
Reducing plastic production: Economic loss or environmental gain?

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Abstract

We reviewed economic and environmental studies on global plastic pollution and we estimate the global cost of actions towards zero plastic pollution in all countries by 2040. If no actions are undertaken, we estimate the cost of damages caused by plastic pollution from 2016-2040, the costs of inaction are significantly higher than those of action. Plastic product sales will also generate a global benefit in the form of incomes (salaries, dividends, etc.). Calculating benefit minus costs provides the net benefits in case of action. Net benefit ranges suggest action and inaction will both be beneficial when considering the high estimates. However, the low estimates show net benefits might be negative, which suggests inaction might generate a net cost for society that will be twice the cost of action. Our estimates are preliminary (several cost and benefit data are lacking).

Keywords: plastic debris, economic analysis, waste management, marine plastic pollution, coastal and ocean

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