

Material Input Per Service unit (MIPS)



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Submitted 6 years 8 months ago by [Emily Benson](#) [2].



The abbreviation MIPS stands for Material Input Per Service unit. MIPS is an elementary measure to estimate the environmental impacts caused by a product or service. The whole life-cycle from cradle to cradle (extraction, production, use, waste/recycling) is considered. MIPS can be applied in all cases, where the environmental implications of products, processes and services need to be assessed and compared.

The Wuppertal Institute for Climate, Environment and Energy (1998) has given an introduction to Material Intensity Analysis (MAIA), based on the MIPS concept.

Applicability

The MIPS tool allows SMEs to increase profit by reducing material input for producing their products, processes or services. It helps SMEs to develop eco-innovative products and services and improve their material footprint. The tool provides information on the material intensity of products, processes and services thus highlighting savings potentials and environmental impacts. As a result, it allows SMEs to choose green business options and to differentiate their products based on measured environmental characteristics.

In order to apply the MIPS tool, there needs to be data available on material intensity (MIT) of different materials, fuels, transport services and food, listed according to the five inputs categories of the MIPS concept. These are abiotic and biotic materials, water, air, and earth movement in agriculture and silviculture (available at http://wupperinst.org/uploads/tx_wupperinst/MIT_2013.pdf [3]).

Process of tool application

The steps of application of the MIPS tool can be described as follows:

- Select team members
- Select a reference product
- Determine the service unit
- Identify the product chain
- Assess the current status
- Estimate the material input of the product
- MI of the whole production process or life cycle and MIPS
- Decrease the material use
- Improve the service
- Relevant design criteria

Benefits

The MIPS tool highlights potentials for resource savings and thus cost savings for SMEs. It provides better information about environmental performance of products, which can also be used for marketing purposes

Examples

The MIPS concept has been applied in multiple research projects, especially in Germany and Finland. Key examples include: Housing, mobility, glass packaging, food, household goods, tourism, leisure and sports activities.

References

- Ritthoff, M. / Rohn, H. / Liedtke, C. (2003): Calculating MIPS: Resource Productivity of Products and Services. Wuppertal Spezial No. 27e. Wuppertal. <http://epub.wupperinst.org/frontdoor/index/index/docId/1577> [4]
- Lettenmeier, M. / Rohn, H. / Liedtke, C. / Schmidt-Bleek, F. (2009): Resource Productivity in 7 Steps - How to develop eco-innovative products and services and improve their material footprint, Wuppertal Spezial 41, Wuppertal. <http://wupperinst.org/en/publications/details/wi/a/s/ad/1109/> [5]

Category: Planning [6], Diagnosis [7]

Tags:

MIPS [8], environmental impacts [9], products [10], services [11], life cycle [12], SMEs [13], profit [14], material input reduction [15], eco-innovative products [16], material footprint [17], improvements [18], green business [19], resource savings [20], cost savings [21], environmental performance [22], marketing [23], diagnosis [24], planning [25]

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