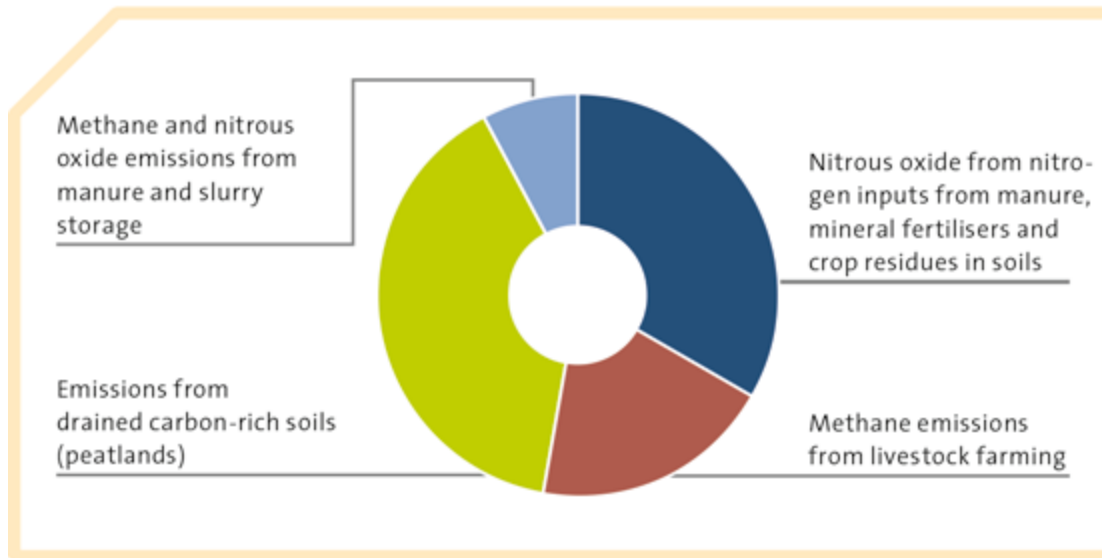
³ Strategic framework for setting priorities for restoring degraded ecosystems in Germany

⁴ Natural Capital and Climate Policy – Synergies and Conflicts (2015)

⁵ <https://www.umweltbundesamt.de/en/agricultural-law>

⁶ <https://www.umweltbundesamt.de/en/agricultural-law>

GHG emissions from German agriculture, based on emissions reporting, in Mt CO₂e, for 2010.⁷



Common Agricultural Policy

The Common Agricultural Policy (CAP) is the policy framework under which European farmers operate, setting out a range of requirements for farming, environmental and rural development activities. Beneficiaries of CAP subsidies must comply with a range of laws to receive the subsidies in full. As the subsidies represent a significant proportion of farmers' income, the policy has considerable impact on agricultural land use and intensity.

In this sense, CAP has contributed to two parallel processes: *intensification of agricultural production, including increasing inputs of fertilizers and pesticides, reduction in diversity of crops, increasing intensity of mechanization with negative impacts on soil, biodiversity and water, and marginalization of production that was no longer competitive on the other hand.*⁸

Although recent attempts at 'greening' the CAP were appreciated, most agree it is insufficient in addressing climate protection. At present, greater emphasis on the environmental dimension of the CAP covers three areas: crop diversification, measures to maintain permanent grassland, and the dedication of 5 % of arable land to 'ecological focus areas'.

There is overall consensus that stronger provisions are required for CAP after 2020. Persisting problems with the policy must be addressed, such as *the continued lack of justification of payments (public money for public goods), the lack of significant environmental improvements and the inability of support schemes to restructure and innovate the agricultural sector with decreased dependency on public support.* In fact, *references to protection needs of organic soils are few and climate change considerations are vague.*⁹

⁷Natural Capital and Climate Policy – Synergies and Conflicts (2015), Figure 10, page 32

⁸Peatlands in the EU Regulatory Environment (2017)

⁹Peatlands in the EU Regulatory Environment (2017)

Furthermore, the implementation of the greening system in Germany has been negatively evaluated by The German Government's Climate Action Programme 2020. According to the programme, the greening measures introduced have had minimal conservation benefits, despite the significant administrative burden the measures have imposed on farmers as well as the competent administrations. Indeed, the greening initiative '*yields low ecological benefits, while providing overpayments for the greening services it generates*'.

There is also a lack of incentives within the new provisions, which would promote ambitious, innovative, and effective sustainable measures while generating income to the farmers. This is a significant impediment not only to the expansion of ambitious conservation measures, but also to the acceptance by farmers of such measures, as they too often imply high conversion costs, of cultivation and management.

Energy policies and Agricultural policy conflict

The strategy set out by the EU and Germany, in their respective policies – Renewable Energy Directive and Renewable Energy Sources Act – prioritises the expansion of renewable energies to replace fossil fuels by 2050. Significant emphasis has been placed on biomass energy. However, the aim to reduce greenhouse gas emissions in the energy sector may lead to higher production-related emissions from agriculture and land use.

Already it has become evident that there are limits to the potential growth which can be achieved in biomass. The German energy efficiency targets affect land use, creating competition in the agricultural sector and the limited availability of forest biomass. The reliance on biomass requires extensive land for the provision of renewable energy.

The European and German energy policies encourage land use change, namely the conversion of grasslands and peatlands into farmlands for the cultivation of energy crops (mostly maize and rapeseed). However, the expansion of biomass production on drained peatlands will most likely *result in higher rather than lower greenhouse gas emissions compared to fossil fuels*.¹⁰

The counterproductive effect caused by such energy policies is damaging the climate, as the drainage of peatlands in favour of energy crops produces more emissions than are avoided through the substitution of fossil fuels. Indeed, '*greenhouse gas emissions from drained peatland soils are considered the main problem. Moreover, increased demand for products and production areas is also further pressuring land use change, albeit indirectly. Similarly, the increased use of fertilisers in agriculture is leading to significant damage (e.g. water and air pollution, greenhouse gas emissions, biodiversity)*'.¹¹

Recently, there have been attempts to mitigate such counterproductive effects through the introduction of sustainable criteria and caps. For example, the amended Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz) adopted in January 2012 caps the share of maize that can be used as biogas feedstock.

At the European level, the Renewable Energy Directive requires *that all bio-fuels counting towards the target must reduce greenhouse gas emissions*, in addition to the restriction of

¹⁰ Natural Capital and Climate Policy – Synergies and Conflicts (2015)

¹¹ Natural Capital and Climate Policy – Synergies and Conflicts (2015)

'biomass feed-stocks derived from land of high biodiversity value, such as natural forests, protected areas and special kinds of grassland, and may not be produced from land with high carbon stocks'.¹²

Although such sustainability provisions are welcome, they have been considered ineffective by many environmental organisations and scientific institutions. Indirect land use change from the displacement of other land uses to other areas is not taken into account when assessing the sustainability of bio-fuels. To address such shortcomings the European Union has recently agreed to introduce a 7% cap, and reporting obligations for indirect land use change. Unfortunately, the resulting cap is still considered rather weak.

Stricter rules for bio-fuels are needed. According to a recent study, *"the sustainability criteria for bio-fuels should be strengthened and extended. Biomass grown on organic soils should not qualify as eligible under the targets of the Renewable Energy Directive (just as it should not be eligible for subsidies under the CAP or Member States schemes such as the German Renewable Energy Act.). The targets set by the EU for increasing the biomass share by 2020 have already been modified by halving the previously envisaged rate of increase and ruling out the use of sites of high nature value"*.¹³

Analysis & recommendations

Common among the previously described policies is the subordinate nature of conservation concerns. Within the public funding institutions, nature conservation interests have petitioner status, as they depend on other policy areas responsible for relevant programmes (i.e. agricultural, economic and social). Thus, the other policy areas will tend to prioritise their areas of expertise and focus and delegate conservation matters to a secondary position.

Indeed, established requirements for the provision of funds which were initially designed for areas with other aims often may be inadequately adapted to requirements pertaining to nature conservation. *"This orientation generates considerable administrative overhead and unnecessary difficulties for nature conservation measures. As a consequence, unlike the agencies responsible for the various funds, nature conservation administrations have to implement the highly complex regulations of multiple, different funds simultaneously"*.¹⁴

Similarly, the predominance of sector-specific policies leads to narrow regulation of subjects, which have a much more complex nature and would therefore require an equally comprehensive treatment. European and German agricultural or energy policies, which so far have not properly considered food and feed dynamics or interactions with conservation, illustrate the flaws of this fragmented policy approach.

Such a compartmented policy approach has resulted in a significantly uneven regulation of different but related subject areas. Indeed, a study by the German Federal Environment Agency states that *"Some policy areas show a high level of fragmentation and (regional) overlap (such as forestry) while others are consolidated under the umbrella of a single UN*

¹² Resource-Efficient Land Use – Towards a Global Sustainable Land Use Standard (2015)

¹³ Resource-Efficient Land Use – Towards a Global Sustainable Land Use Standard (2015)

¹⁴ Effectiveness of the current EU Nature Conservation Financing in Germany and Requirements for the next Funding Period post 2020 (2016)

convention (e.g. biodiversity under the CBD and soil desertification under the UNCCD). Yet others are hardly regulated at all and are only dealt with at national or regional level (e.g. agriculture).¹⁵ In addition to creating an environment of legal uncertainty, it often also leads to the subordination of nature conservation and climate concerns in favour of other policy areas with better and more complete regulation.

Soil protection is a good example of the problem with a fragmented and uneven approach. Following the study previously cited, it concludes: *“While different policies (for instance on water, waste, chemicals, industrial pollution prevention, nature protection, pesticides, agriculture etc.) on the international and EU level have an impact on soil protection, there are only few policies that explicitly target soil. Moreover, they do not yet have a considerable impact”*.

The EU Commission attempted to develop a Soil Framework Directive; unfortunately, the proposal failed. The Commission had recognised that different policies such as agriculture, nature protection, urban development etc. have an impact on soil protection. *‘However, because these policies have other aims and scopes of action, they were not sufficient to ensure an adequate level of protection for all soil in Europe’*.¹⁶

National legal regulatory framework – Germany

The significance attached to ecosystems, biodiversity and climate change mitigation varies across the relevant policy areas. The state of ecosystems plays little to no role in national climate and energy policy. Similarly to the situation at the European level, in Germany a range of instruments is already in force. However, to date the different sectors and policy areas have operated in isolation from each other. In definitive, *“Better coordination and alignment of planning laws and regulatory frameworks, as well as a refocusing of funding policy, especially for agriculture”* is required.¹⁷

In the sections that follow, focus will be given to federal legislations, which cover all of German territory, setting the framework and tone for the regions. The German Conservation Law, the Federal Regional Planning Law, as well as the Building Code are among the national legal instruments used for the protection of the environment and ecosystems; covering regulation of both protected areas and the landscape in general.

In Germany, there are diverse instruments at all levels of government. Though, as shown by the policy contradictions described in earlier sections, climate considerations in national legislations are still less developed and uneven.

The multileveled disposition of the German system (i.e. municipal, regional and federal) means that the framework for peatland protection varies regionally. As a result, regions have an important role to play in driving the shift in paradigm in peatland policy.

Nature Conservation and Landscape Management Act (BNatSchG), Federal Regional Planning Act (Raumordnungsgesetz) and the Building Code (Baugesetzbuch)

¹⁵ Resource-Efficient Land Use – Towards a Global Sustainable Land Use Standard (2015)

¹⁶ Resource-Efficient Land Use – Towards a Global Sustainable Land Use Standard (2015)

¹⁷ Resource-Efficient Land Use – Towards a Global Sustainable Land Use Standard (2015)

The Nature Conservation Act places under protection areas deemed relevant due to its environmental, biodiversity, ecosystem or landscape value. An official declaration defines the area to be protected, the purpose of its protection and, if needed, management, restoration or development measures. Outside of protected areas, the Federal Regional Planning Act (Raumordnungsgesetz) and the Building Code are key legislations to safeguard the environment.

The designation of protected areas is one of the most effective ways to ensure the conservation of ecosystems with significantly high sink potential (peatlands, forests, floodplains, grassland); thus safeguarding their sequestration function in the long-term. Protected areas allow climate action to be undertaken cost-effectively while creating synergies with biodiversity targets.

The Nature Conservation Act foresees seven categories of protected areas with different legal land use restrictions (§23–§25, §27, §31–§36). These types can overlap, which means that a particular land area can belong to several protection categories. The level of protection will vary depending on the category. For instance, nature conservation areas, flora fauna habitat areas and special protection areas, in addition to Natura 2000 sites, are generally considered to provide higher protection, as they have stricter legal land use restrictions.

On the other hand, Biosphere reserves, Nature parks and National park areas are generally seen as providing moderate protection, due to their large-scale conservation areas and less restrictive land use. A recent study highlights the effectiveness of land use restriction in Germany, as: *“The conversion rate of grassland to cropland in highly protected areas was generally found to have been reduced by more than 50% in comparison to areas with low or no protection in other German regions”*.¹⁸

The promotion of climate concerns via nature conservation and management measures, foreseen in article 1.4, represents meaningful progress. By emphasising ‘areas with favourable air-cleansing or climatic efforts’ in its first article, under the title of ‘Purposes of nature conservation and landscape management’, the Act is establishing its main aims. Conversely, the explicit prioritisation of ‘the establishment of sustainable energy supply systems, especially via increasing use of renewable energies’ in the same article raises concerns, for the reasons explained in previous sections, namely the counterproductive effects which can harm the climate.

In setting the tone of the law and its aims and priorities, article 1 opens up the possibility to use the natural resources within protected areas. Already, the law is compromising the effective enforcement of the protection. Moreover, article 5 opens the possibility to economic activities in protected areas, such as agriculture. Although it introduces certain conditions related to their compatibility with nature and landscape conservation, this complicates and downplays the effective implementation of the nature protection. Especially considering results from the previously mentioned study which relates higher use restrictions with more effective protection.

¹⁸ Tracking changes in the land use, management and drainage status of organic soils as indicators of the effectiveness of mitigation strategies for climate change (2017)

Furthermore, the main federal law to protect natural areas (BNatSchG) follows the general principle of compensation (article 13), which allows the exploration for, and mining of, mineral resources, excavation, etc, that can cause permanent damage and destruction of valuable landscape components, as long as it is compensated or mitigated, including through re-cultivation.¹⁹ Instead of, for example, prohibiting interventions where permanent or significant adverse effects are unavoidable.

The exemptions to actions which could destroy or seriously damage biotopes of special importance (article 30) establish implicitly the priorities of the Federal Act.²⁰ The law should foresee at least one category of protection where interventions that cause permanent damage or destruction are strictly prohibited, without exception.

Both the Building Code and the Spatial Planning Act have significant impact on environmental protection, especially outside of protected areas, as not all areas can or should be designated. The latter regulates competing interests by providing the framework for spatial order and planning. In Germany there are four planning levels: the municipal, the regional, the federal state and the federal level. Although, there are different competing spatial planning models in Europe, most are aimed at removing regional imbalances and to reconcile the competing objectives of economic competitiveness, social cohesion and environmental sustainability.

The two regulations are linked to the Nature Conservation Law. Article 18 delegates the procedure to safeguard the environment when elaborating land use plans to the Building Code, including *'the decisions governing relevant avoidance, compensation and substitution shall be taken in accordance with the provisions of the Federal Building Code'*. In practice, it appears nature conservation is subordinate to other activities and objectives, as the procedure is entrusted to officials from different sectors, and therefore reflecting their interests and priorities, as opposed to environmental officials.

The key mechanism to ensure that environmental impacts are considered prior to making relevant planning or building decisions is the environmental impact assessment (EIA). This procedure has a significant quantitative and qualitative impact on sustainable land use. As in certain cases environmental assessments are mandatory. At the EU level, EIA are mandatory for infrastructure developments (railway lines, motorways, airports, etc.), certain trans-boundary interventions and the use of uncultivated land for intensive agricultural purposes as well as afforestation, land reclamation for different land-use and peat extraction above 150 ha.

Nevertheless, the legal instruments provided in the regulations herein described are not enough. Other sectors and policy areas must also undertake the protection of climate as part of their primary goal. As previously argued, coherence among policy areas and objectives should be a vital goal. In this sense, agriculture becomes the logical priority sector, as one of the areas with most margin and potential to improve climate protection, in addition to, helping reach the Paris Agreement targets.

¹⁹ Art.1 (5) ... In exploration for, and mining of, mineral resources, and in excavation and land-filling, permanent damage to the natural balance and destruction of valuable landscape components are to be avoided; any unavoidable adverse effects on nature and landscape are to be compensated for or mitigated, in particular by encouraging natural succession, re-naturation, semi-natural landscaping, rehabilitation, or re-cultivation."

²⁰ According to 30(3), "the exemptions to the prohibitions set forth in (2) may be permitted, upon application, if the relevant adverse effects can be compensated for".

Incentive Programmes

Although higher levels of legal protection will lead to better nature conservation, the same cannot be said of the drainage status. In this case, further conservation measures, like rewetting, would require more than just legal protection. Incentive programmes become very important in order to avoid excessive drainage. Such measures will only work with strongly supportive peatland restoration policies and programmes.

To achieve the effective protection of carbon reservoirs within peatlands, it is not enough to have a proper legal framework in place; incentive programmes should be an intrinsic part of the policy objectives. From a commercial perspective, farmers do not have a convincing reason to change behaviours towards environmentally and climate friendly activities. The option of rewetting their property and performing innovative and sustainable farming is not attractive when compared with traditional arable farming; despite the positive effects, namely the avoidance of harm to the climate and water resources and, in many cases, enhancement of ecosystem services.

The social benefits which can arise from the proper protection and use of peatland areas can only be achieved with a more coherent strategy that combines adequate legal frameworks with proper funding policy. There have been movements in Germany's Federal states in this direction. For example, Germany's National Biodiversity Strategy (NBS) includes targets and measures for the restoration of degraded ecosystems. *"The Länder and federal ministries support and supplement the NBS with their own biodiversity strategies, sector-based strategies and programmes of action. In fact, currently the Federation and the Länder work towards meeting the EU restoration target with a focus on the peatland and floodplain ecosystems"*.²¹

Programmes with measures focusing on climate relevant ecosystems have the potential to be considerably cost-effective. For example, according to a recent study, it was estimated that measures to implement the National Strategy on Biological Diversity in Germany on more than 300,000 hectares of peatland would avoid climate damage amounting to € 217 million annually (based on the authors' assumed damage costs of € 70/t CO₂).

Peat extraction – the Federal Mining Act (BBergG)

Under poor legal, technical and environmental standards, peat extraction can cause irreparable damage to peatland ecosystems and ultimately the climate. The current Federal Mining Act (BBergG) regulates the exploration, production and processing of raw materials; and in doing so, it attempts to balance different interests present in society (e.g. private, public, economic, environmental, etc.).

Although, the BBergG is responsible for regulating conservation issues which may be affected by mining activities; environmental interests are still not meaningfully represented in the law. This is especially true at the early stages of the mining decision-making process, as well as during the dismantling phase and after-care, following completion of the mining activity.

Currently, the mine operator is only obliged to take precautions for a re-use of the surface after completion of the mining activity. Instead of at the earliest stage possible, which would

²¹ Strategic framework for setting priorities for restoring degraded ecosystems in Germany

allow for environmental concerns to be an intrinsic part of the extractive activity, present throughout all phases of mining: from the origins of the project to after its conclusion.

As it stands presently, the requirement to take precautions only after conclusion of the activity is *'qualitatively not equivalent to the re-naturation of the former excavation field; instead it aims at a planned subsequent use (e.g. Mining Lake for recreational purposes). More specifically, the areas used by mining can no longer permanently fulfil their original functions, whether for settlement purposes, for agricultural use or as high-quality ecosystems.'*²²

It is clear that the regulation is quite lenient towards mine operators, allowing them a number of options that does not properly take into account environmental considerations. The conservation requirements in the regulation are expressed only as an afterthought. In fact, the mining authority can only demand a security deposit if compliance with the admission requirements (article 55) is considered to be threatened. This means that the general public may have to assume the costs of follow-up activities after mining, which should correspond to the mine operator.

Moreover, the legal uncertainties caused by gaps in the law tilts the balance further in favour of the more powerful and organised interest groups. For instance, the Mining Act does not clarify which law is to be applied in the legal relationship between mining rehabilitation and nature conservation intervention. This is likely to translate into mining and economic interests prevailing in detriment to conservation concerns, as the mine operator will favour the implementation of the legislation which best serves their interests.

There is disagreement between those who believe that the nature protection provisions included in the Nature Conservation Act (BNatSchG) should also be applied to projects of the BBergG and those who argue that the BBergG supersedes the general and special regulations of nature conservation law. This issue remains open to interpretation. A provision to clearly define the relationship between both regulations – akin to § 18 BNatSchG²³ – is needed.

The Act also allows mining activities that can cause significant harm to the environment, as not all mining projects are required to undergo an Environmental Impact Assessment (EIA). Only those extraction projects above a certain extent or production volumes must conduct the assessment. Although the criterion does not affect most peat extraction projects, as they usually occupy large areas, it does allow certain prospecting and extraction operations (like fracking) to operate freely due to the small physical size of the individual drill site, even though such projects can pose serious risks to the environment and climate.

Therefore, the current legislation is excluding important extraction projects that threaten the integrity of ecosystems. *'The cumulative effects of the spatially concentrated drill sites are not considered at all'*²⁴. All projects should undergo mandatory EIA at the time of approval of

²² Umweltverträgliche Nutzung des Untergrundes und Ressourcenschonung Anforderungen an eine Raumordnung unter Tage und ein modernes Bergrecht (2014)

²³ Article 18 Relationship to Building Law: (1) If interventions in nature and landscape are anticipated as a result of the preparation, modification, supplementation or suspension of local land-use plans or of statutes pursuant to Article 34 (4) Sentence 1 No 3 of the Federal Building Code, then the decisions governing relevant avoidance, compensation and substitution shall be taken in accordance with the provisions of the Federal Building Code.

²⁴ Umweltverträgliche Nutzung des Untergrundes und Ressourcenschonung Anforderungen an eine Raumordnung unter Tage und ein modernes Bergrecht (2014)

search operation and not only for projects that can cause major accident that would significantly damage ecosystem, as it is right now.

In definitive, in its current version, the BBergG cannot satisfactorily meet the requirements of preventive and effective environmental and nature conservation.²⁵ The Act does not provide a real and comprehensive frame to effectively balance the different, and too often opposing, environmental and economic concerns, which play a significant role in extractive activities.

A recent study requested by the German Environment Ministry recommends extending the purpose of § 1 BBergG to integrate environmental interests as a primary concern at the same level as economic interests. In this sense, *'in addition to the existing soil protection clause, a precautionary clause should be included to prevent environmental hazards'*. The modified BBergG would finally treat with equal importance the promotion of the supply of raw materials (i.e. primarily economic interests) and the promotion of environmental standards, to safeguard the best possible handling of natural resources and ecosystems during the exploration and production of raw materials.

Moreover, environmental issues should be inserted within the mining procedure as early as possible, ideally, in the stage of granting mining rights. According to the provisions in force, exploration and production licenses consider environmental concerns only when examining prevailing public interests.

There is significant advantage to companies as well, the early time of inclusion means *'that mining companies will also receive greater legal certainty regarding their future planning, as a result, a later approval of the extraction operation will also become more likely. In fact, after the granting and awarding of the mining rights, the mining authority binds itself to a certain degree and the subsequent restriction or total refusal of the project becomes increasingly unlikely'*.²⁶

Furthermore, article 55 of the Federal Mining Act, whereby requirements for the approval of the operating plans are listed, should make explicit reference to nature and ecosystem interests and conservation. The present situation is definitely insufficient, as the provision only regulates the obligation to take precautionary measures in order to ensure the reuse of the land taken up following the mining activity. Additionally, restoration projects should be prioritised before resorting to any other subsequent re-utilisation considerations.

The BBergG must be modernised by raising the standards of the mining procedure – including requirements of environmental protection, transparency and greater public participation – to levels which are already routine in other sectors. Indeed, in modernising and improving the law, Germany can become a reference in the extraction sector and would be better positioned to set an example for less developed countries. As it is right now, Germany cannot serve as an example to follow to any country.

Furthermore, the natural resources extraction sector would benefit greatly by an international agreement which could address, among other resources, peat extraction standards. A binding international policy does not yet exist; neither do European provisions

²⁵ Umweltverträgliche Nutzung des Untergrundes und Ressourcenschonung Anforderungen an eine Raumordnung unter Tage und ein modernes Bergrecht (2014)

²⁶ Umweltverträgliche Nutzung des Untergrundes und Ressourcenschonung Anforderungen an eine Raumordnung unter Tage und ein modernes Bergrecht (2014)

on extraction, processing or marketing, with the general exception of the environmental impact assessment procedure.

Therefore, an international instrument to regulate rules for states to plan and assess mining would likely elevate the standards of mining overall. The European Union is best suited to foment this process by developing a common regulation for natural resource extraction which could set a frame for other countries to follow.

Recommendations

As already explained, there is significant margin for improvement of the peatland protection in Germany.

- Better coordination and coherence between planning laws, regulatory frameworks and funding policies, whereby environmental and climatic interests are consistently and comprehensively considered.
- The Nature Conservation and Landscape Act should include a category of protection which forbids extractive or agricultural activities, especially considering the proven effectiveness of higher levels of protection. At the very least, the Act should foresee a category of protection where interventions that cause permanent damage or destruction are strictly prohibited, without exception.
- Incentive programmes should be an intrinsic part of peatland policy. Legal regulatory framework alone is insufficient to achieve effective protection of carbon reservoirs within peatlands. A more coherent strategy that combines adequate legal frameworks with proper funding policy is needed on a federal level.
- The German Federal Mining Act must be modernised. In its current form it is outdated and inadequate. In definitive, in reference to Resource Extraction, Germany cannot lead by example.
 - The standards of the mining procedure must improve to levels which are already normal in other sectors, including requirements of environmental protection, transparency and greater public participation.
 - All projects should undergo mandatory Environmental Impact Assessment at the time of approval of search operation, without exception.
 - Environmental issues should be inserted within the mining procedure as early as possible, ideally, in the stage of granting mining rights.
 - The Mining Act should prioritise restoration projects before resorting to any other subsequent re-utilisation alternatives.

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