

## The natural resources deficit: the implications for German politics

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Falling amounts of natural resources and the 'peak oil' question, i.e. the point in time when the maximum rate of extraction of easily-accessible oil reserves is reached, have been among the key issues in public debate in Germany on all levels: expert, business and – most crucially – the government level. The alarming assessments of German analysts anticipate a rapid shrinkage of oil reserves and a sharp rise in oil prices, which in the longer term will affect the economic and political systems of importer countries. Concerns about the consequences of the projected resource deficit, especially among representatives of German industry, are also fuelled by the stance of those countries which export raw materials. China, which meets 97% of global demand for minerals crucial for the production of new technologies, cut its exports by 40% in summer 2010 (compared to 2009), arguing that it had to protect its reserves from overexploitation.

In 2009 the value of natural resources Germany imported reached €84 billion, of which €62 billion were spent on energy carriers, and €22 billion on metals. For Germany, the shrinkage of resources is a political problem of the utmost importance, since the country is poor in mineral resources and has to acquire petroleum and other necessary raw materials abroad<sup>1</sup>. In autumn 2010, the German minister of economy initiated the establishment of a Resources Agency designed to support companies in their search for natural resources, and the government prepared and adopted a national Raw Material Strategy.

In the next decade the policy of the German government, including foreign policy, will be affected by the consequences of the decreasing availability of natural resources. It can be expected that the mission of the Bundeswehr will be redefined, and the importance of African states and current exporter countries such as Russia and China for German policies will increase. At the same time, Germany will seek to strengthen cooperation among importer countries, which should make pressure on resource-exporting states more effective. In this context, it can be expected that the efforts taken to develop an EU resource strategy or even a 'comprehensive resource policy' will be intensified; or at least, the EU's energy policy will permanently include the issue of sourcing raw materials.

<sup>1</sup> [http://www.bgr.bund.de/cln\\_145/nn\\_1920686/DE/Themen/Min\\_\\_rohstoffe/Rohstoffagentur/Bilder/rohstoffagentur\\_\\_nl\\_\\_abb1\\_\\_p,templateId=neuesFenster.html](http://www.bgr.bund.de/cln_145/nn_1920686/DE/Themen/Min__rohstoffe/Rohstoffagentur/Bilder/rohstoffagentur__nl__abb1__p,templateId=neuesFenster.html)

[http://www.bgr.bund.de/cln\\_145/nn\\_1920686/DE/Themen/Min\\_\\_rohstoffe/Rohstoffagentur/Bilder/Verteilung\\_\\_Rohstofflieferungen\\_Deutschland\\_\\_600\\_\\_g.html](http://www.bgr.bund.de/cln_145/nn_1920686/DE/Themen/Min__rohstoffe/Rohstoffagentur/Bilder/Verteilung__Rohstofflieferungen_Deutschland__600__g.html)

## German experts on the depletion of natural resources

The deficit of raw materials and its implications for the global, and especially the German economy and politics, have become the subject of research and analysis by key German research institutions and think-tanks. The problem is being examined by the Stiftung Wissenschaft und Politik (SWP)<sup>2</sup>, the government and parliament's leading advisory institution on foreign policy and security issues, as well as by the Bundeswehr Transformation Centre (BTC)<sup>3</sup>, a think-tank of the Federal Ministry of Defence. The issues related to the depletion of natural resources, especially petroleum and rare earth elements (such as cerium, zircon, dysprosium, europium, yttrium, and lanthanum, which are necessary in the process of creating new technologies, including those related to renewable energy) have been discussed by experts from other German research and analytical institutions, such as Wirtschaftsforschung und Beratungsunternehmen AG in Berlin and the Zentrum für Europäische Wirtschaftsforschung in Mannheim.

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appropriate decisions. However, individual experts differ significantly in outlining the short and long-term implications thereof for German domestic and foreign policies.

The assessment made by the Bundeswehr Transformation Centre's analysts is the most alarming one<sup>4</sup>. They believe that the peak oil point will be reached by 2010 and will be followed by a permanent and

terminal decline of oil supplies, and consequently by a sharp rise in the price of oil. In the longer term (within 15-30 years) it may even trigger global conflicts over this raw material. According to the experts, such conflicts will jeopardise the currently existing political and economic systems, especially in oil-importing states. The international position of these states will deteriorate steadily, while the position of oil exporters will strengthen. The BTC's experts believe that the diversification of energy sources is desirable, albeit possible only to a limited extent, due to the high geographic concentration of oil deposits.

Petroleum is the key resource for modern economies. Therefore shortages of it will lead to economic collapse, and in some cases may even bring about a crisis of the state. To illustrate their point, the experts refer to the case of North Korea following the collapse of the Soviet Union and the loss of cheap oil supplies. As a result, agricultural machinery became useless and people had to return to traditional farming methods. However, this proved unsuccessful, despite the use of a vast labour force, because the agricultural land had been saturated with fertilisers. The harvest gathered fell by 60%, which led to a famine.

For developed countries such as Germany, the transition to the post-resource era will not be as dramatic as for developing countries. In this context, the BTC's analysts indicate the new EU member states from Central and Eastern Europe. Highly developed countries hit by the high prices of natural resources will handle the problem of shortages or even the absence of some resources thanks to their prosperity and public trust in the state institutions, while younger and poorer democracies may not be able to handle this task.

There are also extremely dissimilar opinions among the experts, especially among the representatives of oil-importing economic associations. They believe that the concerns raised are exaggerated, that petroleum reserves will suffice for many years, and even if one source is depleted, another one will emerge instantly.

<sup>2</sup> The SWP is seriously concerned with the resource deficit problem. 'The way of dealing with competition for shrinking raw materials' tops the list of the four main research priorities that the SWP included in its 2009-2010 research plan. One of its research departments addresses this issue comprehensively; there is also some irregular research on the issue conducted by other departments.

<sup>3</sup> The BTC provides the ministry with assessments concerning the future of the Bundeswehr, the preparation, conduct and evaluation of foreign military missions, and security in general, including the legal and political aspects of the security policy. One department of the BTC has prepared the first part of a wider assessment entitled 'The armed forces, capacity and technologies in the 21<sup>st</sup> century'. The first part is called 'Peak oil: the shrinkage of energy resources and its implications for the security policy', and it contains an alarmist assessment of the situation that has aroused great interest among German experts and journalists:  
<http://www.peak-oil.com/download/Peak%20Oil.%20Sicherheitspolitische%20Implikationen%20knapper%20Resourcen%2011082010.pdf>

<sup>4</sup> The report forecasts that in the immediate future Germany will not be able to replace petroleum as the main energy carrier and the key element of the production process in most sectors of the economy. The projected lack of petroleum, or limited access to this material, will result in a crisis of mobility, restricted movement of goods, rising unemployment and food shortages.

'Middle ground' opinions are presented by the analysts from the SWP and the Federal Institute for Geosciences and Natural Resources (BGR). To simplify, their judgement can be reduced to a statement that the peak oil is yet to come and is predicted to happen in 2020. The antidote against the problem, and the crucial task of this moment, is to develop an alternative to petroleum as an energy carrier, and to manage energy resources more effectively in order to reduce energy-intensity. This would in fact mean the implementation of the basic assumptions of the German Climate Policy that Berlin is advocating internationally.

## German industry's concerns...

Germany's demand for natural resources is growing, along with its increasing economic growth (GDP rose by 3.6% in 2010). German industry is dependent on one hand on imports of almost all natural resources, and on the other on exports of highly processed goods, which are the main source of Germany's income. Representatives of industrial enterprises have been disturbed by these experts' alarmist reports, and have appealed to the German government to develop a comprehensive raw material policy.

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German industrialists are beginning to feel the first effects of the resource deficit, such as restrictions on access to some resources (including rare earth elements<sup>5</sup>) and a rise in the prices of other raw materials. During the 3<sup>rd</sup> Raw Materials Congress, organised in Berlin in October 2010, the Federation of German Industries (BDI) lobbied for politicians to become more actively involved in solving the problems of resource management in Germany.

Participants in the congress concluded that secure and reliable access to raw materials is the key factor for the success of German industry, and called for Germany and the EU to adopt a comprehensive raw material strategy. In this context, the speech by the German minister of economy Rainer Brüderle (FDP) was particularly interesting. He pledged his support for the industrialists and promised, among other things, government guarantees in trade and a greater involvement by the Chambers of Foreign Trade and the Germany Trade & Invest federal agency<sup>6</sup> in monitoring and analysing the market trends in resource trading.

The BDI, apart from organising the regular Raw Materials Congresses, has appealed to the G20 states for a 'strategic approach to the raw materials issue'. The French President Nicolas Sarkozy has already announced that during his country's presidency of the G20 in 2011, France plans to prioritise issues such as the operation of raw materials markets, the possibilities for regulating them, and increases in the prices of natural resources and food.

The Committee on Eastern European Economic Relations (Ost-Ausschuss) and German steel producers have also regularly referred to the problem of raw material shortages. In October 2010, the Ost-Ausschuss published a study<sup>7</sup> on China's economic expansion in Eastern Europe, which aroused widespread interest and anxiety among German politicians, experts and the media.

In late 2010, Ekkehard Schulz, the then head of ThyssenKrupp, an international conglomerate and one of the world's largest steel producers, said that providing raw materials would be the greatest challenge in the coming years. He appealed for the creation of a joint-stock company, Deutsche Rohstoff AG, an enterprise that would group different companies and participate in the extraction process to secure German industry's access to iron ore and

<sup>5</sup> These are used in the production of household appliances, the automotive industry and the production of renewable energy sources, including wind turbines, and in energy-efficient magnetic refrigerators, etc.

<sup>6</sup> [http://www.gtai.com/web\\_en/homepage](http://www.gtai.com/web_en/homepage)

<sup>7</sup> The study concludes with the statement that Germany and the EU must start to consistently defend their interests against China's expansion; the latter country first ensured its access to African resources, and is now expanding to Kazakhstan and Uzbekistan to pursue the same objectives. At the same time, China is restricting its exports of metals. The study points out that Germany needs to cooperate closely with resource-rich Central Asian states, the more so because the Chinese companies which invest there are unbeatable, as they are fully supported by their state. In this context, the Ost-Ausschuss stresses the key position of Russia as a supplier of energy carriers, metals and other mineral resources (compare: <http://www.ost-ausschuss.de/russland-muss-integraler-bestandteil-eines-europ-ischen-wirtschaftsraums-werden> [http://www.ost-ausschuss.de/sites/default/files/pm\\_pdf/Positionspapier-China-Ost-Ausschuss\\_2.pdf](http://www.ost-ausschuss.de/sites/default/files/pm_pdf/Positionspapier-China-Ost-Ausschuss_2.pdf)).

coal. This enterprise should also be open to companies which process aluminium, lead, copper and zinc. Schulz believes that this joint enterprise should operate first of all in Africa, which is now dominated by Chinese firms, and that this enterprise could become a stock-listed company in the long term.

### ...and the German government's reaction

The German government is taking both the experts' reports and the concerns voiced by German industry seriously. This is illustrated by the regular energy summits that have been held at the Federal Chancellery for some time, the Federal Institute for Geosciences and Natural Resources (BGR)'s regular monitoring of the situation on global markets, and reports on the accessibility of raw materials presented regularly by BGR experts in the Ministry of Economy. It should also be noted that the raw materials question has been mentioned in speeches by key German politicians.

Chancellor Angela Merkel<sup>8</sup> made a plea for Germany and other industrialised countries to intensify their efforts to secure a stable supply of raw materials for their economies. In this context, the German Chancellor spoke of the need to develop a 'win-win' strategy and combine modernisation in exporter countries with the use of their natural resources. The minister of the economy Rainer Brüderle spoke in a similar way during the above-mentioned BDI Raw Materials Congress.

At the same time, as befits a member of a liberal party, Brüderle reminded the representatives of business that it is the private companies who are responsible for securing their access to raw materials. He added that the government was not going to engage in negotiations concerning the conditions of commercial contracts, nor was it planning to take up shares in companies established by industrial enterprises to source raw materials. A similar point was made by Chancellor Merkel: in reaction to the crisis caused by China's blockade on

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exports of rare earth elements in October 2010, she declared that the acquisition of raw materials is the duty of private companies, and not the state. She thus dampened business's hopes for a stricter political reaction from the state towards China. On the other hand, the reservations expressed by both politicians concerning

the separation of politics and the economy while seeking to access raw materials has been softened by Brüderle's declaration during the congress that the government will support German industry by establishing 'raw materials partnerships' with developing countries<sup>9</sup>. A similar statement can be found in the German Raw Material Strategy.

A statement that German foreign policy's objective is to 'promote German economic interests in global markets' was made explicitly in Guido Westerwelle's speech in October 2010 to the German Council on Foreign Relations (DGAP). Most notably, this speech also included the notion of Außen-Rohstoffpolitik, i.e. a foreign policy relating to raw materials in the context of 'Germany promoting international renewable energy projects such as DESERTEC'.

Most interesting, however, is the change of rhetoric German politicians are using when discussing the objectives of foreign and security policies and the tasks of the Bundeswehr. In May 2010 the German President Horst Koehler, speaking on Deutschlandfunk radio, linked the Bundeswehr's participation in foreign military missions with the protection of German economic interests. Following an unprecedented campaign against him after the interview, the president felt forced to resign. A simple and truthful statement by the president, namely that the Bundeswehr protects German economic interests abroad, sparked

<sup>8</sup> During the annual meeting of the members of the Committee on Eastern European Economic Relations (Ost Ausschuss) on 14 October 2010 in Berlin.

<sup>9</sup> For example <http://www.reuters.com/article/2011/01/30/us-germany-kazakhstan-rawmaterials-idUSTRE70T2QN20110130>

criticism from the Social Democratic Party, the Greens and the Left who suggested that the president endorsed the use of the Bundeswehr for purposes that go against the German constitution. What was worse, the president's party colleagues did not support him openly at the time. Jan Techau<sup>10</sup>, a renowned expert, points out that German interests have always been protected by military means, although 'just a few years ago, it was not done by Germans themselves; they let others do the work – first of all, Americans, the British and the French, who made commercial maritime routes passable and made sure that the prices of oil were determined by the market and not the dictators'.

Autumn 2010 saw a rapid change in German rhetoric. In November, the defence minister Karl Theodor zu Guttenberg declared that Germany 'should be ready to use its troops against pirates and for the protection of its economic interests'. In his opinion, military intervention is sometimes necessary to safeguard the permeability of trade routes and

<sup>10</sup> Jan Techau, 'Geopolitischer Allergieschub', *Financial Times Deutschland*, 31 May 2010.

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prevent regional conflicts. The minister also declared that he would try to convince the German people that there is an interdependency between Germany's security policy and its position in world trade, the situation on the domestic labour market and the public's income. He also warned against conflicts between developed and emerging economies over possible competition for resources.

Experts from the Social Democratic Party (including Rainer Arnold, their spokesman on defence policy) have also stressed recently that the protection of trade routes is the responsibility of the Bundeswehr. Arnold also recalled that this had already been laid out in 2006 in a White Paper prepared by the ministry of defence, which defined the German security environment and the implications thereof for the German army.

This volte-face in rhetoric is being accompanied by some concrete decisions from the German government, the most important being the adoption of the Raw Material Strategy and the announcement of the plans to set up a governmental Resources Agency.

On 7 September 2010, during the annual meeting of German ambassadors, Minister Brüderle announced plans to set up a state Resources Agency (Rohstoffagentur/RA). The institution will be tasked with monitoring and analysing the situation in the area of raw materials, and with supporting German enterprises in their search for resources. Apart from this, the agency is intended to develop cooperation between Germany and resource-exporting countries, and carry out state programmes aimed at securing supplies for German industry. The RA will replace the office for raw materials and geology within the Ministry of Economy. The new Agency is supposed to deal with strategic resources such as gas, oil, copper, titanium, cobalt and lithium<sup>11</sup>.

Another effort aimed at securing safe and permanent access to raw materials for the German economy is the preparation of the Raw Material Strategy. This document, which was proposed by the minister of economy, was approved by the government in October 2010. It is focused on supplying minerals such as rare earth metals to Germany, and describes the risks related to the activity of China and other exporters (in the context of restrictions on exports of rare earth elements). The strategy specifies the methods the German government will employ, namely governmental guarantees for investments and funds for activities aimed at obtaining raw materials, diplomatic and political support for international projects related to raw materials, and setting up partnerships with resource-rich countries. The strategy also announces close cooperation on this issue between three government departments: the ministry of the economy, the ministry of foreign affairs, and the ministry responsible for

<sup>11</sup> <http://www.osw.waw.pl/en/publikacje/ceweekly/2010-09-15/germany-plans-to-create-a-resources-agency>

development policy; this is supposed to create a synergetic effect. The strategy assumes that Germany will make the lifting of barriers in international trade a key topic of bilateral talks with members of the EU, G8 and G20. Germany declares that it wants to implement this strategy in close cooperation with and according to the EU's raw materials strategy<sup>12</sup>.

### The implications of a predicted raw materials deficit for German policy

The analysis of the reports prepared by the aforementioned research institutions, particularly the BTC, shows that the main task in **German domestic policy** in the context of resource shortage is to increase public awareness of how serious the situation is. Making the public aware of the risks is meant to allow the politicians to obtain public consent for profound changes (including legal amendments), while at the same time maintaining public confidence in the state institutions. It is also stressed that these processes need to be stepped up.

Germany, as a state that faces a projected resource deficit, is already implementing a number of tasks connected to this new situation. These tasks have been defined and included in the government's strategies:

- decreasing energy consumption, improving energy efficiency and preparing the economy for the replacement of petroleum with other energy carriers (with nuclear energy temporarily, and other recommended sources of energy such as coal, gas, biomass, and the development of green technologies), and using electricity as a force in the automotive industry in a 20-year perspective<sup>13</sup>. It should be noted that these claims are closely related to the climate policy Germany has implemented internationally, as well as its demands to reduce the consumption of oil and coal;
- developing cross-border infrastructure, first of all interconnectors, to enable the use of energy from renewable sources. Germany supports this project on the EU forum, which should allow it to export a possible surplus energy to other states, including Poland;
- increasing research investments both related to the obtaining and use of energy carriers, and to discovering, extraction and recycling of rare earth elements (this is how rhenium is already being recycled). The German ministry of science and research is subsidising the research, entitled 'Recycling and replacement of rare earth elements', to the tune of €1.5 million. Moreover, an Institute for Research of Raw Materials is to be established in Freiberg (Saxony) in 2011<sup>14</sup>;
- diversification of Germany's export specialisation – Germany remains the leader in machinery exports (including cars), but it is also becoming a leader in production and exports of green technologies, and therefore has to be prepared for intense competition from the United States, and emerging powers such as China and India.

In the near future, Germany's resource policy may become a driving force behind changes in its **foreign and security policy**:

1. The most important consequence of the decreasing availability of raw materials, especially petroleum, will be the need to accept the growing significance of resource-exporting countries<sup>15</sup>. On one hand, Germany is likely to continue the principle it has applied so far, namely 'cooperation instead of confrontation', towards states such as Russia, China or Middle East countries. Bilateral partner relations with the suppliers (also with African and Central Asian states<sup>16</sup>). will also be promoted. On the other hand, Germany will seek to maintain close cooperation with developed countries, first of all within the EU, to consolidate their efforts and act more effectively towards exporter states.

<sup>12</sup> So far, the objectives expected to be included in the EU strategy have been in line with the objectives of the German strategy (lifting barriers to trade in rare earth elements; promoting raw material extraction on EU territory, even if this requires a relaxation of rigid environmental criteria; a more efficient management of raw materials and their recycling). On 26 January, the European Commission announced that the full text of the strategy would not be published as planned; the draft document had encountered crushing criticism from President Sarkozy.

<sup>13</sup> <http://www.osw.waw.pl/en/publikacje/ceweekly/2010-10-06/germanys-new-energy-strategy>

<sup>14</sup> <http://www.medienservice.sachsen.de/mediennews/158844>

<sup>15</sup> The BTC's analysts predict a huge increase in the importance of petroleum-exporting countries ('Petroleum will become the key decisive factor on the international stage'), in international organisations also; a decline in the importance of free-market principles in the raw materials trade, and even a return to a planned economy regulated by the state.

<sup>16</sup> During a visit to Ghana in January 2011, the secretary of state in the German ministry of economy, Dr Bernd Pfaffenbach, launched a Deutsche Wirtschaft agency designed to 'support the chances of German enterprises operating in Ghana' in oil extracting projects. Minister Brüderle met Turkmenistan's minister of foreign affairs in January. Brüderle stressed, "Turkmenistan with its vast reserves of gas is a very important partner in the process of diversification of energy sources and transport routes." See also: <http://www.reuters.com/article/2011/01/30/us-germany-kazakhstan-rawmaterials-idUSTRE70T2QN20110130>

2. Maintaining close cooperation with Russia and attaching it to Europe will remain Germany's priority, even at the cost of 'stretching' some elements of Europe's security architecture<sup>17</sup>. German experts also recommend continuing the creation of numerous interdependencies between the raw materials suppliers and the importers (within the framework of the German-Russian turned EU-Russian Partnership for Modernisation), and to strengthen these ties especially on the corporate level, as in the case of the Nord Stream pipeline. Africa, and indirectly also the Arctic<sup>18</sup>, are to become a new area for such activity, which will be exploited increasingly intensively.
3. The position of the Bundeswehr will be strengthened, as an important element in shaping Germany's foreign and security policy. An increasingly large part of German society will share the conviction that international operations in which German army will participate shall be aimed at safeguarding trade routes and peacekeeping in those resource-rich regions which are at risk of conflicts. This activity undertaken by the reformed Bundeswehr as an expeditionary army will be perceived as extremely significant for Germany's economic situation and well-being.

<sup>17</sup> Bundeswehr Transformation Centre, 'Peak oil – the shrinkage of energy resources and its implications for security policy', p. 53: "Russia should be allowed to carry out a diverse foreign energy policy towards the EU members, to keep German-Russian bilateral relations in as good condition as they are".

<sup>18</sup> <http://www.osw.waw.pl/en/publikacje/cweekly/2009-03-18/german-actions-subject-arctic>



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