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COMMISSION STAFF WORKING DOCUMENT

On the implementation of the Raw Materials Initiative

Accompanying the document

**Communication from the Commission to the European Parliament, The Council, The
European Economic and Social Committee and the Committee of the Regions**

**on the review of the list of critical raw materials for the EU and the implementation of
the Raw Materials Initiative**

{COM(2014) 297 final}

1. INTRODUCTION

This document follows the Communication of 24 June 2013 on the implementation of the Raw Materials Initiative¹. It is the second progress report on this Initiative which was launched in 2008² and further developed in 2011³ summarising the work done under the three pillars and cross-cutting activities.

The Raw Materials Initiative aims to improve European access to raw materials through a range of actions under three pillars:

1. ensuring that there is a fair and sustainable supply of raw materials from global markets;
2. ensuring that there is a sustainable supply of raw materials within the EU;
3. boosting resource efficiency and increasing the amount of recycling.

An expert group — the ‘Raw Materials Supply Group’, with representatives from Member States, other EEA and candidate countries and organisations representing stakeholder interests — advises the Commission and oversees the Initiative’s implementation. Since June 2013, this group has met in Brussels in September and December 2013 and in March 2014.

2. FAIR AND SUSTAINABLE SUPPLY OF RAW MATERIALS FROM GLOBAL MARKETS (PILLAR 1)

2.1. EU trade strategy for raw materials

The Commission has implemented the EU trade strategy for raw materials in line with the priorities set out in its 2008 and 2011 Communications on raw materials, promoting a sustainable supply of raw materials from non-EU countries. This is a three-pronged strategy which involves the following:

- securing agreement on international optimal trade disciplines and on export restrictions in bilateral and multilateral negotiations;

¹ COM(2013) 442, 24.6.2013.

² Communication from the Commission to the European Parliament and the Council: ‘The Raw Materials Initiative — Meeting our Critical Needs for Growth and Jobs in Europe’, COM(2008) 699, 4.11.2008.

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: ‘Tackling the Challenges in Commodity Markets and on Raw Materials’, COM(2011) 25, 2.2.2011.

- effectively enforcing international rules and tackling restrictions, through dialogue, in the market access strategy, and through the World Trade Organisation (WTO) dispute resolution process;
- raising non-EU countries' awareness of policies on trade in raw materials and developing best practice through bilateral dialogue and in international fora such as the G8/G7, G20, OECD and the United Nations Conference on Trade and Development (UNCTAD).

The Commission regularly reports on progress in the implementation of the EU trade strategy for raw materials and participates in meetings and workshops involving Member States, industry associations and Non-Governmental Organisations.

2.1.1. Outcome of trade negotiations

For the first time, raw materials have become a priority in negotiating trade agreements with non-EU countries. This has produced significant results both in concluding bilateral agreements and in the context of WTO discussions.

As far as multilateral negotiations are concerned, the EU has used the opportunity provided by WTO accessions to secure commitments from acceding countries on export duties, which are not covered by WTO basic rules. Negotiations with Tajikistan and Afghanistan resulted in a commitment not to impose export duties, except on a list of specific products. Progress was made in negotiations with Kazakhstan on finalising an agreement on export duties. The EU will keep monitoring ongoing and future WTO accessions and seek commitments from relevant countries.

With the launch of new free trade agreement (FTA) negotiations, the EU is negotiating on export restrictions with a number of non-EU countries, including resource-rich countries and countries that use export restrictions. The EU and Singapore initialled the text of a comprehensive FTA in September 2013, including a full ban on export duties. In October 2013, the EU and Canada reached political agreement on the key elements of a trade agreement including the prohibition of export taxes and export restrictions, subject to specific exemptions. Negotiations continued on other FTAs, including ones with India, Malaysia and Mercosur, and negotiations with Vietnam and Thailand began. The EU's ambition remains to eliminate export duties on industrial raw materials, but the first rounds of ongoing negotiations show the increasingly difficult position taken by EU counterparts, many of whom resort to export duties as part of their broader economic policy. Economic partnership agreement negotiations are ongoing with the East African Community and the Southern African Development Community, also taking into account the development needs of these economies. The contribution of trade and investment to sustainable development, including issues related to corporate social responsibility ("CSR"), is part of these negotiations.

In the transatlantic trade and investment partnership (TTIP) negotiations with the US, the EU advocates global rules on trade and investment for raw materials, to the extent that these have not been fully covered by international trade and investment rules. This will give a strong signal, alongside the US, of supporting open trade and non-discriminatory access to raw materials.

2.1.2. Tackling barriers: monitoring and enforcement

The Market Access Advisory Committee (MAAC) and various working groups continued to focus on monitoring and tackling export restrictions affecting trade in raw materials. The committee is composed of Member State representatives who identify and analyse market access barriers in non-EU countries. The EU has identified and dealt with several export restrictions, particularly through bilateral discussions.

- Russia's plan to close the port in Saint Petersburg to scrap metal shipments, which would have led to severe restrictions on scrap exports, was abandoned following numerous interventions by the EU at bilateral level and in the OECD Steel Committee.

- Indonesia's export ban on minerals and metal ores was discussed with Indonesia at various bilateral and multilateral meetings. The measures have been reconfirmed by a decree in 2014. The EU is closely following the evolution of these rules and is considering the most appropriate way to address this issue.

- South Africa's export restrictions on scrap metal were last addressed at a MAAC meeting in October 2013, where the EU reported on its interventions with regard to South Africa.

- The EU, together with the US and Japan, launched a second WTO dispute settlement case in March 2012 against China's export restrictions covering 17 rare earths, as well as tungsten and molybdenum. In March 2014, and in line with the previous ruling on other raw materials, the WTO found that China's export duties and quotas were in breach of China's WTO commitments and were not justified for reasons of environmental protection or conservation policy. The Commission continues to monitor implementation of the first case, whereby China had to remove export restrictions on another set of raw materials (bauxite, coke, fluorspar, magnesium, manganese, silicon metal and carbide and zinc).

2.1.3. Outreach activities

The EU held regular bilateral dialogues with a number of key partners, including the US, Japan and China, to tackle systemic issues and specific cases of export restrictions. In March 2014, a regional dialogue between the EU and the Latin American countries included fruitful exchanges on trade strategy for mining raw materials.

The Commission also helped implement the OECD's ambitious work programme on trade in raw materials, including an update of the export restrictions inventory, an analysis of the economic effects of export restrictions, case studies on alternatives to export restrictions implemented by resource-rich countries to develop an economy based on natural resources, and working on export restrictions transparency, including a checklist of good practices.

Thanks to the EU's efforts, trade in raw materials remains on the G20 agenda. However, as the engagement of some G20 Members remains limited and further contact will be needed, the EU will discuss this issue with upcoming G20 presidencies to determine the best way forward.

2.2. Raw materials dialogues and diplomacy

So far, cooperation partnerships and policy dialogues have been set up with the United States, Canada, Japan, China, Russia, Argentina, Brazil, Chile, Colombia, Mexico, Uruguay, Greenland, Southern Neighbourhood countries, as well as Peru, Mongolia and

Myanmar/Burma, of which the last three were set up in 2013. Preparation for further dialogues is underway.

In December 2013 a US-Japan-EU workshop on critical raw materials was organised in Brussels. It provided an opportunity to exchange information on the review of the EU's critical raw materials list, inform participants about the review process and compare it with American and Japanese analysis and data on critical raw materials. It also explored areas for cooperation, especially in research, and identified substitution as an area for cooperation with Japan.

The Commission has also contributed to an EU-wide mapping exercise on raw materials diplomacy and financial assistance, which is being led by the European External Action Service.

2.2.1. United States

A US-EU workshop on raw materials flow and data standards took place in November 2013 in Washington D.C., as part of exploratory talks to:

- improve the exchange of information on criticality;
- examine areas where materials flow information is insufficient;
- improve the inventory of identified mineral resources;
- expand knowledge of mineral supply chains and
- improve end-use data in order to better understand mineral supply chains and potential sources of recycled materials.

In 2013, two EU-US negotiation rounds on the transatlantic trade and investment partnership (TTIP) were held, which also covers raw materials. Another round took place in March 2014.

2.2.2. Japan

The Commission and Japan's Ministry of Economy, Trade and Industry (METI) are holding annual industrial policy dialogues, the last of which took place in April 2014 in Tokyo. The Commission provided information on the EU research and innovation programme Horizon 2020 and the state of play of the science and technology co-operation with Japan, updated the Japanese side on the European Innovation Partnership on Raw Materials and gave information on the revision of the list of critical raw materials and on the proposal for a Regulation on conflict minerals. The Commission also proposed to further co-operate to explore ways to better address raw materials in international fora (e.g. G20, G8/G7). METI stated that any opportunity to deepen the dialogue would be welcomed. They also stated that on conflict minerals Japan would like to explore the possibility of mutual recognition with the EU.

2.2.3. Canada

The Commission has held discussions on raw materials with Canada's Ministry of Natural Resources, and took part in a workshop to exchange information on rare earth elements research and development in Ottawa in June 2013. As they have strong potential for mining rare earth elements and other critical raw materials, the Commission invited Canada to the workshop on critical raw materials with American and Japanese counterparts. Canada will also be welcome to attend a future meeting of the European Rare Earth Competency Network (ERECON) as an observer.

2.2.4. Latin American countries

In December 2013, the Commission held high-level bilateral meetings on raw materials with Peru and Chile. An event was organised in March 2014 in Lima (Peru), with representatives from the EU and the Latin American countries which are included in the dialogue (Argentina, Brazil, Chile, Colombia, Mexico, Peru and Uruguay). The event covered exchange of best practice, sustainable mining, safety and the environment, corporate social responsibility standards, labour rights, managing mining waste, reporting, mining laws, trade and promoting investment. All participating countries showed a clear will to deepen cooperation with the EU.

2.2.5. China

The Commission and China's Ministry of Industry and Information Technology (MIIT) are leading a joint working group on raw materials. In November 2013, the working group met for the third time in Brussels. Representatives from relevant industry associations from both sides attended the meeting. The Commission provided information on policy developments on raw materials and on the European steel and aluminium industries, while the Chinese side gave an update on policies to promote the development of advanced materials and to manage overcapacity in the Chinese steel, aluminium and construction materials industries. There was also a constructive discussion on China's export restrictions on rare earth elements. MIIT also stated that China was ready to work with the EU on setting up an appropriate global governance structure for raw materials.

In addition, dialogue on opportunities to deepen cooperation on tackling illicit trade in waste began between China's customs administration and the Commission.

2.2.6. Greenland

Greenland – an autonomous community within Denmark – is among the overseas countries and territories associated with the EU. It is one of the EU's resource-rich neighbours, possessing significant reserves of several natural resources including rare earth elements. Its mineral resource and hydrocarbon strategy is currently being revised and an amended strategy for the period 2014–18 is expected to be presented to and discussed with the Parliament of Greenland during the spring session of 2014.

In 2013, a study was launched to provide information on the EU's and Greenland's needs and to identify policy options for cooperation on natural resources. The results of the study are expected by the end of 2014.

The Commission also proposed to include Greenland in the Kimberley Process certification scheme by extending the EU territory for this purpose to cover Greenland. The Regulation of the European Parliament and the Council was adopted in February 2014.⁴

2.3. Development policy

2.3.1. Joint Africa-EU strategy and African, Caribbean and Pacific (ACP) framework

Cooperation between the EU and the African Union focuses on three areas:

- governance;
- investment and infrastructure;
- geological knowledge and skills.

In the field of governance, the Commission launched a series of initiatives to promote transparency in the EU and globally. 'Structural transformation and natural resources' was chosen as the main focus of the 2013 edition of the 'African Economic Outlook' report,

⁴ Regulation (EU) No 257/2014 of the European Parliament and of the Council of 26 February 2014 amending Council Regulation (EC) No 2368/2002.

supported by the EU. Partners from the Africa-EU Strategic Partnership have also started preparing for a forum on mineral resources governance, to be held in 2014.

The Commission launched a study to examine how to strengthen cooperation between African and European geological surveys. It aims to set up a programme to build the capacity of African surveys and improve knowledge exchange and the digitalisation of data on African deposits. It will build on a consultation launched at a joint workshop involving European and African geological surveys held in Ghana in September 2013.

The current programming of EU external aid takes into account the importance of investment and infrastructure. The issue of linking infrastructures with raw materials deposits was addressed in June 2013 at the first meeting of the reference group on infrastructure. This group was created with African partners under the Africa-EU Strategic Partnership to jointly address all infrastructure-related issues (transport, energy, ICT and transboundary waters).

The EU-African Union summit on 2–3 April 2014 was preceded by an EU-African Union business forum including a round-table discussion on raw materials.

The EU's intra-ACP strategy for using allocations from the tenth European Development Fund was modified to incorporate mineral development among the priority actions. A roadmap for developing the mineral sector in ACP countries was drafted, identifying priority actions to be taken. This roadmap led to the setting up and funding of a project to build capacity for mineral institutions and small-scale private-sector companies operating in low-value minerals in ACP countries, for a total of EUR 13.4 million. Its implementation is expected to start in 2014.

The European Parliament initiated a pilot project, implemented by the Commission, on recovering critical raw materials through recycling. Two events were organised, the first in Addis Ababa (Ethiopia) and the second in Brussels. They provided opportunities to exchange best practice and identify common challenges and future research and innovation needs. The project's objective is to draw up a joint European and African research and innovation agenda on waste management, paving the way for creating mutually beneficial European-African partnerships.

2.3.2. Promoting financial transparency

The Commission and EU Member States have supported a number of initiatives to promote transparency and accountability in the use of natural resources and in the extractive industry, with a view to ensuring that countries obtain a fair deal from the use of their natural resources so they can reach development goals. With the adoption of the revised Accounting and Transparency Directives⁵ in June 2013, the EU has taken a huge leap towards a global transparency standard in the extractive and forestry sectors. This legislation will require listed and large unlisted extractive and forestry companies to disclose their payments to governments on a country and project basis. These provisions will be effective from July 2015, putting the EU at the forefront of international efforts on financial disclosure requirements.

The EU is also active in international fora to encourage countries that host major extractive companies to implement equivalent mandatory reporting rules, thus helping to create a level

⁵ Directive 2013/50/EU of the European Parliament and of the Council of 22 October 2013, OJ L 294, 6.11.2013.

playing field that places the same reporting burden on all companies, regardless of the country in which they are headquartered. The Commission also continued to provide financial and political support to the Extractives Industries Transparency Initiative (EITI). The EITI is a global coalition of governments, companies and civil society organisations working together to make the management of revenues from natural resources more open and accountable. Countries implement the EITI standard to ensure full disclosure in an annual report of taxes and other payments made by oil, gas and mining companies to governments. This allows citizens to see for themselves how much their government is receiving.

With the World Bank and the OECD, the Commission has also helped improve legislation on and the implementation of transfer pricing rules, particularly in the extractive sector. Building capacity in this area will help reduce the potential for tax avoidance and evasion and improve business certainty.

2.3.3. Promoting supply chain transparency

2.3.3.1. Responsible sourcing of minerals originating in conflict-affected and high-risk areas

On 5 March 2014, the High Representative of the EU for Foreign Affairs and Security Policy and the European Commission proposed an integrated EU approach to stop profits from trading minerals being used to fund armed conflicts and promote responsible sourcing of minerals from conflict-affected and high-risk areas. As part of the EU approach, the Commission proposed a draft Regulation setting up an EU system of self-certification for importers of tin, tantalum, tungsten and gold who choose to import responsibly into the Union. Self-certification requires EU importers of these metals and their ores to exercise 'due diligence' by monitoring and administering their purchases and sales in line with the five steps of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risks Areas. To increase public accountability of smelters and refiners, which will enhance supply chain transparency and facilitate responsible mineral sourcing, the EU aims to publish an annual list of EU and global 'responsible smelters and refiners'.

A number of incentives are also proposed to promote the taking-up of the certificate and encourage supply chain due diligence by EU and global companies, such as EU public procurement incentive for end users, financial support for SMEs, policy dialogues and diplomatic outreach with governments in extraction, processing and consuming countries as well as development cooperation.

In the African Great Lakes region, the EU supports the Regional Initiative against the Illegal Exploitation of Natural Resources launched by the International Conference for the Great Lakes as a means to curb the link between mineral revenues and conflicts.

2.3.3.2. Kimberley Process certification scheme

The Kimberley Process certification scheme is a global initiative between governments, civil society organisations and industry, launched in 2000 under UN General Assembly Resolution 55/56, to stop trade in 'conflict diamonds'. The initiative's purpose is to ensure that trade in rough diamonds does not finance violence by armed rebel groups. It currently has 54 participating members, representing 81 participating countries. The EU is a participant and is represented by the Commission. In 2013, the Commission contributed substantially to the progress made on the reform agenda under South Africa's chairmanship, in particular in terms of strengthening the implementation of the scheme within the current mandate.

2.3.3.3. Forest Law Enforcement, Governance and Trade (FLEGT)

In 2013, the new EU timber regulation,⁶ laying down obligations for operators placing timber on the internal market, came into force. It complements the voluntary partnership agreements (VPAs) with timber-producing countries to ensure that only legally harvested timber is imported into the EU from these countries. There are currently 18 countries engaged in VPA processes, six of which have ratified agreements: Cameroon, the Central African Republic, Ghana, Congo, Liberia and Indonesia. The EU continues to finance a number of development cooperation actions, including actions promoting multi-stakeholder processes and the participation of civil society in national processes for preparing, negotiating and/or implementing VPAs; actions supporting implementation through private sector initiatives;

⁶ Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010, OJ L 295, 12.11.2010.

actions helping to improve governance in the forestry sector and actions improving the transparency and capacity of relevant government institutions.

3. ENSURING THAT THERE IS A SUSTAINABLE SUPPLY WITHIN THE EU (PILLAR 2)

3.1. Facilitating the exchange of best practice

The Commission facilitates the exchange of best practice and has set three objectives focusing on promoting investment in extractive industries, namely:

- 1) establishing a national minerals policy;
- 2) setting up a land use planning policy for minerals;
- 3) putting in place a clear, understandable and streamlined process to authorise the exploration and extraction of minerals.

To meet these objectives, the three following actions have been put into practice.

3.1. Evaluating and exchanging good practice to ensure the sustainable supply of raw materials within the EU

The ‘Good Practice Project’ aimed to provide examples of good practice from across Europe in implementing developments to increase the competitiveness of the European raw materials sector. It ran until March 2014. As part of the project, a study was prepared to:

- (a) analyse and compare the data collected (using a solid, coherent methodology), provide plausible explanations for the findings made and draw substantiated conclusions;
- (b) take into account the results of previous studies and evaluations and
- (c) give recommendations on which (type of) good practice policies/activities work best.

The 25 cases chosen were grouped into five categories:

- policy and legislative framework;
- information and knowledge base;
- governance;
- land use planning;
- permits and authorisation.

3.1.2. Report on national minerals policy indicators

The report on national minerals policy indicators replies, based on input from 18 Member States, was presented to the Raw Materials Supply Group. The data collected offers solid ground for further in-depth enquiries. A second data collection exercise could be undertaken

in 2017. The indicators can help the Commission and Member States to assess the current situation and identify areas for improvement. On the basis of the replies received from the Member States, the indicators will be refined and regularly populated with data.

3.1.3. Competitiveness of the European mineral raw materials sector

A competitiveness study started in January 2014. The aim of the study is to have a comprehensive, up-to-date and concise overview of the competitiveness of the European mineral raw materials sector, divided into non-energy extractive industries and recycling industries. Results are expected by the end of 2014.

3.2. Improving the EU's knowledge base

To improve the EU's knowledge in the field of raw materials, the Commission, in the short term, works with Member States to evaluate the scope for increased synergies between national geological surveys. This would make it possible to achieve economies of scale, reduce costs and increase the potential for joint projects (e.g. a harmonised minerals database, a European raw materials yearbook, etc.). In the medium term, synergies with other EU initiatives, including the development of Copernicus, the European Earth observation programme, could improve the EU's knowledge of raw materials.

The following initiatives will help achieve this.

3.2.1. Study on statistical information on resources and reserves ('Minventory')

This ongoing study is analysing the potential for a pan-European statistical database on reserves and resources of non-energy non-agricultural raw materials. It will identify the relevant bodies that would be involved in creating such a database and explore ways of doing so. It will take stock of statistical data on reserves and resources used in Member States, covering both primary and secondary materials, and will make recommendations to be used in the development of a European minerals yearbook. The final results of the statistical analysis will be reviewed in 2014.

3.2.2. Study on data inventory for a raw material system analysis

A new study on data needed for a full raw materials flow analysis was launched at the beginning of 2014, based on a 2012 study. It looks at key challenges, i.e. how to fill data gaps and remove data flow bottlenecks by finding data sets or developing appropriate modelling, and will provide complete data sets for 22 raw materials.

3.2.3. Lifecycle data network on raw materials and critical raw materials

The Commission continued to develop lifecycle data, methods and studies in order to improve the knowledge base on (critical) raw materials. Life cycle data outline the resources consumed, emissions, and social pressures associated with the supply chains of raw materials. They equally identify where raw materials are used in supply chains and how they are managed at the end-of-their life for products and services. The Life Cycle Data Network, officially launched in February 2014, is expected to host quality-assured life cycle data from European and non-European public and private organisations.

3.2.4. Materials Information System for Energy Technologies (MIS-ET)

The Commission has developed a digital platform to gather, store and disseminate information about materials used in low-carbon energy technologies using a user-friendly, easily navigable web-based system, MIS-ET. The platform will become fully operational in 2014.

3.2.5. Collaboration with EuroGeoSurveys

Raw materials are included, alongside other geology fields, in the March 2013 collaboration agreement between the Commission's Joint Research Centre and EuroGeoSurveys, the association of EU national geological survey organisations. The agreement covers the association's strategic plan to build the European Geological Data Infrastructure (EGDI). This collaboration may also be extended to cover participation in the European minerals intelligence network, Minerals4EU.

3.3 Seabed Mining

The 2012 Communication on blue growth⁷ identified five focus areas, including marine mineral resources. Seabed mining is technologically feasible and is considered a part of the Raw Materials Initiative, the European Innovation Partnership on Raw Materials and the Horizon 2020 programme. Seabed and subsea floor represent the next tangible source of raw materials, including for some critical raw materials. However, seabed mining, particularly deep and subsea mining, is challenging from an environmental and technological perspective. In December 2013, the Commission launched a study to look into deep sea mining. The results of this study are expected in 2014.

4. BOOSTING RESOURCE EFFICIENCY AND INCREASING THE AMOUNT OF RECYCLING (PILLAR 3)

4.1. Resource efficiency

In December 2013, the Commission published a study report about material efficiency for ecodesign. The study examines how products could be designed in a more sustainable way using less material and fewer rare materials. It analyses a range of possible materials-related indicators for use in ecodesign preparatory studies and impact assessments. Four parameters were selected: recyclability benefit rates; recycled content; product lifetime; a critical raw material index.

As part of the European Platform on Lifecycle Assessment, the availability of data on critical raw materials in the European Lifecycle Database was analysed. The analysis identified knowledge gaps and priorities for broadening the availability of data in product supply chain analyses and in macro-economic indicators for the EU. The potential to provide information for EU lifecycle indicators was also assessed. These indicators give an idea of direct and

⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: 'Blue Growth opportunities for marine and maritime sustainable growth', COM(2012) 494, 13.9.2012.

indirect flows of critical raw materials in the EU economy, including domestic extraction and imports.

The European Resource Efficiency Platform (EREP)⁸ was set up to provide high-level guidance on the transition to a more resource-efficient economy, stimulating growth and business opportunities. EREP issued recommendations in June 2013 and in March 2014. They include:

- moving towards a circular economy and promoting high-quality recycling;
- improving resource efficiency in business-to-business relations, in particular sustainable sourcing standards and
- putting a coherent, resource-efficient product policy framework in place.

Under the environmental theme of the EU's Seventh Framework Programme for research and technological development (FP7), the Commission approved funding for 14 resource efficiency projects in October 2013. The projects involve over 140 partners from 19 European countries, research organisations and private companies. They will tackle the challenges of recycling waste materials from manufactured products and the agricultural sector. The funds for the projects are EUR 40 million.

4.2. Recycling

Secondary raw materials are an important potential source of raw materials in Europe.

In 2013, the Commission carried out intensive work to prepare for the waste target review. The review, which will take place in 2014, will be guided by the objectives set out in the EU's seventh Environment Action Programme for waste management, namely:

- to reduce the amount of waste generated;
- to maximise recycling and re-use;
- to limit incineration to non-recyclable materials;
- to limit landfilling to non-recyclable and non-recoverable waste.

In 2013, the Commission carried out a 'fitness check' of five waste-stream directives including those on packaging waste, end-of-life vehicles and batteries. It found that the directives by and large contain the elements subsequently set out in the Raw Materials Initiative. However, it identified a need to streamline issues such as methods for calculating targets.

The Commission also asked European standardisation organisations to develop European standards for the treatment of waste electrical and electronic equipment (WEEE) reflecting recent advances in technology. This measure aims to ensure that any European operator carrying out collection, recycling and treatment operations complies with minimum standards to prevent negative environmental impacts.

⁸ The platform's members include Commissioners, members of the European Parliament, ministers, business CEOs, academics and representatives of NGOs and civil society.

To help 10 Member States that were lagging behind in waste management practices meet EU targets, the Commission helped them optimise their policies through tailored roadmaps with practical recommendations. Some of these Member States are now making rapid progress towards meeting the EU targets.

The Commission also developed a model to quantify the environmental and economic impacts of waste management policy changes.

4.3. Waste shipments

In July 2013, the Commission proposed passing stricter legislation on national inspections of waste shipments to ensure that all Member States have similar levels of checks.⁹ The proposal will, once adopted, amend the EU Waste Shipment Regulation by requiring that:

- Member States develop risk-based inspection plans which refer to, *inter alia*, human and financial resources, the assignment of tasks, cooperation between authorities and training needs, in order to support and steer Member States' inspections to target the most problematic and high-risk waste streams;
- exporters provide evidence on whether an item to be shipped is waste or not, and whether exported waste will be managed in an environmentally sound manner.

To ensure a harmonised approach to customs enforcement of the Waste Shipment Regulation, the Commission is working with Member State experts from customs authorities and environmental authorities to produce guidelines. They are expected to be adopted in the first half of 2014. In parallel, the Commission made progress on establishing a correlation table between waste codes and the customs tariff codes (Combined Nomenclature codes), which should simplify checks.

The Commission also supported participation by a large number of Member States' customs authorities in operation Demeter III, coordinated by the World Customs Organisation in 2013. It focused on maritime shipments of hazardous and other waste (in particular electrical and electronic waste, household waste and industrial waste) covered by the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

The Countering WEEE Illegal Trade (CWIT) project, funded by FP7, was launched in September 2013 and will run for two years. It is led by INTERPOL and targets policy-makers, law enforcement agencies and the electronics and e-waste industries. It aims to find regulatory, procedural and technical gaps which criminals can exploit to illegally transport and dispose of e-waste, and to recommend solutions.

In May 2013, a study was published, examining the feasibility of applying a global certification scheme/standard for recycling facilities to the export of waste streams. It considered four options: (1) no EU certification scheme, (2) voluntary EU certification scheme, (3) mandatory EU certification scheme, (4) mandatory EU certification scheme including mandatory third-party verification. The study recommended a mandatory certification scheme with mandatory third party verification, while making sure that WTO rules are followed. A stakeholder consultation meeting was held in June 2013 and an online consultation was launched in December 2013, focusing on export data and trends and the

⁹ COM(2013) 516, 11.7.2013.

identification of key waste streams. The Commission is now analysing the feedback received to identify options for policy action, including voluntary approaches, and the scope of waste categories.

Internationally, the eleventh Conference of Parties to the Basel Convention adopted a framework on environmentally sound waste management in May 2013. In December 2013, it was decided that an expert group should assess the role of certification schemes as a tool to ensure environmentally sound management.

5. CROSS-CUTTING ACTIVITIES

5.1. Sector-specific criticality analyses

The Commission has examined critical metals for the energy sector, analysing a wide range of energy technologies, including the main electricity generation technologies, electric vehicles, lighting, fuel cells, electricity storage and energy efficiency technologies. It also looked at future supply and demand projections and identified 32 raw materials used in energy applications in significant quantities compared to their supply. Most of these materials are used in electric vehicles and for lighting applications. Solar and wind energy technologies and fuel cells also use many of them in significant quantities. Eight of these materials were considered critical for the energy sector, based on a combination of market and geopolitical factors, while four others were considered almost critical.¹⁰

As part of the European defence sector action plan¹¹, the Commission will carry out a new study to identify critical raw materials for this sector.

5.2. European Rare Earth Competency Network (ERECON)

ERECON is a project the Commission launched in 2013 at the request of the European Parliament. It aims to facilitate an open discussion among experts and create a network of excellence and cross-disciplinary exchange to increase knowledge of the most efficient use of rare earth elements and of their mining, refining, recycling and substitution. Working group meetings were held in October 2013 and January 2014. The working groups produce draft papers for their respective sectors and propose policy priorities for consideration by European policy-makers.

5.3 Markets and stockpiling

In the 2011 Communication on raw materials, and as part of its work on monitoring raw materials defined as critical for the EU, the Commission noted that it was ‘ready to examine with Member States and industry, the added value and feasibility of a possible stockpiling

¹⁰ ‘Critical Metals in the Path towards Decarbonisation of the EU Energy Sector’, European Commission, Joint Research Centre, 2013

¹¹ (<http://setis.ec.europa.eu/system/files/Critical%20Metals%20Decarbonisation.pdf>).
COM(2013) 542, 24.7.2013.

programme of raw materials'. This examination took place between 2011 and 2012 and included extensive internal and external consultation.

As a result, the Commission currently does not envisage to set up an EU-wide raw material stockpiling system.

5.4. European Innovation Partnership on Raw Materials

The 2012 Communication proposing a European Innovation Partnership (EIP) on Raw Materials¹² asked EU and national industry, institutional stakeholders, academia, research organisations and NGOs to come up with a plan to contribute to the mid- and long-term security of the sustainable supply of raw materials in Europe.

Following the first high-level steering group meeting in February 2013, a strategic implementation plan, based on input from five operational groups, was adopted by the high-level steering group on 25 September 2013.

A call for commitments from external stakeholders to implement the plan opened on 31 October 2013 with a deadline of 7 February 2014. Following analysis by the Commission, the high-level steering group identified a total of 80 'raw materials commitments'. This recognition process provides a guarantee that they are in line with the EIP, gives them visibility and encourages synergies.

5.5. Research

Horizon 2020, the programme for research and innovation in the European Union for the period 2014–20, plays a crucial role in putting the Europe 2020 strategy for smart, sustainable and inclusive growth into practice by providing a common strategic framework for the EU's funding of excellent research and innovation.

Raw materials are a new research field under the Horizon 2020 programme and they are part of Societal Challenge 5 in the chapter on ensuring the sustainable supply of non-energy and non-agricultural raw materials. This chapter uses input from the EIP strategic implementation plan.

Including raw materials in the Horizon 2020 programme will help reach EIP targets, e.g. developing innovative pilot actions, finding substitutes for critical raw materials applications and creating an innovation-friendly regulatory framework.

Total funding for all actions included in Societal Challenge 5 will reach EUR 3 081 million, of which around 20% will be dedicated to raw materials.

The work programme for 2014–15 contains seven raw materials topics for 2014. Five of these — covering the production of primary raw materials, substitution and policy support actions — are part of developing a low-carbon, resource-efficient economy with a sustainable supply of raw materials. The other two topics — covering recycling and a secondary raw materials

¹² Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: 'Making Raw Materials Available for Europe's Future Wellbeing — Proposal for a European Innovation Partnership on Raw Materials', COM(2012) 82, 29.2.2012.

inventory — are part of the focus area on waste.¹³ There will also be a ‘cross-challenge topic’ under the SME Instrument of the Horizon 2020 programme. In line with the EU's strategy for international cooperation in research and innovation¹⁴, participation of relevant international partners in activities under these topics is encouraged. The first calls for proposals under the Horizon 2020 programme were published on 11 December 2013 and the first grants will be awarded by the end of 2014.

¹³ ‘Waste: a resource to recycle, re-use and recover raw materials. Towards a near-zero waste society.’
¹⁴ COM(2012) 497