



VIRTUAL WATER

# AGENDA

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1. Virtual Water and direct water: Differences
2. How much water needed
3. Virtual Water History

# EXAMPLES AND DIFFERENCES

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## Virtual Water

- "embedded water"; "indirect water"
- water "hidden" in products we buy and use every day
- goes unseen by end-user of a product or service
- e.g. water to grow the wheat for the pasta

## Direct Water

- water that is seen, felt and used in a given time and location to produce an item or service
- e.g. water to boil pasta

# Examples



**650 Barley**  
*litres of water for one pound (500 g)*



**650 Wheat**  
*litres of water for one pound (500 g)*



**2500 Millet**  
*litres of water for one pound (500 g)*



**650 Toast**  
*litres of water for one package (500 g)*



**750 Cane Sugar**  
*litres of water for one package (500 g)*



**90 Tea**  
*litres of water for one pot (750 ml)*



**840 Coffee**  
*litres of water for one pot (750 ml)*



**2500 Burger**  
*litres of water for one burger (150 g beef)*



**4650 Beef**  
*litres of water for one steak (300 g)*



**1000 Milk**  
*litres of water for one litre*

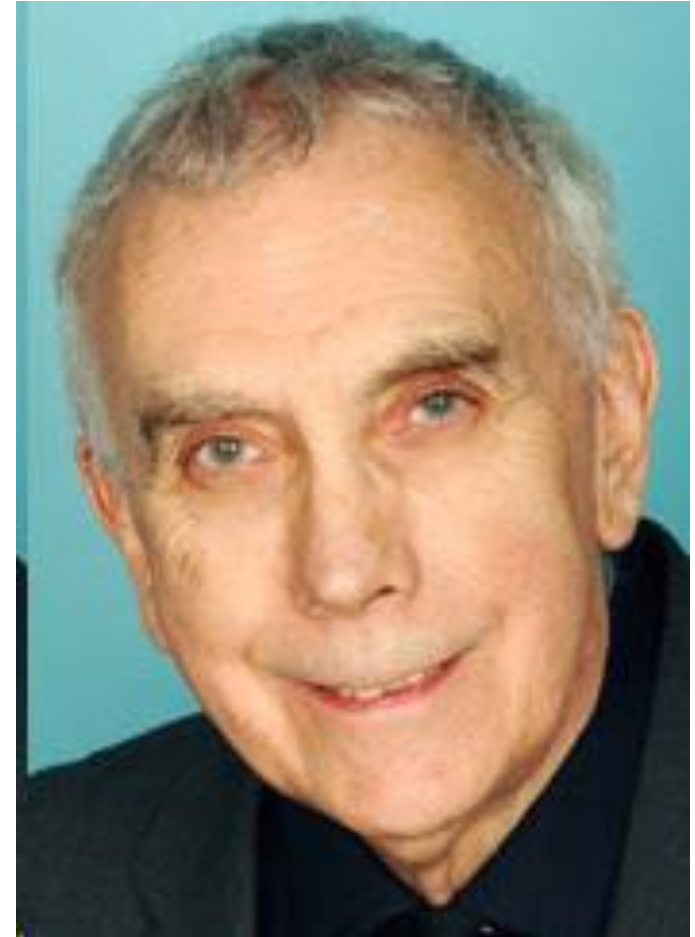


**2500 Cheese**  
*litres of water for one big piece (500 g)*

# HISTORY

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- concept "virtual water" was discovered by Dr. Tony Allan
- Dr. Allan's research: Middle Eastern and North African countries able to consume food despite struggling with water scarcity
- importing food from water-rich countries → water-stressed countries could beat water scarcity



# HOW TO MIMINIZE WATER CONSUMPTION

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- avoiding milk from cows (e.g. oat milk)
- consuming less meat or become vegeterian
- avoiding food including much cane sugar
- avoiding water intensive food



THE END



# SOURCES

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- <https://www.watercalculator.org/footprint/what-is-virtual-water/>
- <https://www.eni.com/en-IT/low-carbon/concept-of-virtual-water.html>
- <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/virtual-water>