Policy Document on Raw Materials
## Contents

### Summary
- Background and analysis 3
- Solutions 3

### Introduction
- 4

### Chapter 1  Analysis
- Supply, demand and scarcity 6
- Multipolar system 7
- The carrying capacity of the earth 7
- Investing in sustainability as an opportunity 7
- Dutch raw materials position 8
- Top economic sectors dependent on raw materials 9
- Rare earths 9

### Chapter 2  Towards a Dutch strategy for security of supply of raw materials
- From analysis to strategy 10
- The role of the Dutch Government 10
- Free trade and open market system 10
- EU 11
- Bilateral policy and strategic partnerships 12
- Raw materials scarcity as an opportunity 12
- Development cooperation 13

### Chapter 3  Action points
- Agenda 1: Supply 14
- Agenda 2: Demand 15
- Agenda 3: Efficient and sustainable consumption 16

### Literature
- 17
Summary

Background and analysis
Growing world population and the associated rising demand for raw materials increase the risk of global over-exploitation and threaten natural capital as the basis for our raw material production. The challenge of having raw materials in the right place at the right time is largely a combination of political, financial, technological, environmental and social factors that generally manifest themselves as forms of scarcity. Prices have been rising for some time, bucking a downward trend that has lasted for years. There are also signs that the transparency of trade and the regulating power of the market are diminishing. By contrast, there is increasing state intervention in the security of raw material supplies throughout the world. Such distortions cause supply to fall behind demand, which in turn leads to stronger price fluctuations and concern among businesses about the availability of raw materials for their production processes.

Thus one can conclude that in this multipolar world the security of raw material supplies has also become something of an economic and security concern for the Netherlands. This is reason enough for the Government to stimulate national policy-making while still promoting European policy. This Policy Document is the start of the process. We have opted for an integral approach: the document covers both abiotic and biotic raw materials. The first requirement for the Dutch economy is security of supply, and we have included long-term sustainability, in terms of people, planet and profit, as a specific condition to ensure continuity of supply.

The Government's first concern is to preserve the free trade system. Free trade is crucial to the Netherlands, as a major transit route. The scarcity of raw materials is also seen as an explicit opportunity. The Government hopes to encourage innovation, re-use and substitution so that we can take a leading role in this field in Europe. This can strengthen the economy and our trading position. Solutions are sought at European level where possible, and at national level where necessary. This policy document is in line with the Dutch input into the EU flagship initiative for a Resource Efficient Europe and the Communication of the European Commission on Raw materials and commodity markets.

Solutions
In formulating solutions the Government has assumed that primary responsibility lies with trade and industry, and that the role of government is to facilitate, encourage, create frameworks and coordinate. Three agendas have been elaborated:

Agenda 1:    secure and increase supply and improve sustainability of supply
Agenda 2:    limit demand and where possible improve sustainability of demand
Agenda 3:    improve the sustainability and efficiency of raw materials consumption
INTRODUCTION

Our economy depends on raw materials. A threat to availability can lead to unpredictable fluctuations in price and quality. The shift in the (economic) balance of power may put the Dutch economy and our competitive position at risk. Global tensions increase in proportion to conflicts in interests between industrialised countries, emerging economies and raw material producing countries. These tensions are a potential threat to world peace and security. Dependence on raw materials also impacts on people, climate, biodiversity and the environment, which in turn can pose a direct threat to our welfare and prosperity.

It is therefore important to identify potential risks to our supplies of raw materials. We must anticipate those risks, to safeguard our economy and competitive position. This means being more careful in dealing with the supply of raw materials while still taking account of economic, geopolitical and social challenges. At the same time, these challenges offer opportunities for Dutch businesses. One of the challenges, bearing in mind that policy for development must be consistent, is that our raw material supply should not damage stability and sustainable economic growth of developing countries, but rather contribute to them.

This policy document is the first move in an integral Dutch policy on raw materials. Current initiatives will be catalogued and harmonised; the main problems and opportunities will be put on the agenda. The letter also names a number of actions that are already underway or are due to start soon. Steps will also be announced that are required to enhance our understanding of the problems surrounding raw materials – and the role of government in this area.

Owing to the global nature of the raw materials problem, opportunities for national solutions are limited. Hence the principle of: European where possible, national where necessary and where it offers opportunities. Thus Dutch policy is as far as possible in line with what is already happening at European level. Where necessary action will be taken in a bilateral or broader multilateral context. The letter is an ideal opportunity to build on the recommendations of the European Commission (Raw Materials Initiative) and to anticipate or respond to the raw materials policies of major trading partners. At national level, at the request of trade and industry and in consultation with knowledge institutions and stakeholder organisations, we will look for ways to remove barriers, to encourage the search for substitutes and to seize any opportunities arising from improving social sustainability.

Because of the mutually reinforcing effect on economic potential, growth, employment and the desirability of balancing growth with the carrying capacity of the earth, we have opted in this policy document to adopt an integral approach to abiotic raw materials (ores and industrial minerals) and biotic raw materials (such as soya and palm oil). Both flows are important to strengthen our position as a transit route and processor of raw materials; the cause and effect of scarcity in the two flows are inextricably linked, and biotic raw materials may increasingly be substituted for abiotic ones.

With its proclaimed integral approach, this policy document meets the requirements of the Nicolai-Ormel motion (32500V81), submitted during the debate on the foreign affairs budget on 15 December 2010. The motion asked the Government to draw up an integral policy document on the security of raw materials, indicating how it will be promoted. The motion also on the Government

---

1 PBL: Scarcity in a sea of Plenty (2011) and UNEP: Decoupling natural resource use and environmental impacts from economic growth (2011)
to consider the raw materials producing developing countries and describe the necessary adjustments in national and European policy, and national economic policy.

Raw materials are in some respects Global Public Goods. For the sake of focus, GPGs are largely disregarded in this document – except in a general context. Policy has already been elaborated on the themes of water and food security. The same applies to fossil fuel based raw materials (oil for chemicals) and building materials. The latter are largely traded locally and regionally, so part of the analysis in this document would not apply.

This raw materials strategy also partly ties in with policy in the framework of the sustainability agenda, the top sectors and development cooperation policy (letter on development cooperation).

**CHAPTER 1 Analysis**

**Supply, demand and scarcity**

Stable supplies of raw materials are essential for an open, competitive and innovative economy, such as we have in the Netherlands. This was given priority in the coalition agreement and has also received attention in Parliament. However, we cannot necessarily count on the availability of economically exploitable raw materials in the medium to long term. Global demand for raw materials is increasing due to the strong growth in world population and prosperity. Supply lags behind, driving up the price of raw materials, fuelling speculation and increasing the shortages. There is no guarantee that supply will keep pace with demand in the future.

If these current trends continue, the adverse effects could also affect the Netherlands, both as a consumer and as a significant transit route. Furthermore, the current methods of supply to meet growing demand are exceeding the carrying capacity of the earth, and endangering the productive base. Since we can assume that the world population will have reached around 9 billion by 2050, it will be a challenge to meet its needs in a way that both achieves global prosperity, and simultaneously reduces the burden on the environment.

We do not currently have an immediate physical shortage of abiotic or biotic raw materials. There are adequate proven reserves of the main abiotic raw materials. There are also large areas of the earth’s (deeper) crust which have so far scarcely been explored for potentially significant new supplies. However, the purity of many ores tends to decrease with depth, and despite upscaling, efficiency and innovation, ever more water and electricity are required for extraction.

---

2 Combating corruption, sustainable extraction, strengthening local governance and transparency of financial flows, partly with a view to the competitive position of Dutch business.
3 With regard to substitution, diversification and recycling
4 The term “GPGs” or global public goods refers to all the trans-boundary global goods and services for which the operation of the market is imperfect and international cooperation is required to secure a stable world supply in those goods or services. Other GPGs include a more stable climate, access to energy and water and effective ‘governance’ of these GPGs.
5 Focusbrief OS. (Focus document on development cooperation)
6 Fossil energy resources in the policy document: “Naar een nieuw kader voor internationale energierelaties” (Towards an new framework for international energy relations) (01/2011)
7 Policy on building materials in laid down in the “Nota Ruimte” (Land Use Planning Memorandum) (2006), paragraph 4.8. This policy is reaffirmed in the draft Structuurvisie Infrastructuur en Ruimte (Structural Vision for Infrastructure and Planning (2011).
8 The Government will send a sustainability agenda to Parliament prior to the opening of the States-General on Prince’s Day.
9 Nicolaï/Ormel motion (32500V81), etc.
Raw materials shortages are more often due to economics. Since raw materials markets can be imperfect and demand is increasing, prices have risen on average over the past ten years. Raw materials markets have delayed adjustment mechanisms, for example because of the lead-time for new mining operations and higher agricultural production, and that can contribute to further temporary shortages. This in turn leads to uncertainty about the availability of raw materials and a sudden increase in price volatility, often accompanied by a negative spiral of extra government intervention to secure supplies.

With biotic raw materials ever smaller harvests lead to price rises and a drop in availability. Reduced agricultural yields can be due to climate change (both floods and increasing drought) and over-exploitation of land.

**Multipolar system**

The geopolitical situation is subject to upheaval. The world is becoming more complex, less comprehensible, and international rules and agreements proliferate. As non-western countries and regions and gain in economic and political power, we can no longer assume that our Western framework of standards will prevail. More and more countries – often but not exclusively those with more state capitalist economies – are taking measures to secure their own supplies of raw materials. The creation of strategic reserves, proactive acquisition by (semi)state enterprises, export restrictions and "land grabbing" all put pressure on the raw materials markets and form a barrier to free trade.

Raw materials are also being politicised to achieve foreign and economic objectives, for example, by excluding deliveries in the event of conflicts, as political small change in international forums or to obtain investment, loans and trade preferences.

There is growing international support for agreements to set minimum requirements for measures to combat the negative impact of raw materials production. The recently reviewed OECD guidelines for multinationals and the OECD Due Diligence guidelines are examples of this. This development encourages businesses that operate on an international scale to take better account of human rights, employment rights and the environment.

**The carrying capacity of the earth**

Unsustainable consumption and production, and increasing use of raw materials diminish the capacity of the earth to provide (renewable) raw materials. Furthermore, in the case of biotic raw materials, competition for land between significant ecosystems, food production, biofuel, wood and fibre production, etc., plays a significant role. This can lead to social problems in the producing countries and risks to the economies of importing countries. Sustainable use of raw materials requires that we take account of the consequences in terms of people, planet and profit, so that this use can be sustained in the long term, without passing on negative effects to the environment and biodiversity, to other regions in the world, or to future generations. There is a growing awareness in the business world and in stakeholder organisations that sustainability is a prerequisite for long-term economic development. Globally operating businesses are adapting their strategies accordingly and calling for policy to create frameworks and conditions to accelerate sustainable transitions and strengthen their own competitive position. Dutch multinationals set the global trend in a number of sectors.

**Investing in sustainability as an opportunity**

It should be stressed that, as well as risks, there are also clear opportunities. As it becomes more difficult to access scarce raw materials, the significance of reuse and substitution increases. Innovation is a key concept here. The Dutch economy is well placed to take exploit these

---

10 For example, due to monopoly-forming, the lack of public trading platforms, state intervention from emerging economies, and concentrations of power among suppliers

11 OECD Due Diligence Guidance for Responsible Supply Chain of Materials from Conflict-Affected and High Risk Areas
opportunities and to turn the growing global shortage of raw materials into a comparative advantage. The Netherlands occupies a central position in Europe and has well developed infrastructure for recycling. The Netherlands has also already embarked on the process of transition towards a biobased economy linked to sustainability conditions. This means that, provided it stimulates innovation, the Netherlands could play a leading role in Europe in the field of re-use and substitution. There are also opportunities in relation to the primary production of raw materials, as the Netherlands is at the leading edge of offshore raw material extraction.

**Dutch raw materials position**

The EU has assessed 41 abiotic raw materials for their short-term importance to the European economy. Fourteen proved critical due to their economic importance for European industry and the high degree of risk affecting supply. These include rare earths (see table, page 9). The Netherlands imports practically all the abiotic raw material it needs. The Government bases its analysis on the 41 raw materials identified by the EU, plus phosphate, gold and tin. However, no definitive national priorities have yet been set for abiotic materials. This will require further analysis of the business and top economic sectors, which will be carried out in the next few months. For a first indication, see the table “Top economic sectors dependent on raw materials” on page 9.

No European priorities have as yet been set for biotic raw materials. Imports of biotic raw materials are undeniably indispensable for consumption and industrial processing. The Netherlands has already assessed its requirements for biotic raw materials within the framework of its biodiversity policy programme (2008) and sustainable trade initiative (IDH), based on the criteria of ‘importance for the Dutch economy’ and ‘sustainability’. Access to and the sustainability of wood, soya, palm oil, fish(meal), peat, cocoa, coffee and spices will remain vital to the competitive position of the Netherlands in the top sectors of agri-food, horticulture and seed stock, water, energy and chemicals.

Apart from has an immediate and as yet unspecified dependence on basic raw materials, the Netherlands is a major transit route for both biotic and abiotic raw materials. Logistics, imports and exports are essential components of the Dutch economy. A less free market for raw materials could therefore have a direct impact on the Dutch economy. When it comes to abiotic raw materials for its domestic industry, the Netherlands is primarily a large-scale importer of semi-manufactured products, and not so much of raw materials as such. The Netherlands also has a relatively small but technologically sophisticated industrial base; a significant agrisector that generates 10% of the country’s employment and which is highly dependent on the import of biotic raw materials for human and animal consumption. Many large Dutch multinationals have links with producers of biotic and abiotic raw materials. There is no other country in the European Union of a similar scale or in a similar position in relation to the international movement of raw materials.

---

12 rare earths, platinum group metals, germanium, magnesium, antimony, gallium, indium, beryllium, cobalt, tantalum, fluor spar, graphite, niobium, tungsten.

13 TNO and the CBS (Central Statistical Office) have indicated the for the Dutch economy the product groups glass and building materials, base metals, metal products, machinery and installations, office furniture and computers, electronic machines, medical, precision and optical equipment, cars, other transport and gas and electricity are particularly dependent on critical raw materials.

14 The Netherlands does however import raw materials for steel production and the steel industry.
Top economic sectors dependent on raw materials

<table>
<thead>
<tr>
<th>Sector</th>
<th>Examples of related products and raw materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-Food</td>
<td>Phosphate for fertilisers, soya for cattle feed, palm oil, cocoa, coffee, spices, fish(meal)</td>
</tr>
<tr>
<td>Horticulture and seed stock</td>
<td>Peat as a substrate for plant breeding and cultivation</td>
</tr>
<tr>
<td>High-tech materials and systems</td>
<td>Germanium in optic cables and optic infrared technologies; cerium in computers; antimony, niobium and tantalum in micro-condensers; iron ore, coke, injection coal, tin and zinc ores for steel; bauxite/alumina for aluminium; silver, gold and copper for electronic equipment; tungsten, niobium, vanadium, nickel, manganese and chrome for special steels.</td>
</tr>
<tr>
<td>Energy</td>
<td>Neodymium, dysprosium and samarium in permanent magnets; indium, gallium, selenium and tellurium in solar cells; platinum in fuel cells; europium, yttrium, gallium and indium in LED lighting; lithium, cobalt and rare earths in battery technology; biomass for energy generation</td>
</tr>
<tr>
<td>Logistics</td>
<td>Lithium and neodymium in electric cars; cobalt and samarium in high-speed trains; scandium alloys in light-weight aeroplane frames; magnesium for metal alloys in cars; platinum, palladium and rhodium in catalytic converters;</td>
</tr>
<tr>
<td>Creative industry</td>
<td>Niobium, antimony and tantalum in computer chips; rare earths such as yttrium, europium, terbium and indium in LCD technology</td>
</tr>
<tr>
<td>Life-sciences</td>
<td>Tantalum in medical technology</td>
</tr>
<tr>
<td>Chemical industry</td>
<td>Platinum and palladium in catalysts; cobalt in synthetic fuel; rare earths as catalysts</td>
</tr>
<tr>
<td>Water</td>
<td>Palladium for desalination; timber for piling, scaffolding and mooring bollards</td>
</tr>
</tbody>
</table>

Rare earths

TNO carried out a quantitative study with CE Delft, following on from a qualitative study by CBS, to determine the extent of dependence of the Dutch economy on the metals neodymium, indium and copper. The study indicated that indium, neodymium and copper are not imported as pure raw materials, but largely as a component of semi-manufactured products and components. This is a crucial feature of the Dutch economy; the Netherlands is an advanced trading country. There is no extraction of raw materials from ores here, and production of "lower-end" and even "high-end" (assembled) components takes place abroad. The sectors that produce or process goods containing indium accounted for nearly a billion euros of added value in 2009; they also employed more than 22 thousand people. That is 0.3% of the Dutch total. For neodymium this was a good 250 million euros and 7300 people (0.1% of the Dutch total). The figures for copper are less modest: 2.9 billion euros (0.6% of Dutch GNP) and 70.4 thousand jobs (0.9%).
CHAPTER 2 Towards a Dutch strategy for security of supply of raw materials

From analysis to strategy
The analysis shows that an adequate supply of quality raw materials cannot be taken for granted in the long term. This is due to economic scarcity, changing geopolitical conditions and unsustainable consumption and production of raw materials. The Netherlands’s top sectors face potential risks because of this, but they can also reap benefits. Risks can be managed and opportunities exploited by trying to secure a good supply (ensuring availability and improving sustainability), where possible improving sustainability and limiting national demand, and by making more efficient use of raw materials.

The role of the Dutch Government
The economic, geopolitical and social trends described above make security of supply of raw materials a matter of strategic national interest. The development of a Dutch raw materials strategy is thus timely. The Government favours a strategy which is as much in line with Europe as possible, but where necessary responds to the raw materials policy of major trading partners. Where necessary action will be taken in bilateral or broader multilateral contexts.

The underlying assumption is that securing the supply of raw materials is primarily the domain of trade and industry. However, where the market is not operating optimally, the Dutch Government will intervene through appropriate channels (EU, WTO etc.). Where specific opportunities arise for the Netherlands, the Government will, where possible make an active contribution – in response to business initiatives and in consultation with knowledge institutions and stakeholder organisations. The Dutch Government can facilitate and stimulate, coordinate initiatives, create frameworks, exploit market processes and where necessary steer processes towards a socially desirable outcome. It also has an important role in raising awareness of the potential threats and opportunities arising from the raw materials issue.

The Government has appointed a Special Representative for Natural Resources to contribute to the establishment of a Dutch international policy on long-term and sustainable security of supply of raw materials. To promote security of supply, he will develop a national and international network of governments, business, research institutions and stakeholder interest groups and organisations (including NGOs). In addition to strong links with the EU, he will build and extend bilateral relationships with raw material producing countries. Cooperation between Government, trade and industry and knowledge institutions will be intensified through existing channels, such as the Platform on scarcity of materials and the Knowledge Platform on sustainable management of raw materials. A conference at national or European level may also be considered.

Free trade and open market system
Trade, the processing industry and logistics are significant sources of income for the Netherlands. The thrust of our foreign policy in relation to the security of supply of raw materials must thus primarily be to maintain a global free trade system. For a trading nation like the Netherlands it is particularly important that an escalating global struggle for raw materials is prevented. Everyone would suffer. Our policy must therefore focus more intently on promoting internationally respected rules and effective multilateral frameworks.

EU
On 10 March 2011, the European Council accepted the conclusions of the Communication on tackling the challenges in commodity markets and on raw materials. This Communication is one of the initiatives taken within the framework paragraph of the European flagship initiative on
Resource Efficiency,\textsuperscript{15} which is designed to contribute to the desired smart, sustainable and inclusive growth referred to in the EU 2020 strategy. The Dutch Government embraces this initiative, since continuity of raw materials supplies will only benefit from an integral European approach, which exploits the synergies between sectors (such as industry, agriculture, transport and energy) and as far as possible avoids passing on the impact. The Government believes that much needs to change to achieve a commodity-efficient Europe, and supports the development of a suitable mix of instruments including innovation and market-based instruments.

The key features draw on principles formulated by the Commission as the basis for an integral strategy to ensure access to raw materials for European businesses:

- The stability and transparency of commodity derivative markets must be improved, partly through changes to the directives on Market Abuse and markets in financial instruments;
- Further research is required on the interaction between the financial and commodities markets;
- The existing list of fourteen critical raw materials must be regularly updated to reflect market trends;
- The Commission and Member States must be able to take timely measures where the availability of certain critical raw materials is in the balance;
- The EU must use "raw materials diplomacy" to raise and promote its trade strategy in international meetings and negotiations;
- The EU must increase its bilateral cooperation with raw materials producing developing countries to promote good governance and investment, and enhance geological knowledge and skills.

Various European countries – such as France, Germany and the UK – already have their own raw materials policies. However, their policies differ significantly according to their different national interests, and there is a risk that they could undermine the European position. For example, as situation could arise in which European interests were not adequately served within the changing context of a multipolar world. The Netherlands is therefore keen to see a strong European policy aimed at promoting an open trading system. Where the EU has the necessary competence, the Netherlands will actively encourage policy formation. Partnerships will also be sought with other Member States to harmonise the various national strategies.

\textit{Bilateral policy and strategic partnerships}\n
The specific characteristics of the Dutch economy, and the associated interests\textsuperscript{16} call for national policy in addition to EU policy. Bilateral relations and strategic partnerships are an important consideration: for example, with Germany, an important trading partner, to maintain the Netherlands’s position as a major transit route for raw materials and to promote any common interests which may arise from it; and with international organisations, stakeholder organisations and other key players.

Good relations with raw materials producing countries are also important. An initial analysis shows that the Netherlands has relatively little need for basic abiotic raw materials for its industries: it relies mainly on imports of semi-finished products. It is therefore worthwhile to strengthen relations and form alliances with countries that are major suppliers of such semi-finished products. Note, the Dutch Government has little direct influence in these matters, but can provide support to the private sector where necessary.

\textsuperscript{15} The flagship initiative on Resource Efficiency concerns not only raw materials but also other resources, such as water and ecosystems.

\textsuperscript{16} Trading nation, relatively high importance of biotic raw materials and the position of our main ports
In general it may be said that constructive relations with trading and other strategic partners will only grow in importance – particularly in view of the need to maintain a free global trade system. The Netherlands will identify strategic partners with whom it wishes to intensify relations within the framework of economic diplomacy and the reorganisation of its network of foreign missions.

**Raw materials scarcity as an opportunity**

As already noted, increasing shortages of raw materials offer the Dutch economy a unique opportunity. Alternatives to the extraction of basic raw materials are more attractive as the shortages increase and prices inevitably rise. Recycling, *urban mining*, *deep sea mining*, raw materials innovation, promoting mining activities in Europe and the development of new materials become economically attractive options. As a pioneer in sustainability and thanks to its position in the global logistics chain. The Netherlands can offer considerable added value in these areas.

Many top sectors (Agri-Food, High-tech equipment and systems, Creative industry, Chemicals and Water) have an advantage in these areas and can receive further support under existing and future government policy. The Netherlands can scale the heights of international research in the field of raw materials innovation, provided this is a specific goal on its innovation agenda. Materials substitution, and the transition to a biobased economy within the constraints of sustainability, also offer good market and innovation prospects.

Waste can be regarded as a raw material. High-quality processing can extract extra value from waste, and can thus benefit both the environment and the economy. In its Policy Document on Waste, the Government will describe how it intends to promote ‘raw materials roundabouts’. A raw materials roundabout is aimed at closed-loop life cycles for raw materials and high quality recycling, again benefiting both the environment and the economy.

Rising raw material prices can also restore the economic viability of mining operations in Europe. There are opportunities here for the Netherlands thanks to its unique expertise in the field of (deep sea) exploration and sustainable mining of abiotic raw materials (such as phosphate recovery from sewage and manure).

Consumers are also showing increasing interest in sustainability. Dutch businesses like DSM, TNT, KLM and Unilever are responding to this and score highly on the Dow Jones sustainability index. Sustainable use of raw materials will also receive more attention due to increasing scarcity and associated economic demand. Because they apply higher standards Dutch and European businesses have an advantage over, say, emerging economies. Profit can be achieved by continuing the domestic effort in terms of diversification in consumption of raw materials, substitution, recycling and re-use.

**Development cooperation**

For raw material producing countries, sustainable extraction and processing of raw materials can be a catalyst for economic growth, exports and combating poverty. However, this potential is not always realised, as extraction also takes place in fragile countries with weak governance, where this sector is often surrounded by violence, conflict, corruption and human rights violations. Development cooperation that addresses good governance, transparency and sustainable use of land can help to ensure that the profits from raw materials benefit the sustainable development of the country. In so doing it provides a foundation for an increase in trade, greater transparency and more stable raw material supplies with less price volatility, so serving an immediate Dutch interest.

---

17 Trade and industry (VNO-NCW) endorse this and request the Government to adopt this approach to the matter (see policy document on waste (Afvalbrief)).

18 Replacing ‘critiscal’ minerals and metals with abundantly available elements of the periodic table
The same applies to international initiatives in relation to raw materials management, for example, in the field of certification of conflict resources and publication of payments to mining businesses and governments (Extractive Industries Transparency Initiative EITI). Dutch development cooperation supports several of these initiatives. The creation and enforcement of such (international) regulations are also relevant components of a raw materials strategy.

The Sustainable Trade Initiative (IDH) has met with success in relation to biotic raw materials. Producers throughout the chain (e.g. palm oil, soya, cocoa/chocolate, tea) work with stakeholder organisations and authorities to improve the sustainability and security of raw materials supply through the world.

Countries like China and Japan use their development cooperation efforts as a means to secure the supply of raw materials. The Netherlands must not go down that route, but can still learn from it. For example, by using its advanced development cooperation network for the benefit of coherent policy, in which mutually beneficial economic interests go hand in hand with the security of raw material supplies. Other efforts – for example under the European Neighbourhood Policy - can also be tailored to this purpose (e.g. phosphates in Morocco).
Chapter 3  Action points

In the short and medium term the Government will work on the following action points.

Agenda 1 - Supply

Securing availability and improving sustainability of raw materials by seeking new supplies, closing cycles (re-use, recycling) and seeking alternatives to phosphates as a finite resource.

Make optimum use of raw materials in the Netherlands and the EU to reduce dependence on raw materials from outside the EU.

Government effort will focus on:

- The removal of rules that create unnecessary barriers.
- New initiatives aimed at sustainable solutions for raw materials shortages, such as the Knowledge Platform on Sustainable Raw Materials Management now being set up at the Technical University (TU) Delft and the Materials Scarcity Platform (The Hague Centre for Strategic Studies (HCSS) and TNO).
- Carrying out a feasibility study into cooperation with Japan in the field of recycling and substitution of rare earths (autumn 2011) and into cooperation with Australia and China to reduce ecological stress due to the extraction of rare earths (also autumn 2011).
- Helping to create a Phosphates Action Plan, to encourage businesses, knowledge institutions and stakeholder organisations to work together to accelerate solutions.
- Facilitating the certification of peat by the industry, in collaboration with the stakeholder organisations, and working with these parties to investigate potential alternatives to peat.

Promote international stability and increase transparency of contracts and financial flows.

The Government will:

- Provide financial support to The Natural Resource Charter, the Kimberley Process, the regional raw materials certification initiative of the International Conference on the Great Lakes Region and the Extractive Industries Transparency Initiative (EITI).
- Based on anticipated international developments in the various transparency initiatives, including those in the EU, introduce EITI or a similar initiative in the Netherlands at the appropriate time.
- Lobby international financial institutions to give priority in public contracts procedures to countries that demonstrably uphold the EITI rules. Provision of technical assistance and expertise in contract negotiations on the use of raw materials to developing countries must also be made dependent on this condition.
- Enhance the ability of developing countries that have successfully implemented EITI (such as Liberia) to offer assistance to other African countries;
- Actively disseminate the OECD’s “Due Diligence Guidance for Responsible Supply Chain of Materials from Conflict-Affected and High Risk Areas” and the UN Ruggie guidelines on business and human rights.

In the European context, the Government will seek to:

- Obtain for the Netherlands one of the ten anticipated pilot plants for demonstration projects under the Raw Materials Initiative.
- Use EU frameworks (such as the European Eco-Innovation Action Plan and the Framework Programme for Research) to programme those initiatives in the field of raw materials.
efficiency, recycling, eco-innovation and eco-design that are important for the Dutch private sector.

- Contribute to initiatives to increase transparency in futures trading.
- Introduce specific expertise of Dutch businesses and knowledge institutions into European development cooperation partnerships with resource-rich countries (e.g. Dutch recycling technology and logistics).
- Share Dutch experience and best practise on improving the sustainability of trading chains (e.g. sustainable trade initiative, Round tables).

**Agenda 2 – Demand**

**Restrict national demand for raw materials and make it more sustainable.**

With its own public purchasing policy and operational management the Government will encourage efficient, sustainable and innovative use and re-use of raw materials by:

- Introducing criteria to improve the sustainability and restrict the use of raw materials – as well as energy – into the tendering process for large government construction contracts.
- Paying particular attention to the role of raw materials when setting out its stall for sustainable and innovation-based government purchasing;
- Inviting top economic sectors to indicate which raw materials (of which the Government is a major purchaser) they regard as "at risk", so that clear priorities can be set.
- Encouraging the development of promising alternatives through substitution, reducing consumption and re-use of materials through the Small Business Innovation Research Program (SBIR).
- In the Government’s own management operations, paying attention to the recovery of strategic raw materials by making chain agreements about product design, better use of waste flows, the purchase of services instead of products and the recovery of phosphates from waste water.

**Sustainability standards in the EU context.** The Government will:

- Introduce experience gained from “Round Tables” into the EU as “best practice”.
- Investigate opportunities in consultation with the European Commission to extend the scope of the EU approach to promoting trade in and production of demonstrably legal and sustainable timber, to include other biotic raw materials.

The current organisation of the market is not sufficiently geared to long-term prosperity. The environmental effects of production and over-exploitation are not adequately reflected in the price. The Government will:

- Campaign in European and global processes to shift the administrative burden from employment to consumption and use of resources. This campaign will be elaborated in collaboration with leading businesses.
- Investigate opportunities to use market instruments to discourage the consumption of unsustainably produced raw materials.
- Promote payment for biodiversity and eco-system services, by elaborating the TEEB (The Economics of Ecosystems and Biodiversity) for the Netherlands.

---

19 The matters in this sub-agenda will be discussed in greater detail in the Sustainability Agenda and the *Programma Duurzame Bedrijfsvoering Rijk* (programme for sustainable government facilities and operations)
Agenda 3 – Efficient and sustainable consumption

Improve the efficiency and sustainability of raw materials consumption within the Dutch economy by transforming raw materials chains, promoting market operation aimed at sustainable security of raw materials and more intelligent design of processes and products.

The Government will:

- Encourage agreements on raw materials deliveries, not just between governments but also with international businesses, sectors and consumers (Round Table on soya, palm oil, cocoa, coffee).
- Promote, extend and scale up the implementation of the Sustainable Trade Initiative, partly by seeking cooperation within the EU.
- Support raw materials producing countries in efforts to meet sustainability and quality standards, partly by means of partnerships.
- Where necessary, encourage the adoption by the private sector of action plans linked to sustainability covenants.
- Make an active contribution to the 2012 review of the EU eco-design directive (2009/125/EG), with a view to broadening its scope and embedding sustainable use of raw materials.
- Call on the Confederation of Dutch Industry and Employers (VNO-NCW) and other organisations to elaborate a concrete Dutch sustainability agenda for the private sector, aimed partly at underpinning the Dutch position in Brussels from a long-term perspective, and in so doing to use, among other things, the 2050 Vision of the “World Business Council for Sustainable Development.”
- Strive for coherence when formulating responses to the different initiatives that fall under the flagship initiative on “Resource Efficient Europe”.

Literature

- The Hague Centre For Strategic Studies: "Quick Scan for the Dutch Policy Document on Raw Materials" 2011
- CBS in collaboration with TNO Bouw en Ondergrond (Construction and Subsoil), "Critical materials in the Dutch economy", December 2010
- The Netherlands Environmental Assessment Agency (PBL), "Voedsel, biodiversiteit en klimaatverandering" (Food, biodiversity and climate change) 2010
- Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI Essen), Fraunhofer-Institut für System- und Innovationsforschung (ISI) & Bundesanstalt für Geowissenschaften und Rohstoffe (BGR), " Trends der Angebots- und Nachfragesituation bei mineralischen Rohstoffen " (Trends in supply and demand for mineral resources), 2007
- TNO Bouw en Ondergrond, "Metal minerals scarcity: A call for managed austerity and the elements of hope", March 2009
- TNO Bouw en Ondergrond, presentation on materials scarcity, November 2010
- US Geological Survey, Commodity Statistics and Information.
- European Commission, DG Enterprise and Industry, Raw Materials Reference Documents
- University of Leiden/ M2I
- Zukünftige Technologien Consulting of the VDI Technologiezentrum GmbH, "Innovationen gegen Rohstoffknappheit" (Innovations to combat scarcity of raw material) Zukünftige Technologien, Vol. 74, 2008

---

World Economic Forum
The EU, UN, OECD, G20, France and the United Kingdom have chosen the same approach.