# CAN MESOPELAGIC FISH COMBAT HIDDEN HUNGER?

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SCAN ME

200 m

Mesopelagic zone

1000 m

## THE CHALLENGE

Micronutrients such as **vitamin A, calcium, zinc and iron** are essential for healthy development

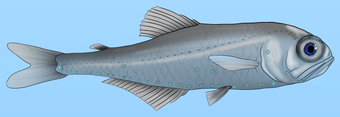
2 billion people currently suffer from micronutrient deficiencies, also known as "**hidden hunger**"[1]

The **rise in the global population** further intensifies this crisis

**7 billion people 2021**

**By 2050**

**9.7 billion people** + **70% higher food demand**



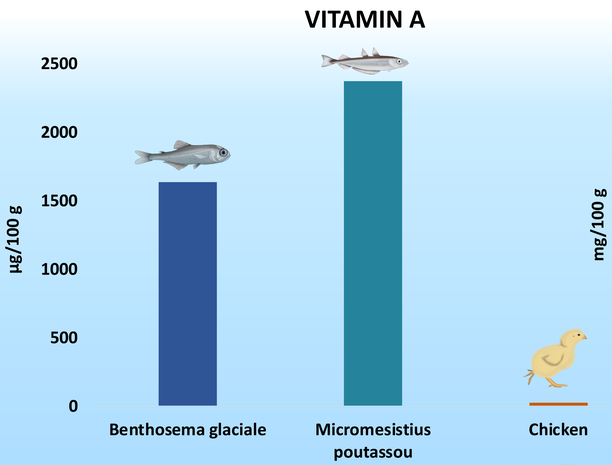
*Benthosema glaciale*

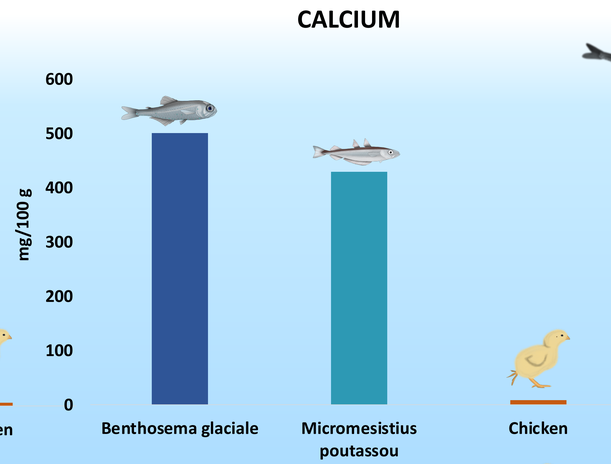
## THE OBJECTIVE

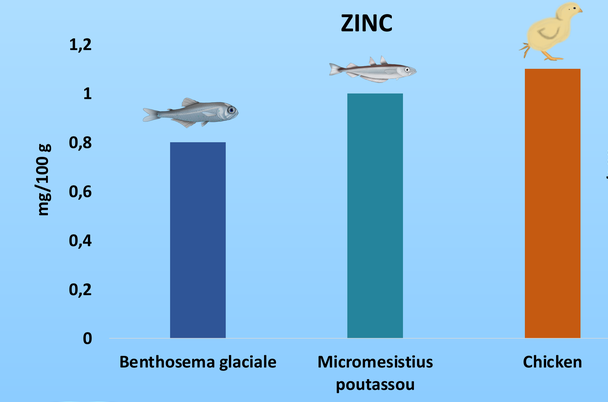
Mesopelagic fish biomass is **estimated to be in the order of 10 000 million tonnes** and not yet commercially exploited[2]

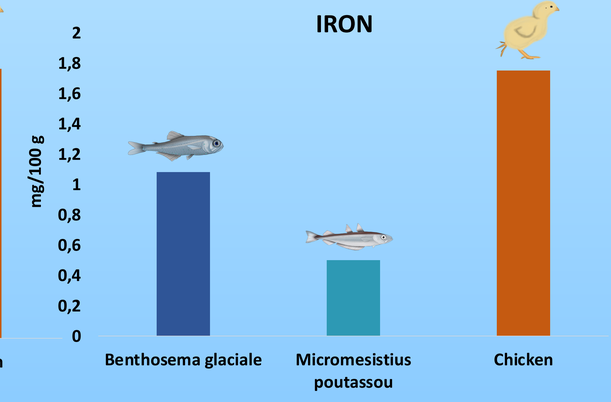
They could potentially be used as a resource to increase **food production**

We want to determine how **nutritious** they are and if they could supply people with **essential micronutrients**




## METHODS

A pelagic trawl net sampled **mesopelagic fish** in 3 Norwegian fjords[3]

Nutrient contents of two species (***B. glaciale and M. muelleri***) were analyzed

Nutrient content of the two mesopelagics was compared with other **meat sources**

## CONCLUSIONS

**Potentially suitable for direct consumption**

**Very promising to be used for nutrient supplements or fish feed for aquaculture**

References:
1. Kawarazuka, N. and Béné, C., 2011. The potential role of small fish species in improving micronutrient deficiencies in developing countries: building evidence. *Public Health Nutrition*, 14(11), pp.1927-1938.
2. Gjøsæter, J., Kawaguchi, K, 1980. A Review of the World Resources of Mesopelagic Fish; FAO: Rome, Italy.
3. Alvheim, A., Kjellevold, M., Strand, E., Sanden, M. and Wiech, M., 2020. Mesopelagic Species and Their Potential Contribution to Food and Feed Security—A Case Study from Norway. *Foods*, 9(3), p.344.