1. The Commission periodically collects data on EU trade to perform the study on Critical Raw Materials. In the most recent study, published in 2020, EU trade of lithium, nickel, manganese and cobalt was analysed for the period 2012-2016 with the values/results included in the table in Annex I.

In the next study on Critical Raw Materials, foreseen for 2023, the analysis period will cover the period 2016-2020. An increase of the use of these raw materials for battery manufacturing is expected.


The study has assessed impacts of two initiatives on cobalt artisanal mining in the Democratic Republic of the Congo against responsible sourcing and sustainability standards. The results show that:
- initiatives have positive impacts, e.g. in terms of child labour reduction and improved occupational safety;
- miners’ income and prices are crucial issues for artisanal mining sustainability, not included in responsible sourcing frameworks; and that despite some challenges, artisanal mining should be supported in order to ensure that ‘responsible cobalt’ is supplied.

In addition, an impact assessment carried out for the Batteries Regulation explores supply chain due diligence options.

3. The role of various powertrain options for alternative fuels (including electric vehicles, hydrogen, biofuels and e-fuels) was analysed in-depth in the Commission's impact assessment and in the study exploring the life-cycle assessment of various alternatively powered vehicles. These showed that battery electric vehicles could achieve the highest environmental benefits (for climate, air quality and other externalities).

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1 European Commission, Study on the EU’s list of Critical Raw Materials (2020), Factsheets on Critical Raw Materials'  
2 https://publications.jrc.ec.europa.eu/repository/handle/JRC121719  
5 https://op.europa.eu/en/publication-detail/-/publication/1f894180-be0e-11ea-811c-01aa75ed71a1