nuclear's wastelands
part 5 – gorleben, the power of the periphery

In the fifth of a series of articles on the local and social legacies of nuclear energy, Andrew Blowers considers the conflict over the nuclear waste facilities at Gorleben, which proved pivotal to the end of nuclear power in Germany

Main photo: GNS Gesellschaft für Nuklear-Servic. Inset: Andrew Blowers

Aerial view of Gorleben and the surrounding area

In the flat middle reaches of the Elbe River in the plains of Northern Germany lies the 'Wendland', a peripheral region of sturdy traditional farms and villages, arable land, forest, heaths and waterland, an area sparsely populated and distant from motorways and big cities. On a straight country road bordered by forest and close to the Elbe is Gorleben, an unremarkable, peaceful village with a most remarkable recent history.

Here, hidden in the nearby woods and ringed by guarded security fences, are two industrial sites. On one site are the headworks, offices and ancillary buildings that serve an excavated salt dome 850 metres below ground, for long explored as the prospective geological disposal facility for Germany's highly active radioactive wastes. Nearby is another complex comprising an interim store for vitrified high-level wastes, a low- and intermediate-level

waste store, and a mothballed pilot conditioning plant for preparing wastes in a suitable form for final disposal. Although peacefully secluded now, the mine and the store have been the focus of the most fiercely contested struggle over nuclear energy in Germany, lasting over 40 years. The conflict over nuclear waste at Gorleben ultimately engulfed the whole country, culminating in the phase-out of nuclear energy in Germany. The power of the periphery proved decisive.

In this tranquil land there is still visible evidence of the struggle that has now subsided. On roadsides, in villages and in fields and on farms in the surrounding region, yellow wooden crosses are encountered, the emblem of Gorleben's protest. On walls and on the tall electricity substations graffiti and slogans are daubed, proclaiming 'Stop CASTOR', referring to the huge containers that carried wastes to the interim store. Among other slogans, now fading, are '*Ausstieg*' ('Climb down') or '*Wir stellen uns Quer*' (roughly, 'We make our stand'), belligerent testimony to the determination of protesters.

In a roadside clearing close to the mine is the astonishing site of a ship, the *Beluga*, once used by Greenpeace for protests, now erected on dry land to greet workers, protesters and visitors. A history of anti-nuclear protest is posted in an open-air display, while in a clearing there is a wooden building, an information centre and a place where regular services are still held. The spirit of the Gorleben movement appears indomitable and persistent.

Photos: Andrew Blowers

Iconic symbols of Gorleben's protests

In the middle of Germany, in the middle of nowhere

Wendland is a historical and cultural construct. It derives from the Wends, a Slavic tribe who settled in the area during the late Middle Ages, part of the criss-crossing movement of peoples typical of the boundless and borderless North German Plain. In truth little is known of this peasant community of 'tillers and herdsmen living in small villages and raising corn, flax, poultry and cattle'.[1] Yet, centuries later, the notion of Wendland has been appropriated by a movement dedicated to defending the integrity and identity of its territory against the disruption and risk of an unfamiliar and dangerous intruder.

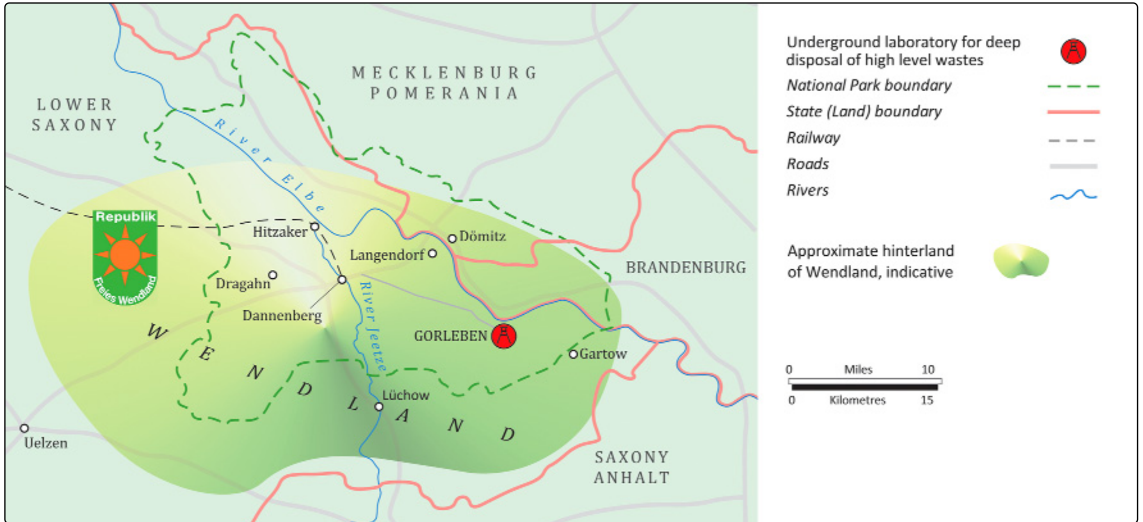
The reinvention of Wendland was made vaguely palpable by the invention of its iconic flag, a startling orange pointed sun on a deep green field (shown on the map on the next page), and through the issuing of passports to the Republik Freies Wendland (the Free Republic of Wendland). Its territorial extent was ill-defined and the map on the next page is indicative. Nonetheless, the idea of a nuclear-free Wendland gained traction, inspiring an incipient tourist industry to promote a land of 'peace and seclusion and pure nature' and to prepare a bid for its traditional landscape and buildings to become a UNESCO World Heritage Site.

Wendland's cultural identity exists within a shared territorial integrity. On its northern side it is bounded by the Elbe, while the border with the former East Germany continues round its eastern and southern sides. The landscape of the eastern part is the waterlands of the Elbtalaue and the forested heathlands, while to the west the agricultural landscape is dotted with traditional 'rundling' villages with their pie-crust layout.

The Wendland is roughly co-terminous with the Landkreis (county) of Lüchow-Dannenberg. Once a borderland, now, as Peter Ward, a manager at the mine puts it, Wendland is 'in the middle of nowhere in the middle of Germany'. When the salt mine was identified as potentially suitable for a deep repository in the 1970s, its peripheral situation of remoteness, low population and underdevelopment seemed to make it a suitable choice. Without comparative site evaluation or public engagement, in a classic exercise in 'DAD', Gorleben was 'decided and announced and defended', with one side defending the nuclear complex, the other rising in defence of their community.

The battle for Wendland

Over the years, the conflict over Gorleben has ebbed and flowed. In the early period, first on the border, then, after reunification, an internal periphery, Gorleben gradually developed its central position in Germany's nuclear politics. As Susan Matthes of Greenpeace described it to me in 2014, 'For many years the only place was Gorleben. It was the end of the world.' The conflict was confrontational almost from the outset and, over time, became increasingly uncompromising. It was played out



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Site of the underground laboratory for exploration of deep disposal of high-level wastes

against competing and shifting discourses being shaped by and shaping vicissitudinous power relations.

From the outset the Gorleben movement was able to mobilise resources – political, economic and social – that rendered an anti-nuclear discourse mainstream and normative. By contrast, pro-nuclear interests, after their initial incursion and establishment of their presence in the Wendland, eventually became marginalised, defensive and ultimately defeated. The resources available for deployment by the protagonists shifted over time in favour of anti-nuclear interests as the conflict over Gorleben escalated into a far wider conflict over nuclear waste and eventually nuclear power in Germany. But, for Gorleben, the conflict is not yet over, victory is not yet complete.

The Gorleben anti-nuclear movement had its foundation and fountainhead in the community. Its local leadership included a Green MP, an MEP, a count who had refused to surrender his land to the mine, and a pastor, as well as environmental activists drawn to the area. Local citizens and activists were able to mobilise under the aegis of the Burgerinitiativen (BI), a network of local groups set up as part of an effort to expand citizen participation in politics.[2]

The Lüchow-Dannenberg BI devoted itself to the nuclear issue and to Gorleben specifically. With a wide local membership it engaged in consciousness-raising, networking and organisation, and was the ideological inspiration of the movement. Another vital group were landowners and farmers, adding a conservative but combative approach, fearful that the nuclear presence might harm the image of their produce and intent on maintaining stewardship of land and forest. The farmers provided practical support, blockading roads with tractors, crops and manure in effective disruptions.

Then there were supporters from beyond the Wendland, from cities like Hamburg, radical and willing to engage in actions and demonstrations. The anti-nuclear protests could also draw on regional and national environmental groups.

The Gorleben movement, with its multifarious composition, displayed leadership, determination, organisation and resilience, together with an ability to weld together disparate and cross-cutting groups intent on a single purpose. The protests were on the whole peaceful but forceful, adopting the full panoply of tactics, including rallies, lobbying, demonstrations, marches and sit-ins, supported by pamphlets, petitions and displays of the iconic flag of Free Wendland. Occasionally, a more militant element was attracted in actions attempting to block transports of nuclear casks into Gorleben.

The pro-nuclear interests drew their strength from economic and political sources. The nuclear industry promised jobs and investment in an underdeveloped area. It provided direct financial support, the so-called 'Gorleben Gelder', and indirectly supported the economy through taxes and wages. The workforce, though mainly skilled, was never large, and, according to workers I spoke to, they felt threatened, 'like footballers coming onto a playing field where the opposing team has been playing for some time'. Throughout the conflict, the industry was unable to provide a strong enough presence, and its influence diminished over time as its position weakened both locally and at national level, leaving its workers insecure.

Politically, the nuclear interests could draw on the support of local councils keen to support the project for the economic incentives that it would attract from the federal government. Even so, the strength of political support varied among councils at local, county, regional (*Land*) and federal levels, often on party-political lines. The pro-nuclear interests were a loose assemblage of industry, workers and politicians,

with wavering support from federal government and ultimately no match for the organised, flexible and focused forces ranged against them.

The dynamics of the periphery go some way to explaining the outcome of the conflict. The peripheral location and underdevelopment of the region exerted a pull on an industry being pushed to find a suitable location. At the same time, the community at the periphery found the social and political leverage to push back the invader and eventually pull in external support to halt the project.

With substantial political support at federal and *Land* (Lower Saxony) level, a mine and an interim store were established. But the local community drew its strength and self-consciousness by reviving its cultural identity to defend its traditional values against modernity in the form of nuclear technology. It was not simply a conservative reaction; it was, too, a rather proactive response – an expression of environmental politics, a claim for local democracy, a rejection of risk, and a campaign for a sustainable environment.

The triumph of protest

During the 1970s the federal government was seeking a site in the state of Lower Saxony for an *Integrietes Entsorgungskonzept* (Integrated Waste Management Concept) – a combination of reprocessing plant, waste processing and conditioning facility, and a deep geological repository. The search was pre-empted when the Premier of Lower Saxony identified Gorleben, which became the only site for the project. There is an absence of data about the selection, and in Peter Ward's view 'No one knows the real reason why Gorleben was chosen in the first place'.

This was a time when protests against nuclear power were large scale and sometimes violent as communities 'reacted as if they had been handed a rattlesnake'.[3] In some cases, as at Wyhl in South West Germany in 1975, the mass protests contributed to the abandonment of nuclear projects. In the absence of public and stakeholder participation and a closed, exclusive and elitist decision-making process of institutional expertise, the contest over nuclear energy became inevitably confrontational. As John Dryzek and colleagues explain: 'The environmental movement in Germany therefore encounters passive exclusion in which opportunities for formal political inclusion are limited and unconventional challenges to governmental authority have been strongly resisted.'[4]

The first major action was a long trek from Gorleben to Hannover to a mass protest estimated at 100,000, which gathered in March 1979 at the Gorleben International Review at the time of the accident at Three Mile Island. In response, the proposal for a reprocessing plant was withdrawn, and the failure to find another site led to the abandonment of reprocessing elsewhere in Germany and reliance on La Hague (France) and Sellafield (UK).[5] With reprocessing eliminated, a critical part of the *Entsorgungskonzept* was forfeited, and opponents could focus on the other remaining two components of the project. For the first decade or so, their target was the mine, where various actions were staged, mostly peaceful, others more intimidatory, and all pursued with characteristic inventiveness.

By the mid-1990s attention switched to the interim store and attempts to prevent the giant CASTOR flasks filled with high-level wastes being transported to Gorleben from La Hague in France. The annual protests against the transport were most spectacular around the turn of the century, with large numbers of protesters intent on disrupting the railways and blocking the roads matched by green uniformed police deployments armed with water cannon, riot gear, helicopters, and tanks. As one protester, Thomas Hauswaldt, observed to me at one of the demonstrations: 'In November, everywhere the leaves have fallen. But, in our forests the leaves are still green – there are so many police.'

By the early years of the new century it appeared that the objectives of the Gorleben movement had been achieved. The Red-Green (Social Democrat-Greens) coalition in federal government passed the Atomic Energy Act of 2002, which reflected a consensus achieved on nuclear policy. Under this there would be:

- a gradual phase-out of nuclear power;
- the abandonment of reprocessing once the contracts with France and the UK had been fulfilled;
- construction of interim spent-fuel stores at power plants; and
- a review of nuclear waste policy.

As a consequence of the review, exploratory work at the Gorleben mine would be suspended for between three and ten years and, in view of continuing protests, shipments of casks to Gorleben even from France and the UK eventually ceased.

The Gorleben conflict had now become intertwined with the wider conflict over the future of nuclear energy in Germany. With the reversion to a more pro-nuclear CDU/FDP (Conservative/Liberal) coalition in federal government in 2009, proposals to slow down the phase-out of nuclear energy kindled spectacular protests across the country during 2010-11, including a 120 kilometre human chain of 120,000 people linking two power stations and passing through Hamburg. There were demonstrations at other power stations and in major cities, and a human chain and rally in Stuttgart. Gorleben, too, became swept up in the national protests when an estimated 50,000 demonstrators came to the Wendland to rally against nuclear power. With forgivable hyperbole, Anika Limbach of AntiAtomBonn, told me: 'In Germany never before and afterwards had there been mass demonstrations of this dimension.'

Main photo: GNS Gesellschaft für Nuklear-Servic. Inset: Andrew Blowers

Gorleben protests, and the iconic Wendland flag

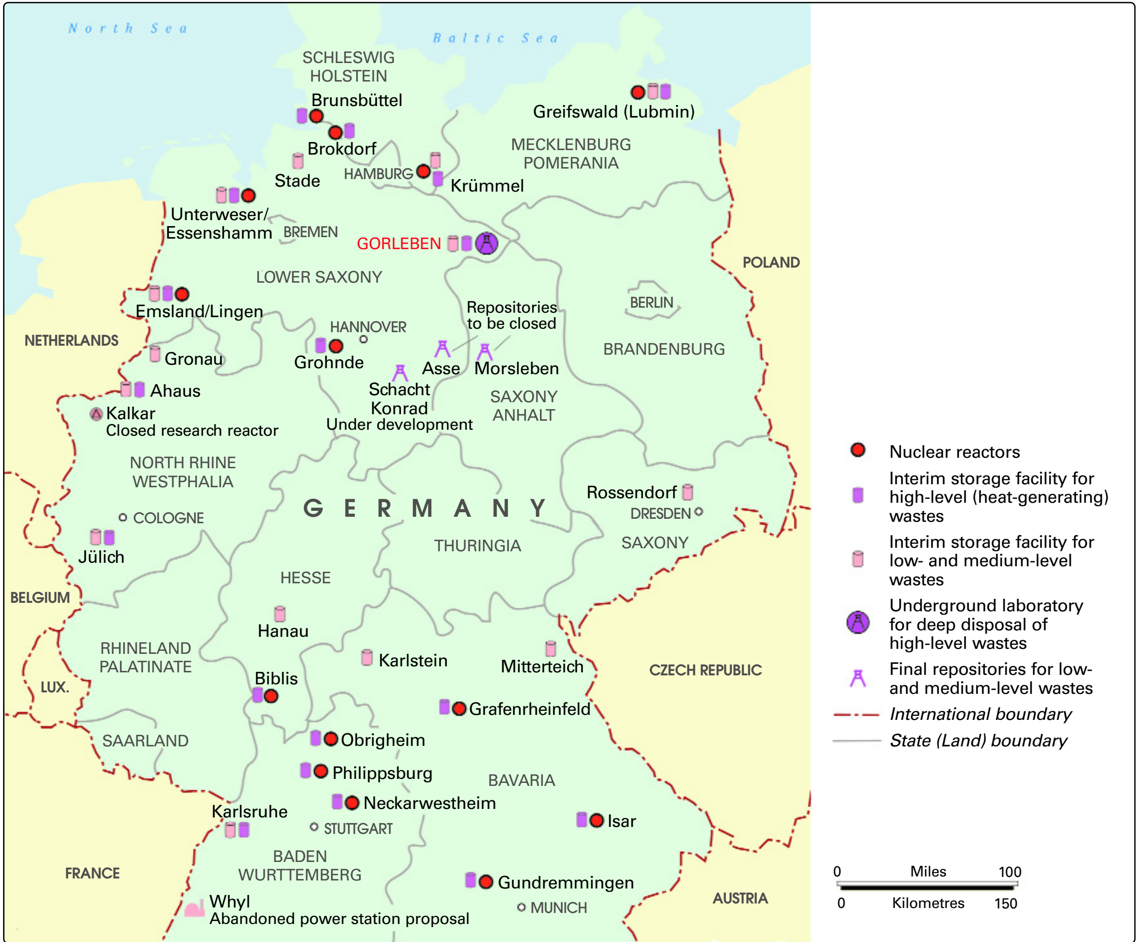
The opposition covered a broad spectrum, and opposition, already heavily against any further nuclear power, became almost universal in the aftermath of the Fukushima accident in March 2011. The Federal Chancellor, Angela Merkel, took due note of the political weather and, two months after Fukushima, announced a phase-out of nuclear energy by 2022 and ushered in the *Energiewende,* an energy transition committed fundamentally to renewables and energy efficiency. The policy had been informed and justified by an Ethics Commission which argued that nuclear energy had ‘poisoned [the] atmosphere in society at large’ and, accordingly, the focus must be on energy supply ‘that dispenses with nuclear power as soon as possible and that promotes Germany’s path towards a sustainable development and new models of prosperity’.[6]

A new beginning?

Gorleben, for long on the periphery, had been swept up into a broader conflict. The moratorium at the mine had been lifted in 2009, although it was virtually under siege from the vigorous protests intent on disrupting the resumption of exploratory work. The reprieve was brief, and in 2012 the mine was shut and left in a condition of care and maintenance. After more than three decades of struggle, all that remained of the *Entsorgungskonzept* was a mothballed conditioning plant, a closed interim waste store, and a shut-down salt mine. The triumph of the Gorleben movement was, almost, complete. But while nuclear energy faced its demise, its legacy of wastes remained. And while the Gorleben mine was closed, it had not yet been finally abandoned, and so its continuing presence could not be entirely ignored in the search for a solution to the problem of the long-term management of highly active wastes.

The geography of the legacy of wastes in Germany is complex, a product of incremental pragmatism and premature opportunism. Some projects, deemed unsafe, have been abandoned.

A low-level waste repository developed near the old border in Morsleben in the former German Democratic Republic is one of several facilities, including power stations, that were closed down and are undergoing decommissioning post-reunification. Not far away, on the other side of the former border in Lower Saxony, in a deep salt and potash mine at Asse, drums of low- and intermediate-level waste have been stored. Flooding and brine seepage and the poor conditions of drum storage make this the most serious legacy issue facing the country. Retrieval is difficult, and it would be practically impossible to clear all the drums. Alternatively, if the drums are left in situ, the mine becomes an impromptu, unplanned repository where leakages will inevitably occur at some point.



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Map of nuclear sites in Germany

A rather more pragmatic and planned solution in the same region is Schacht Konrad, a very deep former iron ore mine, where long-lived, non-heat-generating intermediate-level wastes will be buried at a depth of up to 1,300 metres. The mine was long mired in licensing and planning procedures and is currently undergoing conversion to a repository.

Thus Germany has three incomplete repository projects all within a small region straddling the former border: one, Morsleben, under closure; a second, Asse, where the future is uncertain and controversial; and a third, Konrad, destined to be a permanent deep repository. Around a hundred miles further north of these three sites is the now abandoned deep repository at Gorleben. Until a long-term solution is found, intermediate- and high-level wastes and spent fuel, including wastes retrieved from Asse or repatriated from reprocessing in France and the UK, will be stored in interim stores at reactor sites, decommissioning sites such as Greifswald on the Baltic, research centres (such as Jülich) and purpose-built stores at Ahaus in the north west and at Gorleben, less than a third full before closure.

Finding a solution

With the suspension of the Gorleben mine at the beginning of the century, the way seemed open for a consensual approach to finding a long-term disposal solution. An interdisciplinary expert Committee on a Site Selection Procedure for Repository Sites (popularly known as AkEnd) was established in 1999 and reported to its sponsor, the Red/Green coalition government, in 2002. Its remit was to develop a process for finding a site for deep disposal of high-level wastes. The process would be comparative, on the basis of a 'white map' of Germany, unconstrained by specific geology or preferred location.

AkEnd's approach was truly innovative and imaginative, based on an array of geo-scientific and socio-economic criteria, and introducing concepts such as 'potential analysis' for regional development built upon self-realisation through citizen participation. Its progenitor, the late Detlef Ipsen, described it to me as 'an integrated sociological concept', adding 'if regional building is a process then it cannot be determined in advance'. The whole approach was 'a combination of vision and volunteering', with citizens and councils

indicating a willingness to participate in site selection. The emphasis on devolution and participative democracy was remarkable in the context of legalistic and rule-bound German governance. But, as AkEnd commented, 'the civil self-organisation is not only an alternative to the representative democracy, but is only politically effective through and in reference to it'.[7]

Once published, the AkEnd report sank out of sight, but not entirely out of mind. A decade later, in the propitious circumstances of the post-Fukushima settlement on nuclear phase-out, the ideas and approach of AkEnd were resuscitated, as a new commission was established in 2013 to develop criteria and a process for selecting a site for a 'final repository mine with reversibility'.

The commission comprised 32 members in four equal sector groups – federal government, the *Länder*, science, and civil society. As with AkEnd, it began with an entirely clean sheet, or rather a 'white map' of Germany, in which all options were open. The AkEnd criteria-based approach would again be used progressively to eliminate areas until a few sites (two or three) would be subject to comparative assessment through underground investigation to find the 'best' site in terms of safety for a period of a million years. And the concept of applying effective intergenerational compensation to achieve the development potential of the selected region was also adopted.

There was, too, an emphasis on the need for public participation throughout a staged process organised by a new federal implementing body responsible for site identification, since it was assumed that no community would volunteer a site. The challenge was a familiar one: to find 'a solution that is based on broad social consensus and can ultimately also be tolerated by the immediately affected population'.[8]

Under the Atomic Energy Act, no site is ruled in and none is ruled out. Gorleben, though frozen, is not yet irrevocably shut and remains a divisive issue. The industry, in its weakened position, will be in no position to underwrite another location. As Georg Arens, a civil servant with the environment ministry BMUB remarked to me: 'Site selection will be funded by the operators but all the time Gorleben is still there. Gorleben is not officially given up but everyone recognises the low probability that Gorleben will be realised.'

For the workforce committed to the project there was a painful sense of loss and regret. Peter Ward summed up the bitter feelings of defeat: 'To tear the heart out of the project – when nobody is left who will speak up for the project; then it is finished – whether or not it is a suitable site. A victory in conflict is never the end of the story.'

The Gorleben movement is not triumphant, but remains wary and unlikely to relax its vigilance. Its continuing purpose derives from the social dimension of peripherality – that shared sense of identity, of longstanding comradeship and common purpose deeply embedded in the older generation and passed down the generations. Wolfgang Ehmke, one of the leaders of the movement, summed up the struggle: 'Our resistance has never been broken. It is a little bit of a miracle that we have struggled on for more than a generation.' It is a resistance that has resonated beyond the Wendland, inspiring a wider anti-nuclear movement that has brought an end to nuclear power in Germany and opened up the issue of how to deal with its legacy of nuclear waste. The transformative power of the Gorleben movement still casts its long shadow over the legacy of nuclear power in Germany.

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Notes

1. E Christiansen: *The Northern Crusades*. Second Edition. Penguin, 1998, pp.27-28 (first published 1980)
2. B Doherty: *Ideas and Action in the Green Movement*. Routledge, 2002
3. R Dominick: *The Environmental Movement in Germany: Prophets and Pioneers1871-1971*. Indiana University Press, 1992, p.167
4. J Dryzeck, D Downes, C Hunold, D Schlosberg and H-K Hernes: *Green States and Social Movements: Environmentalism in the United States, United Kingdom, Germany and Norway*. Oxford University Press, 2003, p.41
5. Subsequent efforts to find a site for a reprocessing plant were thwarted by protests, notably at Wackersdorf in Bavaria. This resulted in Germany sending its spent fuel for reprocessing in France and the UK. In 1994 the requirement for reprocessing was dropped, and then abandoned altogether in 2002. It was the necessity to repatriate the high-level wastes from reprocessing in France and the UK that led to protests against the shipments to Gorleben
6. *Germany's Energy Turnaround – A Collective Effort for the Future*. Ethics Commission on a Safe Energy Supply, May 2011. English translation available at http://stophinkley.org/EngRevu/ENERGY%20TURNAROUND.pdf
7. *Site Selection Procedure for Repository Sites. Recommendations of the AkEnd – Committee on a Site Selection Procedure for Repository Sites*. AkEnd (Arbeitkreis Auswahlverfahren Endlagerstandorte, Dec. 2002, p.53. English translation available at www.cienciaensocietat.org/upimages/File/Deliberativa_2/10-Site%20Selection%20Procedure%20for%20Repository%20Sites.pdf
8. *Report of the German Commission on the Storage of High-Level Radioactive Wastes. Summary*. Commission on the Storage of High-Level Radioactive Wastes, Jul. 2016, p.13. English translation available at www.nuclear-transparency-watch.eu/wp-content/uploads/2017/02/Summary_Report-of-the-German-Commission-on-the-Storage-of-High-Level-Radioactive-Waste_EN.pdf