

PUBLICATIONS FROM INTERNATIONAL ORGANIZATIONS ON PUBLIC HEALTH

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

Assessment of agricultural plastics and their sustainability: A call for action. Rome: Food and Agriculture Organization of the United Nations 2021; 160 p. ISBN 978-92-5-135402-5. Over the last 70 years, the use of plastics in agri-food systems and food value chains has become pervasive. Low-cost and adaptable plastic products have crept into every part of the food systems – from fishing gear and tree guards to greenhouses. While they can increase productivity and efficiency in all agricultural sectors and help minimize food loss and waste, plastics are a major source of contamination. This report presents the results of a study on agricultural plastic products used globally in a range of different value chains. The investigation covered all sectors under FAO's mandate: crop production, livestock, aquaculture, fisheries and forestry, including subsequent processing and distribution and assessed the types and quantities of plastic products, their benefits and trade-offs. Sustainable alternative products or practices were identified for products assessed as having high potential to cause harm to human and ecosystem health or having poor end-of-life management. This report is based on data derived from peer-reviewed scientific papers, governmental and non-governmental organization's research reports, as well as from industry experts, including relevant trade bodies. Its recommendations were verified during extensive consultation and review with FAO and external experts. This report serves as a loud call for coordinated and decisive action to facilitate good management practices and curb the disastrous use of plastics across the agricultural sectors.

Climate change, biodiversity and nutrition nexus. Evidence and emerging policy and programming opportunities. Rome: Food and Agriculture Organization of the United Nations and World Health Organization 2021; 74 p. ISBN: 978-92-5-134920-5. Humankind is facing a perfect storm of climate change, biodiversity loss, and multiple forms of malnutrition (stunting, wasting, micronutrient deficiencies, and obesity) coexisting in the same country, community, household, and even individual. Challenges from each of these areas are well known and recognized, but what seems to be missing in many development and policy circles is a recognition that food is at the centre of all three of these issues. This working paper highlights the linkages between climate change, biodiversity loss and malnutrition, using an approach that puts food at the centre as the single strongest lever to optimize human health and

environmental sustainability. This paper identifies entry points within agri-food systems to improve biodiversity and diets, two levers that can be used to enhance nutrition and optimize environmental sustainability while ensuring social equity, especially of the most vulnerable people. Based on these findings, the study makes a number of recommendations for concrete actions by key stakeholders – governments, academia, civil society, private sector, and development partners – to build resilient, inclusive, and sustainable agri-food systems.

Microbiological hazards in spices and dried aromatic herbs. Meeting report. Microbiological Risk Assessment Series No. 27. Rome: Food and Agriculture Organization of the United Nations and World Health Organization 2022; 63 p. FAO ISBN: 978-92-5-135792-7, WHO ISBN 978-92-4-004518-7 (electronic version), WHO ISBN 978-92-4-004519-4 (print version). Spices and dried aromatic herbs impart flavour when added to food, and they may include many parts of the plant, including berries, flowers, leaves, roots and seeds. A number of different pathogens have been found in spices on the market, especially *Salmonella* spp., *B. cereus* and *C. perfringens*. There have also been several disease outbreaks associated with spices and dried aromatic herbs. This Report is the result of the FAO/WHO Joint Expert Meeting on Microbiological Risk Assessment (JEMRA) which considered the global evidence on the burden of illness, prevalence and concentration of selected microbial hazards with respect to various spices and dried aromatic herbs, and interventions aimed at controlling them in these commodities.

INTERNATIONAL SCIENCE COUNCIL (ISC)

Global Risks Perception Report 2021. Paris: Future Earth, Sustainability in the Digital Age, and International Science Council 2021; 27 p. There is increasing recognition across multiple sectors of society that the global risks we face are increasingly complex, uncertain, and systemic. The Global Risks Perceptions Initiative strives to capture and analyse the perceptions on global risk of different scientific communities with the aim of sparking and informing a pluralistic dialogue around risks that draws on a diversity of experience and knowledge. This report shares the findings of the second iteration of the Global Risks Scientists' Perceptions survey. In repeating the exercise first conducted in 2019, the project team recognizes the importance of revisiting risk perceptions over time. In particular, given the manifestations of global risks which have taken

place since 2019, the time is ripe to reassess scientists' perceptions of global risks as a critical contribution to dialogues about potential solutions.

Drury, L. 2022. **The normalization of preprints.** Paris: International Science Council 2022; 14 p. The last few years have seen an explosive growth in the use of preprints and the associated preprint servers by large sections of the scientific community. This ISC Occasional paper addresses the history of the preprint, its advantages and potential disadvantages, and concludes with some recommendations for how the growing acceptance of preprint posting should be handled within academia and the changes in cultural norms (in other words its normalization) that this entails. This article is part of a series of publications from the International Science Council as part of the Future of Scientific Publishing project, exploring the role of publishing in the scientific enterprise, and asking how the scholarly publishing system can maximize benefit to global science and to wider audiences for scientific research.

UNITED NATIONS ENVIRONMENTAL PROGRAMME (UNEP)

Reducing Consumer Food Waste Using Green and Digital Technologies. Copenhagen and Nairobi: United Nations Environmental Programme 2021; 96 p. ISBN 978-87-93458-06-2. The world is facing a food-waste crisis. It is estimated that 931 million tonnes of food were wasted by households, retailers, restaurants and other food services in 2019. Around 61% of this waste occurs within households. Reducing food waste offers multiple benefits for people and the planet, contributing to improving food security, cutting pollution, saving money, reducing the pressures on nature and climate, and creating opportunities for economy and society. This report provides an overview of the causes of consumer food waste and the opportunities for reducing it through different means: behavioural change, technological solutions, and public and private initiatives to mitigate the problem. This study aims to improve understanding of how green and digital technologies could be used to reduce consumer food waste and what could be done to further unlock this potential. By combining global research cutting across multiple disciplines with city case studies, it aims to provide a comprehensive and integrated approach to support countries and cities in combating food waste and in "Building Back Better" a more sustainable economy.

Guidance on Policy and Legislation for Integrated Waste Management during a Pandemic. Nairobi: United Nations Environmental Programme 2022; 93 p. ISBN 978-92-807-3925-1. The Guidance on Policy and Legislation for Integrated Waste Management during a Pandemic provides support to countries in their efforts to develop or revise their legislation and policies to be better prepared for and respond to health and environment risks associated with waste management in case

of a future pandemic. The Guidance presents the elements of framework measures that could be adopted by countries (or used as a basis for revision of existing structures) to enhance preparedness to deal with waste management challenges in future pandemic scenarios. Rather than recommending a one-size-fits all approach, the guidance offers also a checklist with a menu of options for countries to consider for inclusion in pandemic waste legislation and policy guidelines, recognizing the varying context for application in different countries.

EUROPEAN FOOD SAFETY AUTHORITY (EFSA)

European Food Safety Authority (EFSA), Luis Carrasco Cabrera and Paula Medina Pastor. **The 2020 European Union report on pesticide residues in food.** EFSA Journal 2022; 20(3): 7215, 57 p. Under European Union legislation (Article 32, Regulation (EC) No 396/2005), the EFSA provides an annual report which examines pesticide residue levels in foods on the European market. This report is based on data from the official national control activities carried out by EU Member States, Iceland and Norway and includes a subset of data from the EU-coordinated control programme, which uses a randomised sampling strategy. For 2020, 94.9% of the overall 88,141 samples analysed fell below the maximum residue level (MRL), 5.1% exceeded this level, of which 3.6% were non-compliant, i.e. samples exceeding the MRL after taking the measurement uncertainty into account. For the subset of 12,077 samples analysed as part of the EU-coordinated multiannual control programme, 1.7% exceeded the MRL and 0.9% were non-compliant. To assess acute and chronic risk to consumer health, dietary exposure to pesticide residues was estimated and compared with health-based guidance values. Dietary exposure to pesticides for which health-based guidance values were available is unlikely to pose a risk to EU consumer health. In the rare cases where dietary exposure for a specific pesticide/product combination was calculated to exceed the health-based guidance value, and for those pesticides for which no health-based guidance value could be established, the competent authorities took appropriate and proportionate corrective measures to address potential risks to consumers. Recommendations are proposed to increase the effectiveness of European control systems, thereby continuing to ensure a high level of consumer protection throughout the EU.

EFSA (European Food Safety Authority) and ECDC (European Centre for Disease Prevention and Control). **The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2019-2020.** EFSA Journal 2022; 20(3):7209, 197 p. Data on antimicrobial resistance (AMR) in zoonotic and indicator bacteria from humans, animals and food are collected annually by the EU Member States (MSs), jointly analysed by the EFSA and the ECDC

and reported in a yearly EU Summary Report. The annual monitoring of AMR in animals and food within the EU is targeted at selected animal species corresponding to the reporting year. The 2020 monitoring specifically focussed on poultry and their derived carcasses/meat, while the monitoring performed in 2019 specifically focused on fattening pigs and calves under 1 year of age, as well as their derived carcasses/meat. This report provides an overview of the main findings of the 2019-2020 harmonised AMR monitoring in the main food-producing animal populations monitored, in carcase/meat samples and in humans. Where available, monitoring data obtained from pigs, calves, broilers, laying hens and turkeys, as well as from carcase/meat samples and humans were combined and compared at the EU level, with particular emphasis on multidrug resistance, complete susceptibility and combined resistance patterns to critically important antimicrobials, as well as *Salmonella* and *E. coli* isolates possessing ESBL-/AmpC-/carbapenemase phenotypes. The key outcome indicators for AMR in food-producing animals, such as complete susceptibility to the harmonised panel of antimicrobials in *E. coli* and the prevalence of ESBL-/AmpC-producing *E. coli* have been specifically analysed over the period 2014–2020.

WORLD HEALTH ORGANIZATION (WHO)

Report of the technical consultation on measuring healthy diets: concepts, methods and metrics. Geneva: World Health Organization 2021; 73 p. ISBN 978-92-4-004027-4 (electronic version) ISBN 978-92-4-004028-1 (print version). Food systems and diets are changing everywhere and monitoring the healthfulness of diets at global and national levels is becoming increasingly important. Better measurement and monitoring are needed to support governments in establishing policies and programmes to promote healthy diets and assess the effectiveness of these actions. There are critical gaps in global, regional, and national monitoring of characteristics and trends in diets. Currently, there are no harmonized metrics for tracking how diets around the world are evolving and the impact of these changes on human health and the environment. In order to promote increased communication, coordination, and collaboration to accelerate progress toward identifying or developing a parsimonious set of metrics for global monitoring of healthy diets, a technical consultation was organized by the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM) and the Food and Agriculture Organization of the United Nations (FAO), with technical and logistical support from USAID Advancing Nutrition. Eighty-five expert participants representing a wide range of institutions, geographic areas, and roles in the data value chain, engaged in the consultation from 18–20 May 2021. This report provides a summary of the consultation presentations, working group contributions, discussions and recommendations. The report highlights three overarching topics addressed during the consultation: overview of

global diet monitoring and prioritization of metric criteria and characteristics; methods, tools and metrics to measure diets; and definition and prioritization of next steps for identifying a global metric for monitoring of healthy diets.

WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention, second edition: use of mRNA tests for human papillomavirus (HPV). Geneva: World Health Organization 2021; 63 p. ISBN 978-92-4-004043-4 (electronic version) ISBN 978-92-4-004044-1 (print version). This WHO guideline is designed to help countries make faster progress, more equitably, on the screening and treatment of cervical cancer. This document includes guidance on an important additional option for cervical screening, the use of mRNA (messenger RNA) HPV testing. This gives countries additional options when considering which type of HPV nucleic acid amplification tests (NAAT) to use in their screening programs.

Health effects of the use of non-sugar sweeteners: a systematic review and meta-analysis. Geneva: World Health Organization 2022; 210 p. ISBN 978-92-4-004642-9 (electronic version) ISBN 978-92-4-004643-6 (print version). Non-sugar sweeteners have been developed as an alternative to sugars and are widely used both as an ingredient in pre-packaged foods and beverages and added to food and beverages directly by the consumer. Individual non-sugar sweeteners undergo toxicological assessment by the by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and other authoritative bodies to establish safe levels of intake (i.e. acceptable daily intake or ADI). While results of randomized controlled trials have generally suggested non-sugar sweeteners may have little impact on glucose metabolism and result in lower body weight when coupled with energy restriction in the short-term, there is no clear consensus on whether non-sugar sweeteners are effective for long-term weight loss or maintenance, or if they are linked to other long-term health effects at intakes within the ADI. This systematic review brings together the most current scientific evidence on health effects of non-sugar sweetener use.

Guidelines for drinking-water quality: Fourth edition incorporating the first and second addenda. Geneva: World Health Organization 2022; 614 p. ISBN 978-92-4-004506-4 (electronic version) ISBN 978-92-4-004507-1 (print version). The fourth edition of the World Health Organization's Guidelines for drinking-water quality (GDWQ) builds on over 60 years of guidance by WHO on drinking-water quality, which has formed an authoritative basis for the setting of national regulations and standards for water safety in support of public health. It is the product of significant revisions to clarify and elaborate on ways of implementing its recommendations of contextual hazard identification and risk management, through the establishment of health-based targets, catchment-to-consumer water safety plans and independent surveillance.