

Salt reduction strategies in wheat-based products: exploring food-grade seawater



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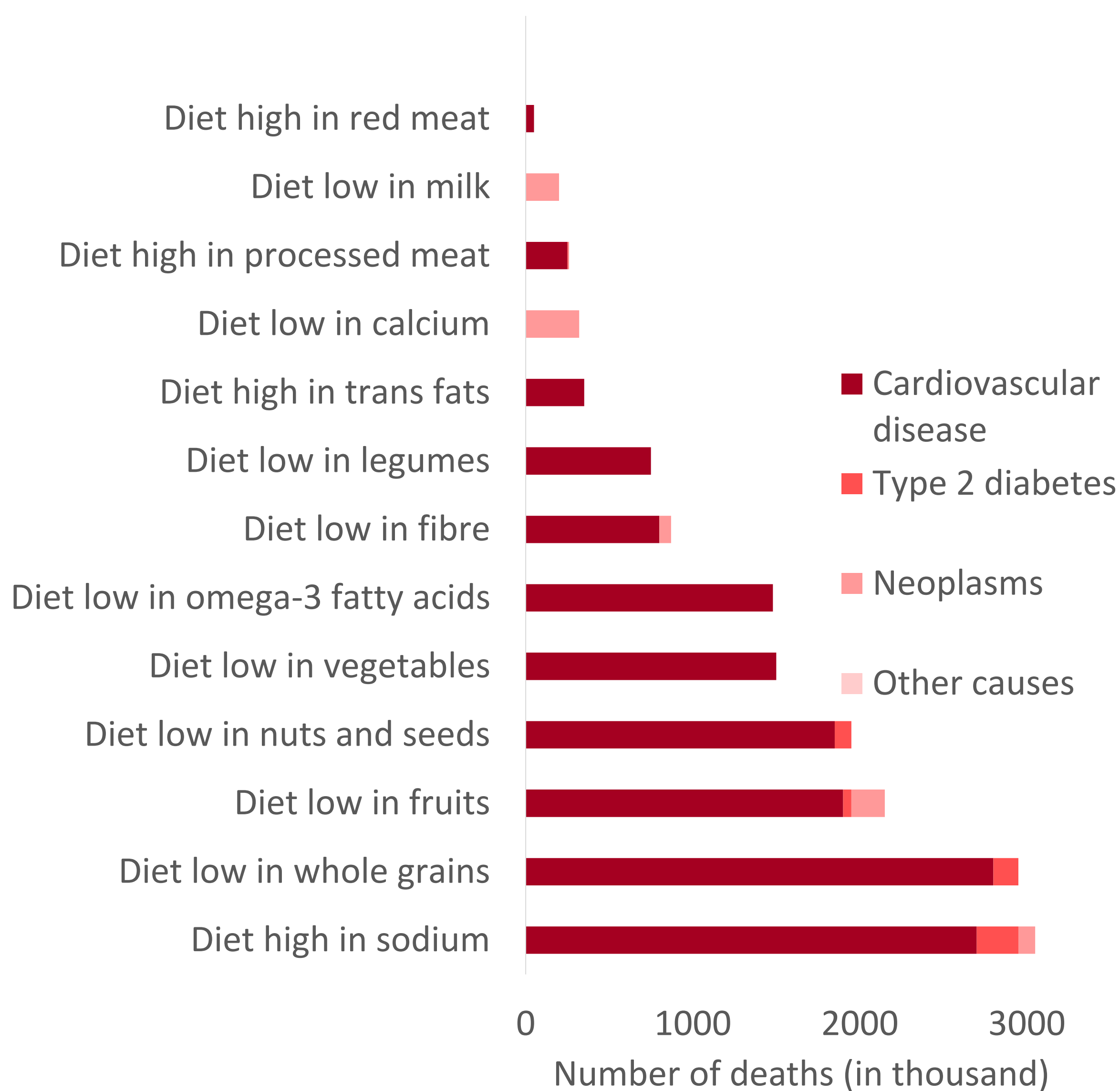


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BACKGROUND

High sodium consumption is linked to increased blood pressure, a key risk factor for **cardiovascular disease (CVD)**, which is the leading cause of death globally. In 2017, around **3 million deaths** were attributed to excessive sodium intake.

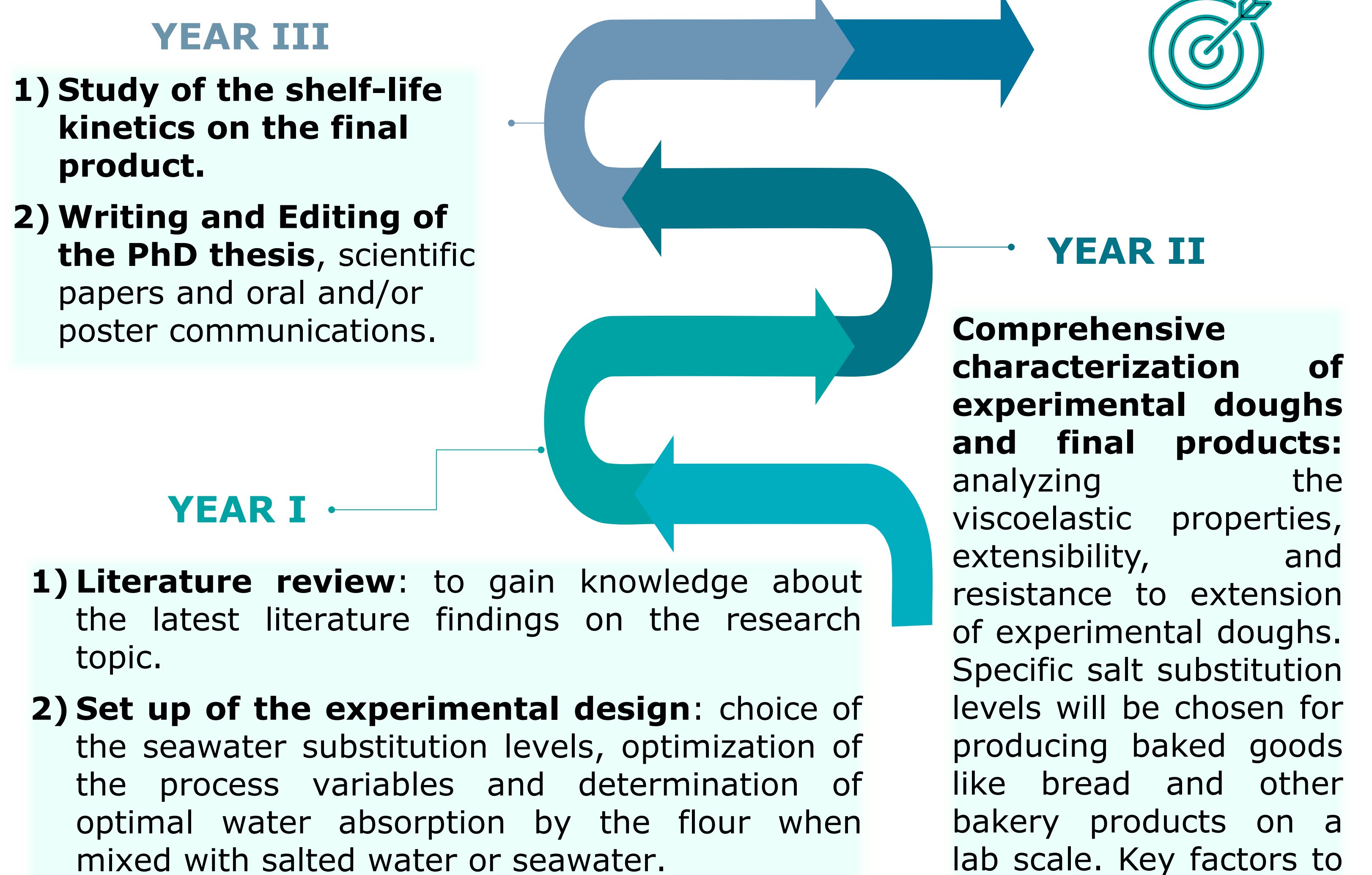
Number of deaths at the global level attributable to diet



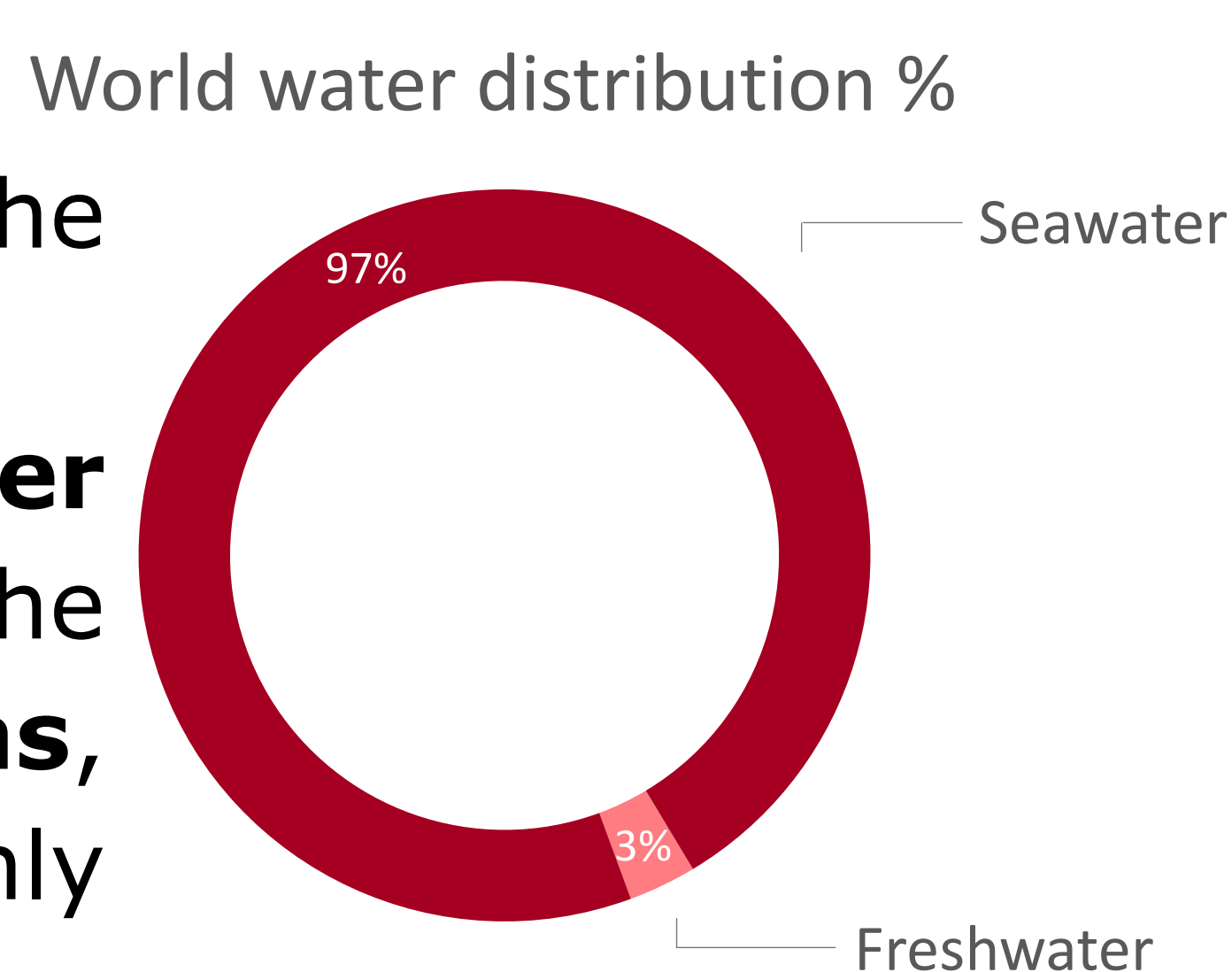
AIM OF THE STUDY

Explore the effects of food-grade **seawater** as a **substitute** for **salt** in **bakery products**. This will include a comprehensive characterization of technological, nutritional, and sensorial attributes, as well as the study of shelf-life of several wheat-based goods.

OBJECTIVES AND MILESTONES



Approximately **97%** of the **world's accessible water** is derived from the **oceans and seas**, that is commonly called seawater.



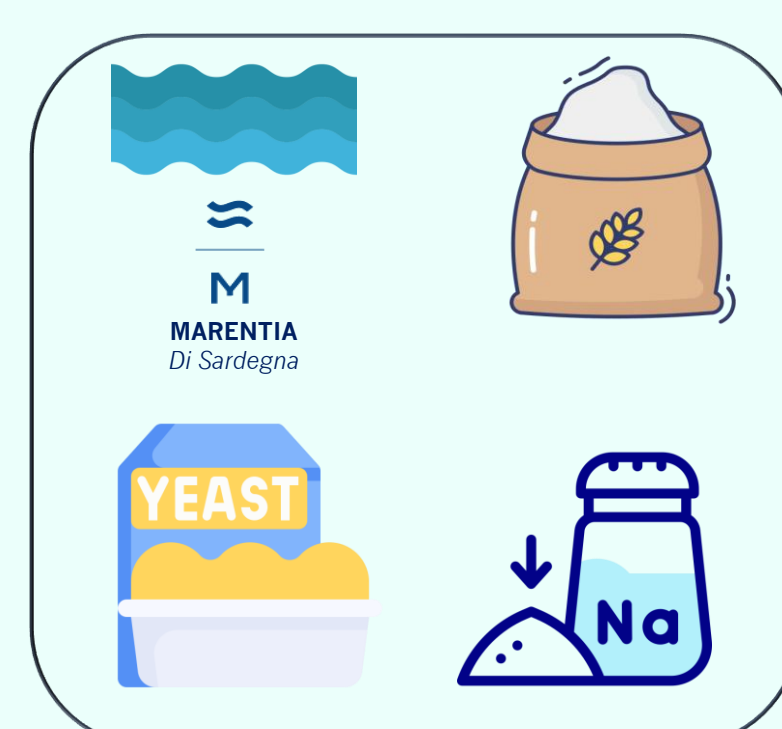
Ionic constituent g/Kg of seawater

chloride	19.162
sodium	10.679
magnesium	1.278
sulfate	2.680
calcium	0.4096
potassium	0.3953
carbon (inorganic)	0.0276
bromide	0.0663
boron	0.0044
strontium	0.0079
fluoride	0.0013

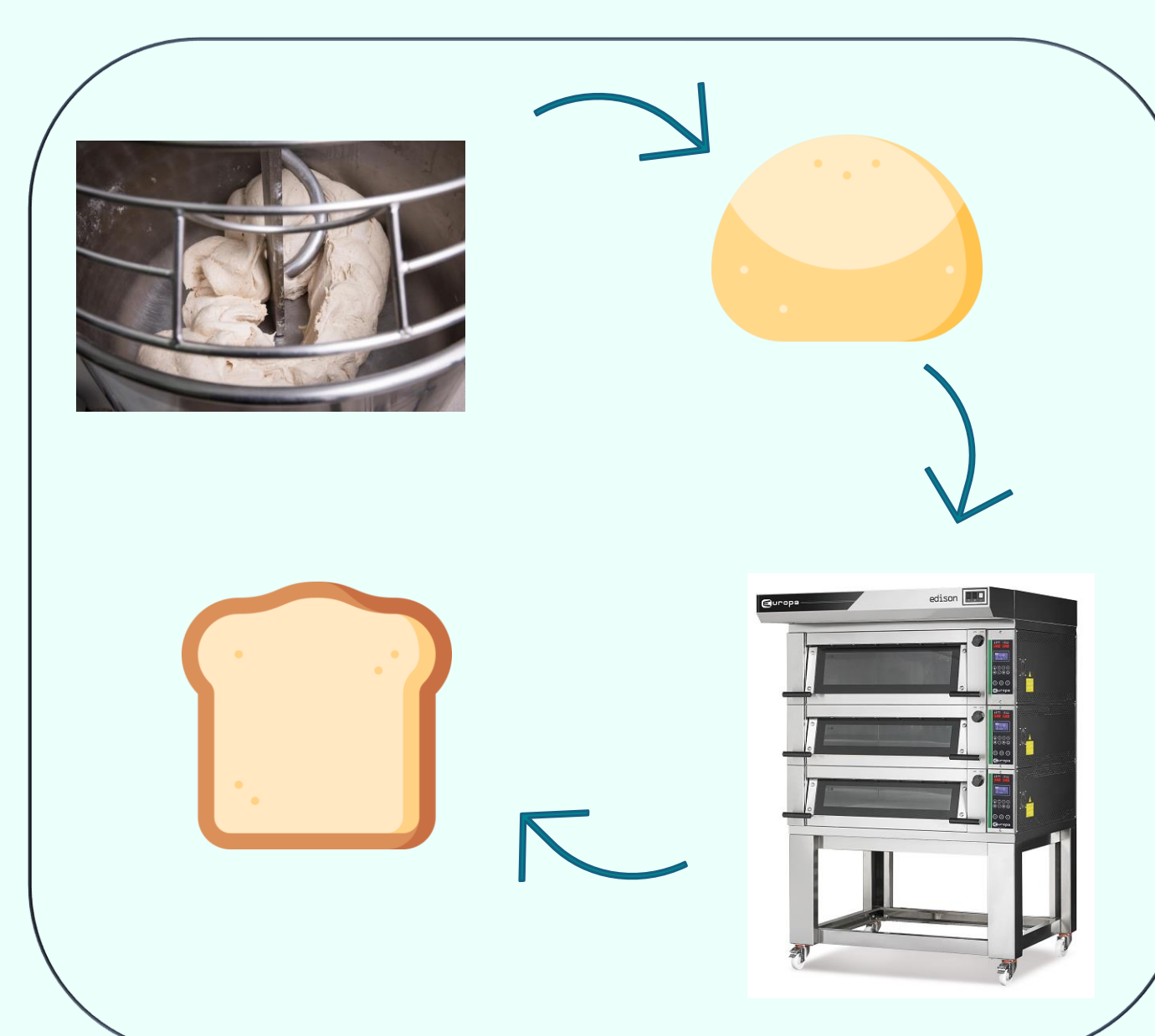
Seawater is a rich source of **macro- and micronutrients**, including magnesium, potassium, calcium.

GRAPHICAL ABSTRACT

Materials



Product development



REFERENCES

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3. Byrne, Robert Howard, Mackenzie, Fred T. and Duxbury, Alyn C.. "seawater". Encyclopedia Britannica, 11 Jul. 2024. <https://www.britannica.com/science/seawater>. Accessed 12 September 2024.