VIRTUAL WATER

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Virtual water (also known as embedded water or hidden water) refers, in the context of trade, to the water used in the production of a good or service. The precise volume of such water can be more or less dependent on climatic conditions and agricultural practice. Virtual water is water that is used in the various steps of the production chain.

Professor John Anthony Allan was the creator of the virtual water concept, which measures how water is embedded in the production and trade of food and consumer products.

The virtual water concept has opened the door to more productive water use by explaining how and why nations such as the USA, Argentina and Brazil "export" billions of liters of water each year, while others like Japan, Egypt and Italy "import" billions of liters of water.

The water is said to be virtual because once the wheat is grown, the real water used to grow it is no longer actually contained in the wheat. The concept on virtual water helps us realize how much water is needed to produce different goods and services and how to use the scarce water available in the best way.

The virtual- water content of a product consists of three components, called green, blue and grey components.

The "green" virtual- water content of a product is the volume of rainwater that evaporated during the production process.

The "blue" virtual- water content of a product is the volume of surface water or groundwater that evaporated as a result of the production of the product.

The "grey" virtual- water content of a product is the volume of water that becomes polluted during its production.

It is relevant to know the ratio of the green to blue water use, because the impacts on the hydrological cycle are different. Both the green and blue components in the total virtual-water content of a product refer to evaporation. The grey component in the total virtual- water content of a product refers to the volume of polluted water.