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A MATHEMATICAL FUZZY MODEL TO STUDY THE EFFECT OF FISH CONSUMPTION ON CORONARY HEART DISEASE MORTALITY IN MOROCCO

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ABSTRACT. The association between fish consumption and Coronary Heart Disease (CHD) due to $n - 3$ polyunsaturated fatty acids, especially fatty, fish consumption may be responsible for protecting against death from CHD. The main contribution of the paper is to give an idea about the distribution of the number of people without CHD risk, with CHD risk, and the biomass of the fish population in Moroccan coasts over the next six years from a fuzzy mathematical model by dint of the uncertainty of data obtained by the statistics that can not be representative of a hundred percent of the entire population, all that to have the connection between the three previous factors. The mathematical model is based on a fuzzy differential equations system. We use the concept of generalized differentiability and obtain graphical solutions for the problem under consideration and analyze the results obtained graphically.

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