EIT RawMaterials supports the European Green Deal with a focus on raw materials and advanced materials to secure Europe’s industrial leadership and sustainable future.

The EU Green Deal was adopted on 11 December 2019. It includes a package of legislative and policy initiatives towards 2050 climate neutrality and increasing climate ambition for 2030. European policies will be framed by the objective of becoming the first climate-neutral continent by 2050.

The Green Deal recognizes access to resources as a strategic security question to fulfill its ambition. Ensuring the sustainable supply of raw materials, in particular of critical raw materials needed for clean technologies, digital, space and defense applications, by diversifying supply from both primary and secondary sources, is therefore one of the pre-requisites to make this transition happen.

Raw materials are critically important for implementing the United Nation’s Agenda 2030 Agenda for the Sustainable Development Goals, and for achieving the goals outlined in the European Green Deal. Raw materials are essential to securing a transition to green energy technologies, to secure growth and sustainable consumption and to securing access to clean and efficient consumer technologies.

Minerals, metals and advanced materials are the key enablers for the transition in the clean energy and mobility sector. The sustainable management of natural resources and the shift to a green economy, securing sustainable supply of raw materials, including promoting innovation and mobilising funding under Horizon Europe, including strengthening resilience of strategic EU value chains are essential in achieving a resource-efficient and competitive economy in Europe.

EIT RawMaterials, funded by the European Institute of Innovation and Technology (EIT), has the vision to develop raw materials into a major strength for Europe. EIT RawMaterials is the world’s largest network in the raw materials sector connecting industry, research and education across Europe. EIT RawMaterials introduces innovative and sustainable products, processes and services to the European market and skilled human capital that delivers economic, environmental and social sustainability to European society.

Mobilising industry for a clean and circular economy - Closing material loops, powering a shift from linear to a circular economy

Raw materials challenges are often treated in a segmented manner and with a short-term horizon. To implement more sustainable solutions requires multiple actors along the value chain to act and invest simultaneously. Therefore, a paradigm shift is required towards systemic thinking aiming at the long-term availability and sustainability of raw materials.

Europe is in a good position to base its resource supply on closed material loops developing new business models fostering a circular economy. EIT RawMaterials pushes new advances in the recycling of high-tech metals such as copper, nickel, lithium and cobalt, which are vital to the European industry and its transition from a linear to a circular economy by integrating key European industry players.

To reduce the negative environmental impact of products, EIT RawMaterials promotes innovation in substitution replacing toxic and scarce raw materials, for example copper in automotive brake pads. Europe’s first high-tech plant built in The Netherlands to recycle asbestos-contaminated steel from construction sites.
was supported by EIT RawMaterials, and many of our members champion the use of artificial intelligence and blockchain technology to close material loops.

EIT RawMaterials is also actively collaborating with the Member States acting as a catalyst for the topic of Circular Economy. For example, together with EIT Climate-KIC EIT RawMaterials supports Slovenia in harnessing Circular Economy models to transform its economy at home and drive new exports of services and products.

Accelerating the shift to sustainable and smart mobility - Securing sustainable supply of raw materials

Europe depends on importing most raw materials that are critical for new applications in the green economy such as in e-mobility and renewable energy. Important raw materials include lithium, cobalt and nickel for batteries of electric cars and rare earth elements for permanent magnets in e-drives used in a myriad of applications and devices ranging from mobile phones to drone technology, robotics and wind turbines.

Digital technologies are a critical enabler in the raw materials sector. EIT RawMaterials takes on these challenges and supports the upscaling of new technologies for the flexible use of raw materials with a focus on entirely new methods for sustainable extraction, recovery and production of raw and advanced materials to meet the highest environmental and social standards while at the same time maintaining market competitiveness. EIT RawMaterials supports start-up entrepreneurs that develop digital solutions for the raw materials sector, pioneering metals trading B2B digital marketplaces, new AI and machine learning solutions for the world leading European machinery and equipment manufacturers.

EU as a Global Leader - Facilitating industrial collaboration and strategic alliances

Setting environmental standards and certification of raw materials

Europe is home to world-market leaders in the metals and minerals sector and to leaders of excellence in raw and advanced materials innovation and entrepreneurial education. They work together at EIT RawMaterials and develop new technologies, products, services and skills for the future. For example, ‘CERA’ offers a new certification scheme for the sustainable supply of raw materials based on blockchain technology. EIT RawMaterials is bringing together key industry actors from the up- and down-stream to develop new diversified sourcing strategies for raw materials that are critical for new applications in the green economy.

EIT RawMaterials supports new forms of collaboration with industry in strategic value chains such as the EIP on Raw Materials, the European Battery Alliance and other EU initiatives. Collaboration across Knowledge and Innovation Communities (KICs) will further trigger reaching the EU ambitions for sustainability.

RAW MATERIALS ARE VITAL FOR THE EU ECONOMY, THE GREEN TRANSITION AND A SUSTAINABLE FUTURE—EIT RAW MATERIALS OFFERS THE KEY SOLUTIONS FOR THIS

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