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The WASTE2TASTE Project Kicks Off!

The 3-year-long Waste2Taste (https://wastetotaste.eu) project, featuring the University of Malta as one of its eight partners, officially kicked off earlier this year, on 1 May 2024. This project is funded under the framework of the Sustainable Blue Economy Partnership (SBEP) (https://bluepartnership.eu/projects/waste-taste-exploring-innovative-food-applications-postharvest-fish-losses), specifically under the 'PA3 - Climate-neutral, environmentally sustainable and resource-efficient blue food and feed' intervention area. The Maltese participation within SBEP projects is managed locally by Xjenza Malta, within the Parliamentary Secretariat for Youth, Research and Innovation.

WASTE2TASTE will contribute to the PHFL (Post-Harvest Food Loss) valorization, including underused fishery by-catch species (e.g. non-protected cartilaginous fish with low commercial value and NIS) and by-products from fish processing and aquaculture industries (e.g. skin, scales, bones, fins, mucus, offal, heads, tails), reducing waste and developing commercially viable high-value products for food applications. An indirect impact is to foster the consumer demand for marine NIS, as a direct management measure for these species which are an ecological hazard to native ecosystems, as for jellyfish biomass (e.g. Rhopilema nomadica, and Aurelia aurita whose blooms are a challenge for authorities in the South Aegean Sea and in the Sea of Marmara and Black Sea, as well as blooms of Pelagia noctiluca in the central and western Mediterranean), shellfish (e.g. blue swimmer crab – Portunus segnis), or starfish (e.g. Asterias rubens). This will be done through the implementation of green processes that will be tested and compared with state-of-the-art industrial processes, to reduce hazardous and contaminating reagents, and energy-intensive processes. WASTE2TASTE will focus on the extraction of collagen, chitin/chitosan, fish oil, and bioactive hydrolysates and their potential use as functional ingredients in food products that will target different end-user' health issues, such as exercise performance, muscle growth, joint problems, gut health, and obesity.

The University of Malta leads Workpackage 7 (Dissemination and Communication) within the project besides having a leading role within WP2 (Collection of raw materials) and WP3 (Circular economy in practice). The following invasive alien species occurring within Maltese waters – Siganus luridus, Portunus segnis, Callinectes sapidus – as well as offal from the bluefin tuna industry have already been sampled by the University of Malta. Biomass from additional sources will be exploited in future months and years, including that originating from selected jellyfish species and from other invasive fish species. Prof. Alan Deidun (https://www.um.edu.mt/profile/alandeidun), resident academic within the Oceanography Malta Research Group (https://www.um.edu.mt/research/oceanographymalta/) (OMRG) of the Department of Geosciences (https://www.um.edu.mt/science/geosciences/) of the Faculty of Science (https://www.um.edu.mt/science/) is the PI on the project at the University of Malta, whilst Prof. Marion Zammit Mangion (https://www.um.edu.mt/profile/marionzammitmangion) (Department of Physiology and Biochemistry (https://www.um.edu.mt/ms/physbiochem/), Faculty of Medicine and Surgery (https://www.um.edu.mt/ms/)), Dr Adam Gauci (https://www.um.edu.mt/profile/adamgauci) and Mr Alessio Marrone (https://www.um.edu.mt/profile/alessiomarrone) (both based at Geosciences) and Mr Neil Cutajar (https://www.um.edu.mt/profile/neilcutajar) (Physiology and Biochemistry) are active participants within the implementation of the same project.

Further details about the project can be gleaned online (https://bluepartnership.eu/projects/waste-taste-exploring-innovative-food-applications-postharvest-fish-losses) or through the project website (https://wastetotaste.eu).

Quicklinks