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# GreenEarth Newsletter

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*Environmental  
footprint of car  
manufacturing*

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We all know that driving a car leads to green house gas and other emissions. But how harmful is the manufacturing of cars to the environment? We compared car manufacturing plants in five countries.

## Environmental impact

Determining the environmental footprint of any kind of manufacturing process is complicated. For a complete picture, we need to take into account everything from the mining of the raw materials used to the emissions caused by the manufacturing of the mobile phones and computers used at a manufacturing plant. For this report, we only looked at the effects on the environment of the manufacturing process itself.

We found that these effects varies dramatically between plants in different countries. This is caused by differences in environmental laws, the overall quality and efficiency of industrial plants, and many other factors. See Table 1 for an overview.

## Three main components

One of the main types of harmful emissions form car manufacturing is CO<sub>2</sub>. As is well-known, CO<sub>2</sub> is one of the main contributors to the greenhouse effect. But NO<sub>x</sub> (i.e. NO and NO<sub>2</sub>) emissions are an important fact as well. These emissions have detrimental health effects, and can cause inflammation of the airways. This means that the effects of NO<sub>x</sub> emissions are more localised than those of CO<sub>2</sub> emissions, but harmful nonetheless. Finally, car factories use large amounts of water. This water cannot be used as drinking water or for irrigation purposes, for example, adding to the environmental footprint of car manufacturing.

Table 1 is a summary of these three components of the environmental impact of a typical car manufacturing plant in Australia, Bangladesh, Canada, Germany and the United states.

Table 1: Environmental impact of a typical car manufacturing plant in 5 countries

Country	CO <sub>2</sub> emissions (1000 tonnes/car produced)	NO <sub>x</sub> emissions (tonnes/car produced)	Water used (m <sup>3</sup> /car produced)
Australia	7	60	165
Canada	6	62	150
Germany	5	63	147
Indonesia	10	68	215
United States	8	62	180

## What can we do?

We could stop driving cars. But more realistically, we can be mindful of where the cars that we do buy are manufactured. We have seen that the environmental impact of car manufacturing is very different in different countries. As always, it starts with awareness. Share the news!