

عنوان مقاله:

Evaluating the environmental effects of various types of transportation systems by using SimaPro software

محل انتشار:

دومین کنفرانس ملی و اولین کنفرانس بین المللی چالش های محیط زیست: صنعت و معدن سبز (سال: 1403)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

The environmental effects of transportation systems have emerged as a significant concern in recent years, transportation with adverse effects on human health, ecosystem and resources is an important factor in environmental degradation. This study seeks to evaluate and compare the environmental impacts of different transportation systems to clarify their sustainability and provide important insights for policymakers and researchers. In this research, the Ecoinvent database, which is a complete information source in SimaPro software, was used to collect information. Four air, rail, road and sea transportation systems were evaluated using SimaPro software and the ReCiPe method, which is one of the environmental impact assessment methods. The findings in this research show that among the indicators of human health, ecosystem and resources have the most harmful effects on human health. The scores of each of the airplane, truck, train, and ship transportation systems in the human health index are equal to ۹۰۲.۳۱, ۶۴۳.۳۱, ۱۶۰.۸۸ and ۱۶.۳۸. Also, the findings showed that the airplane is the most harmful option for human health, ecosystem, and resource consumption. is While the ship proves to be the most stable choice among the four options.

کلمات کلیدی:

Transportation, Environmental effects, SimaPro, Environment, Human health, Greenhouse gases

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<https://civilica.com/doc/2034971>

