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Assessment of greenhouse gas emissions from various energy sources(Article)

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GHG emissions caused by energy generation and consumption is both a global as well as localised issue. Especially for Kazakhstan, which is one of the most significant coal reserves and mining countries. Kazakhstan is the 9th biggest country worldwide and the biggest country in Middle Asian (MA), is a gateway to the west for China. It has been playing a significant role in the "Belt & Road" strategy. It is essential to specify GHG emissions in Kazakhstan, especially that from energy consumption, which has not been studied deeply so far. To fill that gap, this study analysed the GHG emissions from the main types of energy in Kazakhstan from 2006 to 2016, based on the GHG emissions assessment methods defined by The Intergovernmental Panel on Climate Change (IPCC). The GHG emissions characters of Kazakhstan and the whole world were also compared. Results showed that: 1) the energy consumption structures of Kazakhstan and the whole world are visibly different. Coal accounted for a significant proportion in Kazakhstan; 2) the consumption changes of different types of energy ranged widely; 3) the change trends of GHG emissions from Kazakhstan and whole world are similar, first upward then downward; 4) the GHG emission sources structure of Kazakhstan is visibly different to that of the whole world, coal accounted for more than 58 % of whole GHG emissions in Kazakhstan. This study can contribute to understanding energy consumption and GHG emissions in Kazakhstan. Copyright © 2019, AIDIC Servizi S.r.l.