

THE GOVERNMENT OF THE REPUBLIC OF CROATIA

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Pursuant to Article 81, paragraph 3 of the Agriculture Act (Official Gazette of the Republic of Croatia, number 118/18), at the session held on 19 June 2019, the Government of the Republic of Croatia adopted the following

DECISION

ON ADOPTION OF THE PLAN FOR PREVENTION AND REDUCTION OF FOOD WASTE GENERATION OF THE REPUBLIC OF CROATIA 2019 – 2022

I.

The Plan for Prevention and Reduction of Food Waste Generation of the Republic of Croatia 2019 – 2022 is hereby adopted

II.

The Plan for Prevention and Reduction of Food Waste of the Republic of Croatia 2019-2022 is enclosed as appendix to the subject Decision and is an integral part thereof.

III.

It is the responsibility of the Ministry of Agriculture to inform all relevant authorities involved in the implementation of the Plan referred to in item I. of this Decision on the adoption of this Decision.

IV.

The subject Decision shall enter into force on the date of its adoption, and it shall be published in the “Official Gazette of the Republic of Croatia”.

Class: 022-03/19-04/237

Reg.No.: 50301-25/14-19-4

Zagreb, 19 June 2019

Prime Minister

Andrej Plenković, M.Sc., m.p.

PLAN FOR PREVENTION AND REDUCTION OF FOOD WASTE GENERATION OF THE REPUBLIC OF CROATIA 2019 – 2022

1. LEGISLATIVE FOUNDATION

Pursuant to Article 81, paragraph 3 of the Agriculture Act (Official Gazette of the Republic of Croatia, number 118/18), The Ministry of Agriculture drafts and proposes to the Government of the Republic of Croatia a four-year Plan for Prevention and Reduction of Food Waste Generation of the Republic of Croatia (hereinafter: the Plan).

2. INTRODUCTION

For various reasons, food is thrown away and wasted throughout the entire food supply chain, from primary production, processing, distribution, storage, trade to consumption.

The need to prevent and reduce food waste, while ensuring food safety, is a topic of increasing public interest. The resulting food losses represent an undesirable occurrence for ethical, economic and environmental reasons, and most importantly, for reasons related to ensuring sufficient food for all people. The area of food waste prevention has been singled out as a priority area in the communication on the circular economy: ^[1](https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0023.02/DOC_1&format=PDF)

“Closing the loop – An EU action plan for the Circular Economy”, adopted by the European Commission in 2015. According to a study conducted as part of the Commission Project - FUSIONS^[2] (<http://www.eu-fusions.org/phocadownload/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf>) (*Food Use for Social Innovation by Optimizing Waste Prevention Strategies*), approximately 88 million tonnes of food are wasted annually in EU Member States. According to the data collected by the Ministry of Environment and Energy, it is estimated that approximately 400,000 tonnes of food waste is disposed of annually at landfills in the Republic of Croatia (hereinafter: RoC). Due to the importance of these issues, the Republic of Croatia, together with other EU Member States, has committed itself to achieving the goal set out in the EU and UN 2030 Agenda for Sustainable Development with the relevant Sustainable Development Goals, specifically Target 12.3 Ensure sustainable consumption and production patterns, with the specific aim to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains.

The provisions of Article 81, paragraph 1 of the Agriculture Act stipulate that the Plan shall be prepared for the purpose of preventing and reducing the generation of food waste. The subject Plan was prepared following the obligation prescribed by the Agriculture Act and it represents an endeavour to bring together in one place all measures and activities that shall contribute to the prevention of food waste generation in all stages of the food chain, from primary production through processing, trade, the hospitality sector, institutional kitchens to households. The Plan also represents the first comprehensive document of such kind on these issues in the Republic of Croatia.

The definition of "food waste" needs to be clarified for the purpose of implementing this Plan. Food waste encompasses all food as defined in Article 2 of Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (OJ L 31, 1 February 2002) (hereinafter: Regulation (EC) No. 178/2002) that has become waste, as defined by a special regulation governing waste management.

Article 7, paragraph 1 of the Act on Sustainable Waste management (Official Gazette of the Republic of Croatia, No. 94/13, 73/17 and 14/19) prescribe that, in order to prevent waste generation and apply waste management regulations and policies, the order of priority in waste management shall apply. Below, Figure 1 presents the order of priority in waste management, whereby prevention of waste generation represents the foremost priority.

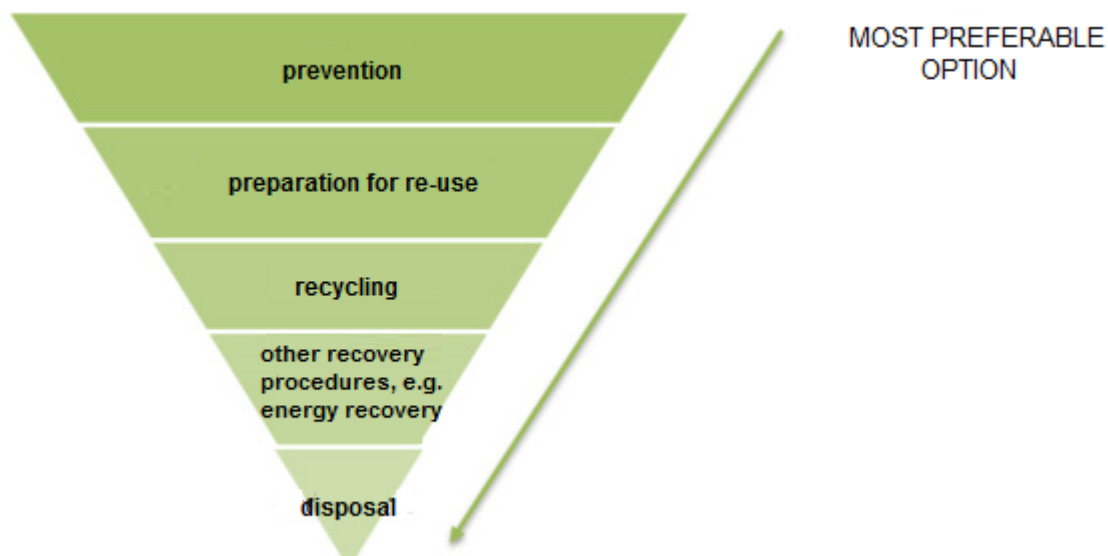


Figure 1. Order of priority in waste management

3. OBJECTIVE OF THE PLAN

The objective of the Plan is to contribute to the realisation of the goals set out in the EU and UN 2030 Agenda for Sustainable Development with the relevant Sustainable Development Goals, specifically Target 12.3 Ensure sustainable consumption and production patterns, with the specific aim to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains. The stated target shall be realised by identifying and implementing critical measures that shall contribute to prevention and reduction of food waste generation along the entire food chain. The implementation of the measures and activities foreseen by the Plan partly contributes to the achievement/realisation of Goal no. 2 of the Agenda: "End hunger".

4. DETERMINANTS OF THE PLAN

The Plan and activities are based on an analysis of critical measures and stakeholders, and through determinants for action, specifically:

- Improvement of the legislative framework, including education thereon and preparation of guidelines to clarify provisions and facilitate the process of food donation
- Contribution to facilitating communication among the food donation system stakeholders
- Preparation of the Feasibility Study for the Food Bank in the Republic of Croatia and, depending on the results of the Study, networking of target groups in order to initiate further activities
- Encouraging better use of EU funds in the field of food waste prevention and food donation
- Coordinated action aimed at food producers, distributors, traders, the hospitality sector and institutional kitchens by means of preparing sectoral manuals, conclusion of voluntary agreements on food waste reduction, food donation and fostering motivation by means of awarding special acknowledgements to the most prominent examples of good practice in food waste prevention
- Establishment of a digital Platform for sharing personal experiences, media campaigns, a brochure in written form by means of which stakeholder education shall be conducted, i.e. direct and indirect action aimed at the final consumer in the form of raising awareness of food waste issues and understanding the expiration date printed on food labels
- Educating pre-school and school-age children and professional training of educational staff, and
- Active and continuous monitoring of impact indicators of the measures provided for by the Plan.

5. MEASURES AND ACTIVITIES

5.1 Measure 1. Improving the food donation system in the Republic of Croatia

Food donation is one of the tools useful for contributing to the realisation of the objectives set out in Directive 2008/98/EC, as last amended by Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (OJ L 150, 14 June 2018). Economic instruments and other measures should be used to encourage the application of the order of priority in waste management. One of the measures should be to facilitate the food donation procedure. Food donation supports the fight against poverty and hunger in the world, and at the same time it is an efficient tool for redistributing surplus food, making donation one of the most preferable options for the goal of overall food waste reduction.

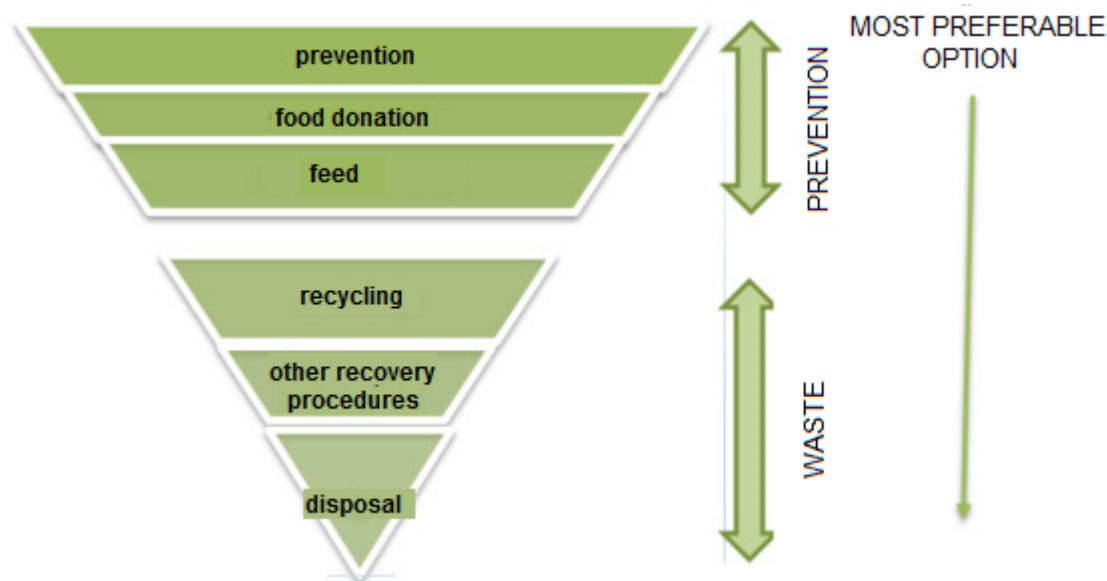


Figure 2. Food waste hierarchy (WRAP- UK Waste and Resources Action Programme) ^[3] (<http://www.wrap.org.uk/content/why-take-action-legalpolicy-case>)

In order to review the efficiency of the current status of the food donation system in the RoC, in cooperation with the Faculty of Food Technology and Biotechnology of the University of Zagreb, the Ministry of Agriculture conducted a study on food donation in the RoC, and the Report on the results of the study on food donation in the RoC was prepared and published ^[4] (https://poljoprivreda.gov.hr/UserDocsImages/dokumenti/hrana/doniranje_hrane/Izvjesce_o_doniranju_hrane_u_RH_-_listopad_2017.pdf). The aim of the study was to determine whether food business operators have food surpluses, how they handle them, whether they donate food, whether they are familiar with the legislative framework for food donation, how they evaluate it and what would encourage them to donate more food. The respondents were grouped into primary producers, food producers, traders, hospitality businesses, institutional kitchens, and food donors.

Food surpluses have been found to exist along the entire food chain. Operators donate food to varying degrees. However, the concern is the proportion of food that is disposed of at a landfill. Familiarity with the legislative framework for donation is quite weak, and approximately 50% of respondents consider it to be restrictive of food donation. The most common barriers to food donation have been identified, which include responsibility for donated food, food regulations, lack of knowledge on whether certain foods may be donated, lack of infrastructure (food storage and transportation), insufficient knowledge on how to get started and the inability to identify non-profit organisations that may be the recipients of food donation. When asked what would encourage them to donate more food, the majority of respondents answered that advice and best practices for food safety in the food donation chain and reliable partners in the food donation chain (non-profit organisations with expertise in the food business), as well as information on such organisations and changes to the legislative framework, would be helpful.

5.1.1 Activity 1. Change of legislation regarding the food donation system

Executed by: Ministry of Agriculture

Collaborators: Ministry of Health, Ministry of Finance, Ministry for Demography, Family, Youth and Social Policy, Croatian Chamber of Economy, Croatian Chamber of Trades and Crafts, Croatian Employers' Association, Croatian Network of Social Supermarkets, Croatian Red Cross, Croatian Caritas, civil society organisations

Deadline: 2019

The food donation system in the Republic of Croatia is regulated by the Agriculture Act (Official Gazette of the Republic of Croatia, number 118/18) and the Ordinance on the Conditions, Criteria and Ways of Donating Food and Feed (Official Gazette 119/15) (hereinafter: Ordinance).

The results of the research on food donation in the Republic of Croatia demonstrated, inter alia, that there is not only a need for education on the legislative framework, but also for modification of the current legislative framework. Also, one of the research results demonstrated that the provisions of the Ordinance should be amended regarding the deadlines for the eligibility for tax benefits on grounds of donated food in order to further encourage food business operators to donate food and facilitate its implementation. The amendments should allow for the realisation of tax benefits until the final day of the food shelf life, so that the food prepared for donation does not have to be separated further by expiration dates and the deadlines prescribed by the Ordinance.

It is also necessary to allow for the sale and donation of food after the expiration of the "best before" date, provided that the food is safe, in order that the food that is safe for consumption is not unnecessarily wasted.

Furthermore, it is necessary to expand the circle of ultimate recipients to whom food can be donated and to reduce the administrative burden on donors and intermediaries participating in the food donation chain. The alleviation of administrative burden should be carried out by abolishing or reducing the frequency of submission of certain reports and/or records to the Ministry of Agriculture.

Proposals of legislative acts and by-laws are drafted within expert working groups and/or committees, and for this reason these bodies should be established and they should involve experts from different fields, including the civil sector, taking into account the multidisciplinary nature of food waste and food donation in order to consider the issues from different perspectives and create high-quality and sustainable solutions.

5.1.2 Activity 2. Organising education courses on the legislative framework for food donation

Executed by: Ministry of Agriculture, Ministry for Demography, Family, Youth and Social Policy

Collaborators: Croatian Chamber of Economy, Croatian Chamber of Trades and Crafts, Croatian Chamber of Agriculture, Croatian Employers' Association, Croatian Network of Social Supermarkets, Croatian Red Cross, Croatian Caritas, civil society organisations

Deadline: 2019 2022

Research on food donation in the RoC has shown that some stakeholders are not familiar with the applicable legislative framework in the field of food donation, which confirms the need for continuous education on this topic.

Following the entry into force of modifications to the legislative framework in the food donation system, it is necessary to organise educational workshops and inform current and potential new stakeholders in the food donation chain about the modifications. The obligations of system stakeholders should be presented in a clear and understandable way and the advantages of food donation over other forms of handling existing food surpluses should be emphasised. Stakeholders should be advised that the redistribution of food surpluses resulting from food being inappropriate for placing on the market due to defects in quality, packing, labelling, mass or other similar reasons, which do not affect food safety, reduces the amount of food that could potentially be disposed of as waste, food is distributed to those in need, and tax recognition of a shortage of goods is made possible in tax regulations for donating such food.

The planned education courses shall be aimed at donors and intermediaries in the food donation chain, and they shall be thematically tailored to the interests of a certain target group. In addition to the interpretation of the provisions of food donation regulations, the education courses provided for the intermediaries shall be enriched with content related to the possibilities and benefits of using the financial resources from European funds intended for the most deprived. The education courses shall be organised in cooperation with the Ministry for Demography, Family, Youth and Social Policy.

5.1.3 Activity 3. Preparation of a Manual on Food Donation, including donation and food business, food donation and tax regulations

Executed by: Ministry of Agriculture, Ministry of Health, Ministry of Finance, Croatian Agency for Agriculture and Food

Collaborators: Croatian Chamber of Economy, Croatian Chamber of Trades and Crafts, Croatian Chamber of Agriculture, Croatian Employers' Association, Croatian Network of Social Supermarkets, Croatian Red Cross, Croatian Caritas, civil society organisations

Deadline: 2019

In 2017, the European Commission published general guidelines on food donation that clarify the application of food law in the context of food donation ^[5] (https://poljoprivreda.gov.hr/UserDocsImages/documents/food/donation_food/EU_Vodic_za_doniranje_hrane.pdf). Also, as a result of the work of the EU Platform on Food Losses and Food Waste, a food donation sub-group, publication of a document that follows the structure of these Guidelines and provides an overview of the best practices of Member States for each chapter covered in the Guidelines is in preparation. Regardless of the publication of these guidelines and the accompanying document containing Member States' practices, the European Commission further encourages Member States to develop national manuals and guidelines on food donation.

Pursuant to Article 3, paragraph 8 of Regulation (EC) No. 178/2002, food donation is considered as placing on the market of food and is subject to the entirety of food law. For this

reason, manuals and guidelines in the field of food donation need to be prepared. The objective of the Manual is to clarify legislative provisions, both of EU and national legislation, to help remove obstacles in the food donation system and to facilitate compliance with legislative provisions by all stakeholders related to food safety and quality, hygiene, traceability, informing consumers on food, distribution of responsibilities, tax regulations etc. The Manual needs to further clarify the roles and responsibilities of food business operators in areas where national rules apply, and examples of good practice need to be provided. It is necessary to prepare an overview of steps for donors, which will lay out in a simple manner the sequence of activities from the initial wish/idea to donate through the selection of intermediaries to delivering the donation and obtaining tax benefits. For intermediaries, it is necessary to describe the rules of the food safety and quality system in a simple manner, taking into account the activities of intermediaries in the food donation chain, since, for example, there are differences in the hazard analysis and in determining critical control points if a certain food business operator only stores prepacked food or supplies raw materials and performs certain technological processes to serve the products made of those raw materials to ultimate recipients.

5.1.4 Activity 4. Establishment of an IT system for linking stakeholders in the food donation system

Executed by: Ministry of Agriculture

Collaborators: Croatian Red Cross, Croatian Caritas, Croatian Network of Social Supermarkets, civil society organisations

Deadline: 2019-2022

The results of research on food donation in the RoC have shown that the inability to identify intermediaries in the food donation chain by donors is one of the main obstacles to food donation. Also, there is a disparity between the supply and demand for food, and it is increasing from the central to the peripheral parts of Croatia. In order to make the food donation system stakeholders more visible and the distribution of surplus food more even, it is necessary to develop a software solution and establish an IT system, i.e. a Platform for Receiving and Distributing Donations. This Platform would enable the networking of all stakeholders involved, transparent distribution of donations and easier communication between intermediaries and donors. To this end, in late 2018 the Ministry of Agriculture developed an IT system (e-donation), which is a communication platform for improving interconnections and communication between donors and intermediaries in the food donation chain, through a central manager. The IT system enables donors to report surplus food to the system, and then the central system manager, in accordance with the number of ultimate recipients catered to by a certain intermediary, the geographical distance of the location and the infrastructural capacities of the intermediaries in the food donation chain, distributes the reported surplus food to selected intermediaries registered with the Ministry of Agriculture, taking into account the number of donations already allocated. Intermediaries in the food donation chain forward the food to ultimate recipients. Donors and intermediaries in the food donation chain are included in the IT system on a voluntary basis.

The implementation of the IT system commenced in November 2018 as a Ministry of Agriculture Pilot Project lasting six months, with a limited number of donors and intermediaries. After the completion of the Pilot Project, and depending on its results, the implementation of the system should be extended to the entire territory of the RoC. Benefits of using the IT system include less burden on donors, easier and more efficient communication between donors and intermediaries in the food donation chain, central management, harmonisation of supply and needs and coverage of peripheral parts of the RoC.

5.1.5 Activity 5. Food bank in the Republic of Croatia - Feasibility Study

Executed by: Ministry of Agriculture

Collaborators: academic and scientific community

Deadline: 2019

Food donation can be realised both within the food chain through redistribution centres such as the food bank and further distribution to charity non-profit organisations, and directly from the food chain to charity non-profit organisations.

Considering that in many countries food banks have proven to be an effective model for improving the food donation system, it is necessary to investigate the possibilities for establishing it in the RoC.

To this end, in 2018 the Ministry of Agriculture initiated activities related to the preparation of a Feasibility Study for the Food Bank in the RoC, which should provide answers on the existing models and ways in which food banks operate in the EU Member States, as well as propose the optimal suggestion of the Food Bank model in the RoC (ownership, organisational structure, financing, logistics, transport and storage solutions), taking into account the existing infrastructure (availability, capacity and suitability of storage space, means of transport and logistic solutions) and the structure of staff (volunteers/employed) involved in the food donation chain.

5.1.6 Activity 6. Food bank in the Republic of Croatia – founding

Executed by: Ministry of Agriculture, Croatian Red Cross, Croatian Caritas, Croatian Network of Social Supermarkets, civil society organisations

Collaborators: Croatian Chamber of Economy, Croatian Chamber of Trades and Crafts, Croatian Employers' Association, Croatian Chamber of Agriculture

Deadline: 2019 2022

Depending on the results of the Feasibility Study for the Food Bank in the RoC, conducting networking of target groups underlined by the results of the Study should begin in order to initiate further activities. Food banks throughout the world are not state-owned. However, it is recommended that charity non-profit organisations, donors and the Government of a particular country participate in planning the founding and the first campaign of the Food Bank.

5.1.7 Activity 7. Encouraging the use of funds for the purpose of procurement and allocation of donated food (FEAD – Fund for European Aid for the Most Deprived and the European Social Fund).

Executed by: Ministry for Demography, Family, Youth and Social Policy

Collaborators: Ministry of Agriculture, civil society organisations, Croatian Red Cross, Croatian Caritas, Croatian Network of Social Supermarkets

Deadline: 2019 2022

A regulation of the European Parliament and of the Council of the European Union establishing the Fund for European Aid to the Most Deprived (FEAD) entered into force on 12 March 2014. The FEAD was established for the period from 1 January 2014 to 31 December 2020, with an amount of EUR 36.7 million provided for in the aforementioned period. FEAD funding contributes to poverty reduction, especially severe poverty such as child poverty, homelessness and food shortages. Through FEAD, it is possible to provide non-financial aid to the most deprived persons, such as food and basic material aid, as well as social inclusion activities aimed at the most deprived persons. Concerning the aspect of food donation, FEAD may be used to finance procurement, transport, storage and distribution of food, as well as technical assistance. In Member States, the FEAD fund operates with the assistance of partner organisations - public authorities or non-profit organisations in charge of distributing aid or taking action to achieve social inclusion.

Concerning the aspect of food donation, FEAD resources may cover the costs of partner organisations incurred in collecting donated food from donors, transporting, storing and distributing it to the most deprived. The costs of redistribution may not exceed the costs of purchasing food. In the context of technical assistance, applicants may express the need for technical assistance if it contributes to the implementation of targeted activities. This may consist of renting or purchasing equipment to redistribute food more efficiently (refrigerators, pallets, warehouses) or purchasing food transport vehicles.

Eligible applicants are non-profit legal entities for whom a competent authority issued a decision authorising the continued collection and provision of humanitarian aid. FEAD can also support activities intended to raise donors' awareness of donor partner organisations. The Ministry of Agriculture keeps the Register of Intermediaries in the Food Donation Chain. Intermediaries are non-profit organisations that are most often engaged exclusively in charity work and contribute to the distribution of food to the most deprived. For this reason, it is envisaged to further encourage and inform intermediaries in the food donation chain regarding the possibilities of utilising financial resources from the FEAD Fund.

In the upcoming 2021-2027 financial period, FEAD activities shall be regulated under the new European Social Fund, which will bring together more existing social funds, as well as certain regulations in the subject field. Following the announcement of each tender, representatives of the Ministry for Demography, Family, Youth and Social Policy shall organise informative workshops for potential applicants, in which potential applicants shall be informed in detail about the announced tender and the application process. Education courses and provision of information on the possibilities and benefits of utilising financial resources from the future

European Social Fund shall also be implemented within the framework of the education courses referred to in activity under number 5.1.2, which shall be conducted in cooperation with the Ministry of Agriculture at educational workshops dedicated to the legislative framework for food donation.

5.1.8 Activity 8. Carrying out a food donation campaign through raising awareness of all stakeholders, social sensitivity and social responsibility

Executed by: Ministry of Agriculture, Ministry for Demography, Family, Youth and Social Policy

Collaborators: Ministry of Finance, Croatian Agency for Agriculture and Food, Croatian Chamber of Economy, Croatian Chamber of Agriculture, Croatian Chamber of Trades and Crafts, Croatian Employers' Association, Croatian Red Cross, Croatian Caritas, Croatian Network of Solidarity Supermarkets, civil society organisations

Deadline: 2019 2022

In order to sensitise the public concerning promoting food donation and poverty prevention, it is necessary to carry out a national campaign that would result in social awareness and the necessity of redistributing food surpluses to the most deprived. The subject activity shall be focused primarily on food business operators, given their crucial role in the food donation system, but thereby not diminishing the role of the general public, or the individual as a member of society. Given the different business conditions of food business operators, as well as the diversity of their products, the campaign would use different channels and tools to communicate goals. In addition to informative messages via leaflets, radio, television and other electronic media and social networking sites, it is especially important to contribute, by using appropriate tools, to interactive communication, detection of potential problems, as well as finding conceptual solutions in order to strengthen the food donation system and ways of implementation *in situ*.

In the new financial perspective - in 2021, when the implementation of the new European Social Fund begins, representatives of the Ministry for Demography, Family, Youth and Social Policy shall prepare brochures, i.e. promotional materials aimed at emphasising the importance of food donation.

In addition to the activities mentioned above, campaigning shall include encouraging voluntary agreements on redistribution of food surpluses between donors and intermediaries in the food donation chain. The development of partnerships and dialogue between intermediaries and food donors should be encouraged in order to contribute to optimising the redistribution of food surpluses through the systematic and planned redistribution, i.e. donation of food surplus to those in need. Activities shall be undertaken to raise awareness of the need and benefits of mutual cooperation between donors and intermediaries. For donors, the benefit is manifested in planned disposal of food surpluses and optimisation of time spent on organising a donation (e.g. shortening the time spent on seeking intermediaries who are able to receive a donation). Intermediaries, on the other hand, can count on the continuous inflow of a certain amount of donated food, and thus more effectively plan the distribution thereof.

5.2 Measure 2. Encouraging the reduction of food waste generation

5.2.1 Activity 1. Cooperation with sectoral associations – preparation of sectoral manuals for the prevention of food waste generation

Executed by: Ministry of Agriculture, Croatian Agency for Agriculture and Food

Collaborators: academic and scientific community, Croatian Chamber of Economy, Croatian Chamber of Trades and Crafts, Croatian Chamber of Agriculture, Croatian Employers' Association

Deadline: 2020 2021

According to the food waste management hierarchy, priority is given precisely to the prevention of food waste generation, and thus to the efficient production, processing and storage of food with minimal surplus generation.

Each stage of food production, processing and distribution requires a different approach to solving the problem of excessive food wastage. It is therefore necessary to ensure the preconditions for food not to be unnecessarily wasted.

For example, in case of generating food waste in primary production (production and cultivation of primary agricultural products in plant production, livestock farming and fisheries), it has been established that a large amount of food waste is due to inadequate storage, and food handling in general and/or non-harvested fruits. Furthermore, the European Commission Market study on date marking and other information provided on food labels and food waste prevention^[6](<https://publications.europa.eu/en/publication-detail/-/publication/e7be006f-0d55-11e8-966a-01aa75ed71a1/language-en>) (hereinafter: the Study), published in February 2018, demonstrated that almost 10% of the 88 million tonnes of food waste generated annually at the EU level was linked to the expiration date marking on food. Based on the results of the Study, one of the conclusions is that food waste, which is linked to expiration date indications, is likely to be reduced if “use by” is only used in cases of foods that is reasonably likely to pose a risk to consumer health, if the expiration date of the product stated on the food label is reasonable and is not unnecessarily shortened due to the marketing and promotion needs related to the product, and if there is consistency in food storage in retail, and consumer instructions on the temperatures at which the products should be stored in the household.

Given the specificities and different reasons for food wastage in different sectors, specific sectoral manuals focused on these issues should be prepared.

5.2.2 Activity 2. Encouraging the sale of food directly from the producers

Executed by: Ministry of Agriculture

Collaborators: Croatian Chamber of Economy, Croatian Chamber of Trades and Crafts, Croatian Chamber of Agriculture, Croatian Employers' Association, units of local and regional self-government

Deadline: 2019 2022

In the classic food chain, where food goes from producers or processors, through distributors to retailers or hospitality businesses, because of the greater number of food business operators,

longer storage, transport and handling of food, the possibility of damage, spoilage or deterioration increases, making food unsuitable for sale and contributing to increasing the total amount of food waste.

Due to reasons stated above, this Plan provides for the activity of encouraging the sale of food directly from the producers. The purpose of this activity is to encourage and increase direct communication between producers and consumers with a view to selling food directly from producers to consumers. This shortens the food supply chain and optimises the time it takes for food to reach consumers from the producer. Due to the shortening of the distribution chain, there is less potential for damage to the packaging, which can lead to food spoilage.

The Ministry of Agriculture shall, through providing support and organising various events (e.g. Autochthonous and preserved products fair etc.) encourage the direct networking of producers and consumers, thereby contributing to facilitating the direct sale of food to ultimate consumers. It is also necessary to support other initiatives intended to promote and sell local products in local areas in order to shorten and promote shorter distribution/retail chains and enable direct contacts between local food producers and the hospitality and tourism sector.

5.2.3 Activity 3. Launching a digital Platform for sharing personal experiences - good business practice in preventing and reducing food waste

Executed by: Ministry of Agriculture

Collaborators: Croatian Agency for Agriculture and Food

Deadline: 2020.

The Platform for sharing personal experiences in the field of food waste prevention should be developed and launched, which will be a system for sharing information, sharing personal experiences and best practice with information on ideas, opportunities and ways of implementing food waste prevention and reduction activities. The platform should be established for the purpose of simplifying information exchange regarding national and EU practices in the field of food waste generation prevention.

The platform would be targeted at food business operators and consumers. It is envisaged that the following may be found at a single place: blueprints for the utilisation of food scraps, advice on food storage and storage in households, interpretation of EU and national regulations in the field of food waste prevention, manuals and guidelines on the abovementioned issues, links to relevant activities and European Commission documents, as well as those of other Member States, links to open EU tenders and national funds providing information on applications, conditions and documentation required to apply for tenders for projects contributing to the prevention and reduction of food waste generation, as well as other useful information in the abovementioned field.

The Platform will provide a forum where logged in users can directly share experiences or post information about the food surplus in their household that they wish to share with those in need. Consumers who want the food offered by a user make direct contact with them and continue to agree independently regarding the take-over of food surpluses.

5.3 Measure 3. Promoting social responsibility of the food sector

5.3.1 Activity 1. Dialogue and concluding voluntary agreements with producers, processors and traders regarding the obligation to reduce food waste generation

Executed by: Ministry of Agriculture

Collaborators: Croatian Chamber of Economy, Croatian Employers' Association, Croatian Chamber of Trades and Crafts, Croatian Chamber of Agriculture

Deadline: 2020 2022

Responsibility for the prevention and reduction of food waste generation is shared among all stakeholders in the food sector. For this reason and for the purpose of realisation of the EU and UN 2030 Agenda for Sustainable Development with the relevant Sustainable Development Goals, specifically Target 12.3 Ensure sustainable consumption and production patterns, with the specific aim to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, it is necessary to achieve a high level of understanding and awareness of the issue of food waste.

To this end, cooperation and dialogue between the different stakeholders in the food chain (food business operators, chambers and associations of food business operators, packaging producers, etc.) should be encouraged in order to define obligations of the signatories to the agreements, through voluntary agreements with different stakeholders, and establish good practice focused on preventive activities regarding food waste generation, facilitate the redistribution of surplus food, i.e. donating food that would otherwise be disposed of as waste, and other activities that can contribute to improving the efficiency of the system for preventing food waste generation. This raises the awareness of the signatories of agreements regarding the necessity of taking action in order to prevent food waste generations, which will, *inter alia*, result in improving the reputation of the signatory companies as socially responsible and socially sensitive companies that care about their business and sustainable development as a whole.

The crucial objectives of concluding voluntary agreements with different stakeholders are to improve the utilisation of resources and raw materials through the prevention and reduction of food waste generation along the entire food chain, "from field to table", with the establishment of a system that enables measuring the achievements regarding reducing food waste and optimising reuse of inevitably created food surpluses. The agreements aim to strengthen cooperation and encourage the exchange of information between producers, processors, distributors, hospitality businesses, traders in order to avoid, due to insufficient planning, the creation of food stocks and thus minimise food waste that would otherwise have to be disposed of in a harmless way, thereby generating additional costs for stakeholders.

5.3.2 Activity 2. Awarding special acknowledgments for the most prominent examples of good practice in the prevention of food waste generation

Executed by: Ministry of Agriculture

Collaborators: Croatian Chamber of Economy, Croatian Employers' Association, Croatian Chamber of Trades and Crafts, Croatian Chamber of Agriculture

Deadline: 2021 2022

Following the conclusion of voluntary agreements with food business operators regarding the obligation to reduce food waste, it is necessary to develop criteria and establish a system for awarding special acknowledgements for the most prominent examples of good practice in the prevention of food waste generation in order to further motivate stakeholders and encourage commitment to meeting the goals concerning prevention and reduction of food waste generation. Since food is lost in different ways at different stages of the food chain, criteria will be defined and allocations established for: primary producers, producers, retail chains and hospitality businesses, in order to encourage reduction of food losses along the entire food chain.

5.4 Measure 4. Raising awareness and informing consumers on prevention and reduction of food waste generation

5.4.1 Activity 1. Campaign targeting consumers related to raising awareness of prevention and reduction of food waste generation

Executed by: Ministry of Agriculture

Collaborators: Environmental Protection and Energy Efficiency Fund, academic and scientific community, civil society organisations

Deadline: 2019 2022

According to a research carried out as part of a Commission project, the largest amount of food waste is generated in households (53%). For this reason, additional activities need to be focused on consumer education and awareness raising. Through strong campaigns, it is necessary to point out that unnecessary food waste is a global problem and that food is precious and its production requires the consumption of many resources that are irretrievably lost when food is wasted. Food waste in households can be reduced by questioning and changing common behaviour, i.e. well-established habits. For this purpose, campaigns with information and educational aspects need to influence consumer behaviour (at home, at school, at work, when buying groceries, at a restaurant, during free time etc.). Campaigns should especially target young people who need to grow up thinking that wasting food is not socially acceptable behaviour. This is why it is important that from their earliest childhood they grow up in an environment where food is valued and respected. It is important to encourage other stakeholders to adopt new habits, such as planned shopping, i.e. purchasing only the necessary food, cooking the optimal amount of food in relation to the number of persons and utilising the leftovers from a today's meal to prepare the next day's meal.

In 2018, the Ministry of Environment and Energy and the Environmental Protection and Energy Efficiency Fund carried out a media campaign related to communication regarding prevention of food waste generation as part of a comprehensive media campaign aimed at reducing waste generation and separate waste collection under the project: “*Za ljepšu našu*” (“*For a more beautiful Homeland*”) The project was implemented under the Operational Programme Competitiveness and Cohesion and is co-financed by EU funds. As part of the campaign and

thematically related to the reduction of food waste generation, a video, radio spot, print ads and an informative educational leaflet were made.

Raising consumers' awareness needs to be continuously pursued to achieve optimal results. The Agriculture Act stipulates that the Ministry of Agriculture is the authority that shall implement measures and activities related to the prevention and reduction of food waste generation and design and carry out an educational and information campaign related to the continuous raising of citizens' awareness of the issue of excessive food waste.

The campaign provided for by the subject Plan shall encompass preparation and advertising of a radio spot and a video on the topic of preventing food waste generation, as well as organising annual events with the aim of raising the general public's awareness of these issues and consulting on ways in which food waste may be reduced.

5.4.2 Activity 2. Initiating a campaign targeting consumers related to understanding food expiration dates and reducing food wastage

Executed by: Ministry of Agriculture

Deadline: 2020 2022

Prepacked food that is placed on the market of the RoC and other Member States must be labelled in accordance with the requirements laid down in Regulation (EU) No. 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers.

According to the aforementioned legislation, the expiration date of food is marked by the statement: ““best before” and “use by”. “Best before” indicates the date of minimum durability of the food, i.e. the date by which the food retains its expected quality, and the consumption of that food is still, for a certain period of time, possible even after the expiry of the date in question. Food should be inspected and, if it is properly stored, there are no visible signs of damage to the pre-packaging or signs of spoilage, it can still be consumed.” “Use by” marks the date by which the food is safe for consumption and after that date the food may no longer be consumed.

According to a 2015 study conducted by the Ministry of Agriculture in collaboration with the Croatian Food Agency and the Faculty of Food Technology and Biotechnology of the University of Zagreb, 2/3 of consumers understand the difference in stating expiration dates on food labels (“best before” and “use by”). However, when these consumers were asked to clarify the difference, only half of them provided correct answers.

In order for consumers to properly interpret the expiration date of prepacked food and to, as a result of being informed better, continue to use the food after the expiry of its “best before” date, either through direct consumption or through processing of food into, for example, fruit spreads, juices, cakes etc., thus reducing the amount of food waste, a campaign should be launched to show to the general public the differences in the marking of food expiration dates and the possibility of consuming food after the “best before” date, in accordance with the recommendations provided in Study on Food Durability Dates prepared by the Croatian Agency for Agriculture and Food. The campaign shall encompass the creation of TV and radio spots,

posts on websites, social networking sites etc. These activities began as early as 2018 when the Croatian Agency for Agriculture and Food produced and aired the video “To use or not to use after”, explaining to consumers the differences in the meaning of different indication of expiration dates on food.

5.4.3 Activity 3. Educating pre-school and school-age children on the issue of food waste prevention

Executed by: Ministry of Agriculture, Ministry of Science and Education

Collaborators: Croatian Agency for Agriculture and Food, Education and Teacher Training Agency, Agency for Vocational Education and Training and Adult Education, academic and scientific community, civil society organisations

Deadline: 2020 2022

Preschool, primary education, and secondary education programmes should include topics concerning the importance of sustainable community development, and especially the importance of reducing and preventing food waste generation. Recommendations for reducing food waste generation should be cited and incorporated through the implementation of an interdisciplinary project of upbringing and education for sustainable development in the south-eastern coast of the Mediterranean Sea and the Black Sea region, which is in line with the UNESCO guidelines for the Decade of Education for Sustainable Development for the “SEMPEP” project (*South-Eastern Mediterranean Environmental Project*), and through the GLOBE programme (*Global Learning and Observations to Benefit the Environment*), which is an international scientific and educational program for students.

In addition, professional training of educational staff is listed in the Programme of the Education and Teacher Training Agency, with topics that are, *inter alia*, focused on the implementation of programmes of cross-curricular and interdisciplinary contents of the Citizenship Education course for primary and secondary schools in the RoC. The Decision on adopting the curriculum for the cross-curricular topic of citizenship education for primary and secondary schools in the RoC (Official Gazette of the Republic of Croatia, number 10/19), students are encouraged to lead an active life in the community in the domain entitled “Civil Society”. Through social participation, a student acquires knowledge, develops skills and forms attitudes on the importance of reconciling personal and common interests in the community and participation of all citizens in contributing to the common good. Within the domain of Civil Society, knowledge, skills and attitudes are developed that prepare and empower students to work together and be involved in changes in the immediate and wider community. Communication and social skills that are important for the development of a school culture are developed as reflecting the values, beliefs, norms, customs and rituals that are built up over time in the school community. Educational expectations of students encompass promoting the development of school culture and the democratisation of the school, and one of the recommendations for meeting the expectations is sustainable development. In accordance with the aforementioned, it is necessary to continuously emphasise the importance of incorporating

measures to prevent and reduce food waste generation in the implementation of cross-curricular topics for students, as well as in the professional training programmes for educational staff. In cooperation with the Ministry of Science and Education, it is necessary to work on introducing the education of pre-school and school-age children through supplementing pre-school, primary and secondary education programmes, and to inform children and young people through preparing leaflets, brochures with information and quiz questions about the possibilities and ways of preventing and reducing food waste generation. Learning about prevention and reduction of food waste generation also contributes significantly to caring about the environment. In 2011, RoC adopted the Action Plan on Education for Sustainable Development as a response to the UNECE Strategy for Education for Sustainable Development, which was adopted at the 2005 meeting of the ministers of environmental protection and education in Vilnius. The strategy promotes education for sustainable development, with the main objective of including topics such as: environmental protection, natural resources management, ending poverty, ethics, human rights, social equality, economy, etc. in all levels of the education system and non-formal and informal education. The introduction of educational programmes focused on the prevention and reduction of food waste generation contributes to the achievement of the objectives of the Action Plan on Education for Sustainable Development.

5.5 Measure 5. Determining the quantity of food waste

5.5.1 Activity 1. Measuring the annual quantities of food waste generated at the national level

Executed by: Ministry of Environment and Energy

Deadline: 2019 2022

The Ministry of Environment and Energy carries out the measurement of food waste based on the information available in the RoC waste management information system and additionally collected and assessed data.

The measurement of food waste is carried out in accordance with the methodology prescribed by the European Commission.

5.6 Measure 6. Investing in research and innovative solutions that contribute to the prevention and reduction of food waste generation

Executed by: Ministry of Agriculture

Deadline: 2022

5.6.1 Activity 1. Providing financial support to projects that contribute to the prevention and reduction of food waste generation

It is necessary to stimulate the cooperation of the food sector and scientific and research institutions by investing in new technologies of production, processing, transportation, storage, new packaging materials and other innovations in order to obtain new innovative solutions that will contribute to the reduction of food waste generation.

Past research has found that food packing (packaging) is one of the important factors that ensure the prevention of food spoilage, preserving food quality and safety, and it represents the first contact with the consumer and, through information such as the ingredient list, instructions for

use and storage, nutritional declaration, food expiration date etc., contributes to informed consumer choice when purchasing food. Innovative packaging that extends food durability, different packaging sizes adapted for small families or singles, new, better quality raw materials for manufacturing packaging that increase the compactness, safety and flexibility of packaging contribute to more efficient storage and distribution with less food wastage (by ensuring freshness, increased food safety due to reduced penetration of contaminants).

The Ministry of Agriculture shall support the continuous development of research and the improvement of new technologies and innovative solutions, because only research can result in new innovative solutions that can be applied for the common purpose of reducing food waste generation. To this end, certain financial resources shall be secured and granted to projects, according to pre-defined criteria, that will contribute the most to solving the issue of prevention and reduction of food waste generation.

6. MONITORING THE IMPACT OF THE PLAN

The impact of the Plan shall be monitored by measuring the quantity of food waste in accordance with a common methodology for measuring the quantity of food waste.

**7. TIMETABLE FOR IMPLEMENTING THE PLAN FOR PREVENTION AND
REDUCTION OF FOOD WASTE GENERATION**

Table 1. Overview of measures and activities by year

Measure	No.	Activities	2019	2020	2021	2022
1. Improving the food donation system in the RoC	1.1	Modification of legislation regarding the food donation system				
	1.2	Organising education courses on the legislative framework for food donation				
	1.3	Preparation of a manual on food donation, including donation and food business, food donation and tax regulations				
	1.4	Establishment of an IT system for linking stakeholders in the food donation system				
	1.5	Food bank in the Republic of Croatia - Feasibility Study				
	1.6	Food bank in the Republic of Croatia – founding				
	1.7	Encouraging the use of funds for the purpose of procurement and allocation of donated food (FEAD and ESF+)				
	1.8	Carrying out a food donation campaign through raising awareness of all stakeholders, social sensitivity and social responsibility				
2. Encouraging the reduction of food waste generation	2.1	Cooperation with sectoral associations – preparation of sectoral manuals for the prevention of food waste generation				
	2.2	Encouraging the sale of food directly from the producers				
	2.3	Launching a digital Platform for sharing personal experiences - good business practice in preventing and reducing food waste				
3. Promoting the social responsibility of the food sector	3.1	Dialogue and concluding voluntary agreements with producers, processors and distributors regarding the obligation to reduce food waste generation				

	3.2	Awarding special acknowledgments for the most prominent examples of good practice in the prevention of food waste generation				
4. Raising awareness and informing consumers on prevention and reduction of food waste generation	4.1	A campaign targeting consumers related to raising awareness of prevention and reduction of food waste generation				
	4.2	Initiating a campaign targeting consumers related to understanding food expiration dates and reducing food waste				
	4.3	Educating pre-school and school-age children on the issue of preventing food waste generation				
5. Determining the quantity of food waste	5.1	Measuring the annual quantities of food waste generated at the national level				
6. Investing in research and innovative solutions that contribute to the prevention and reduction of food waste generation	6.1	Providing financial support to projects that contribute to the prevention and reduction of food waste generation				

8. FINANCIAL RESOURCES FOR THE IMPLEMENTATION OF PLAN MEASURES

Table 2. Overview of estimated required financial resources by year of Plan implementation

Measure	2019 (HRK)	2020 (HRK)	2021 (HRK)	2022 (HRK)	
1. Improving the food donation system in the RoC	493,000.00	559,000.00	572,500.00	564,000.00	
2. Encouraging the reduction of food waste generation	2,500.00	124,500.00	4,500.00	2,500.00	
3. Promoting the social responsibility of the food sector	0	0	13,000.00	10,000.00	
4. Raising awareness and informing consumers on prevention and reduction of food waste generation	540,000.00	710,000.00	1,585,000.00	1,340,000.00	
5. Determining the quantity of food waste	250,000.00	250,000.00	250,000.00	250,000.00	
6. Investing in research and innovative solutions that contribute to the prevention and reduction of food waste generation	0	0	0	500,000.00	

Table 3. Comprehensive overview of estimated financial resources required for each measure of the Plan

Measure	Estimated financial resources (HRK)
1. Improving the food donation system in the RoC	2,188,500.00
2. Encouraging the reduction of food waste generation	134,000.00
3. Promoting the social responsibility of the food sector	23,000.00
4. Raising awareness and informing consumers on prevention and reduction of food waste generation	4,175,000.00
5. Determining the quantity of food waste	1,000,000.00
6. Investing in research and innovative solutions that contribute to the prevention and reduction of food waste generation	500,000.00
TOTAL	8,020,500.00