



## **Potential for cobalt recovery from lateritic ores in Europe**

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Cobalt is one of the 'critical metals' identified under the EU Raw Materials Initiative. Annually the global mine production of cobalt is around 55,000 tonnes, with Europe's industries consuming around 30% of that figure. Currently Europe produces around 27 tonnes of cobalt from mines in Finland although new capacity is planned. Co-bearing nickel laterite ores being mined in Greece, Macedonia and Kosovo where the cobalt is currently not being recovered (ores have typical analyses of 0.055% Co and >1% Ni). These ores are currently treated directly in pyrometallurgical plants to recover the contained nickel and this process means there is no separate cobalt product produced. Hydrometallurgical treatment of mineralogically suitable laterite ores can recover the cobalt; for example Cuba recovers 3,500 tonnes of cobalt from its laterite mining operations, which are of a similar scale to the current European operations. Implementation of hydrometallurgical techniques is in its infancy in Europe with one deposit in Turkey planning to use atmospheric heap leaching to recover nickel and copper from oxide-dominated ores. More widespread implementation of these methods to mineralogically suitable ore types could unlock the highly significant undeveloped resources (with metal contents >0.04% Co and >1% Ni), which have been defined throughout the Balkans eastwards into Turkey. At a conservative estimate, this region has the potential to supply up to 30% of the EU cobalt requirements.