

DRAFT!

NATIONAL FRAMEWORK FOR ENVIRONMENTAL ACTIONS 2017 – 2021

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1. Introduction

The Republic of Bulgaria has prepared a National strategy for sustainable operative programmes of organizations of producers of fruits and vegetables for the period 2017– 2021 according to the requirements of Art. 36(1) of Regulation (EU) 1308/2013.¹ This National framework for environmental actions is prepared as part of the National strategy and contains the general conditions related to these actions.

2. General information

The National Strategy provides an opportunity for recognized organisations of producers of fruits and vegetables to apply for financing from the European Union under the operational programs created by them, which need to be approved by the State Fund “Agriculture” – Paying Agency according to the national laws. According to the provisions of Regulation 1308/2013² operational programmes should involve two or more environmental actions or at least 10% of the operational programmes’ costs should cover environmental actions. The National framework for environmental actions contains the general conditions related to the environmental actions as required by Regulation (EU) No 1308/2013³ and Regulation 1305/2013⁴.

Implementation of environmental actions in the operational programmes of producers’ organizations (POs) contributes not only to the application of highest standards for environmental protection, but also for improving the quality of production and its marketing.

The National framework for environmental actions includes the following elements:

- General information
- General requirements and duration
- Interconnection with the Rural Development Programme 2014 — 2020
- Environmental impact of the production of fruits and vegetables
- Target areas of the National programme for environmental actions
- Environmental actions
- Monitoring and evaluation

¹ REGULATION (EU) No 1308/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007

² Article 33(5)

³ Article 33(5)

⁴ Article 3

3. General requirements and duration

3.1. General requirements deriving from the European and national legislation, that environmental actions should comply with

Operational programmes implemented by organizations of producers of fruits and vegetables must include at least two environmental actions or at least 10% of the costs under the operational program implemented by a producer organization should cover environmental actions.

Where at least 80% of producers who are members of PO have made one or more identical agri-environment and climate commitments provided for in the Bulgarian Rural Development Programme 2014 – 2020⁵, then each of those commitments is considered as environmental action.

In order to be qualified as eligible under the operational programmes, environmental actions must comply with the following general requirements:

- they are expected to have a positive effect, which should be in addition to the targeted environmental areas identified in the National framework for environmental actions;
- to lead to commitments that exceed the reference level set in the European and national legislation;
- to lead to loss of revenue and/or additional costs that are to be borne by the producer organization and/or its members;
- to lead to commitments that are verifiable.

3.2. General requirements on complementarity, consistency and compliance, which the environmental actions selected under the Operational Programme should comply with

- Environmental actions that are selected under an operational programme should comply with the requirements for agri-environment payments set out in Article

⁵ Article 28(3) of Regulation (EU) No. 1305/2013 states that “Agri-environment-climate payments cover only those commitments going beyond the relevant mandatory standards established pursuant to Chapter I of Title VI of Regulation (EU) No 1306/2013, the relevant criteria and minimum activities as established pursuant to points (c)(ii) and (c)(iii) of Article 4(1) of Regulation (EU) No 1307/2013 and relevant minimum requirements for fertiliser and plant protection products use as well as other relevant mandatory requirements established by national law”. All such mandatory requirements shall be identified in the programme.

28(3) of Regulation (EU) No. 1305/2013 of the Council. This requires these to generate commitments that go beyond these obligations (benchmark level):

- mandatory standards established in accordance with Articles 5 and 6 of Regulation (EC) No. 73/2009 of the Council and Annex II and Annex III thereto;
 - minimum requirements for the use of fertilizers and plant protection products, which are established by the national legislation (Plant Protection Act, Rules for good agricultural practice related to the implementation of the Nitrates Directive⁶);
 - other relevant mandatory requirements established by the national legislation set out in the RDP with regard to the payments to farmers for environmental constraints in mountain areas, payments to farmers for environmental constraints in areas other than mountains, agri-environment payments, payments under Natura 2000 for land including mandatory requirements set out in the Environmental Protection Act, Soils Act, Water Act, Waste Act, etc.
- To comply with this National framework for environmental actions. This requires selected activities to fall within one of the target areas of activity referred to in paragraph 6, and to comply with all conditions (ecological justification, resulting commitments, etc.) described for each action listed in that Chapter.
 - To be compatible and complementary with other environmental actions implemented under the operational programme of the PO and, where appropriate, with agri-environmental commitments supported within the RDP, which are implemented by members of the producer organization. In the event of a combination of environmental actions and agri-environmental measures of RDP, the level of support must take into account the specific income foregone and additional costs arising from this combination.
 - Support for the environmental actions selected under an operational programme, which is intended to cover the additional costs and income foregone resulting from the actions performed may be changed in case of amendments to the relevant benchmark level (i.e. the set of standards that environmental commitment should exceed in order to be eligible for support).

⁶ Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources

3.3. Duration of environmental actions

Environmental actions that are identical to agri-environment and climate commitments or organic farming supported under the Rural Development Programme 2014 – 2020 shall be with the same duration as those commitments. They shall be continued in the subsequent operational programme of PO, where the duration of such agri-environmental commitments would exceed the duration of the initial operational programme.

Competent authorities may authorise shorter durations for environmental actions or even their discontinuance in duly justified cases, and in particular based upon the results of the evaluation in the penultimate year of the operational program referred to in Article 57(3) of Delegated Regulation (EU) No. 891/2017⁷.

The national framework shows the duration of the activities affected by the above requirement and, where appropriate, the obligation to continue the action in the subsequent operational programme.

The duration of this National framework as part of the National strategy for sustainable operational programmes of fruit and vegetables producers in Bulgaria is five years, as from date of entry into force of the Delegated Regulation (EU) 891/2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors and supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council with regard to penalties to be applied in those sectors and amending Commission Implementing Regulation (EU) No 543/2011.

⁷ Art.3 (2) of the Draft Commission Delegated Regulation (EU) 891/2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors and supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council with regard to penalties to be applied in those sectors and amending Commission Implementing Regulation (EU) No 543/2011

4. Interconnection with the Rural Development Programme 2014 — 2020

Due to the fact that some environmental actions set out in this National framework for environmental actions may be eligible for support under RDP 2014 – 2020, paragraph 14.1.1. of the Bulgarian RDP defines criteria for distinguishing and administrative rules that are to ensure that the beneficiary may be supported for certain operation only under one scheme, namely that under the RDP 2014 –2020 producer organisations shall not be supported by the measure for actions included for support in their Operational Programmes under Regulation (EC) No. 1308/2013.

The above criteria are also referred to in paragraph 2.2 of the Bulgarian national strategy for sustainable operational programmes for organizations of producers of fruits and vegetables for the period 2017 – 2021.

In accordance with Article 30 (4) of the Commission Delegated Regulation (EU) No. 891/2017⁸ the support for environmental actions that are identical to agri-environment-climate or organic farming commitments as referred to in Articles 28 and 29 of Regulation (EU) No 1305/2013 respectively, shall be limited to the maximum amounts laid down in Annex II to that Regulation for agri-environment-climate payments or for organic farming payments.

5. Environmental impact of the production of fruits and vegetables

Environmental protection in production of fruits and vegetables contributes as to the application of high standards for environmental protection, as well as for improving the quality of production and its marketing.

The mid-term analysis of the RDP 2014 – 2020 in terms of environment outlines several key topics.

Bulgaria ranks third among the EU Member States regarding its rich *biodiversity*. Protected areas cover 5.3% of the country and areas of Natura 2000 – 34.4%, but agricultural

⁸ Draft Commission Delegated Regulation (EU) 891/2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors and supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council with regard to penalties to be applied in those sectors and amending Commission Implementing Regulation (EU) No 543/2011

lands and forests with high natural value may also be seen outside these. According to the National Priority Action Framework the **most numerous threats to the species are related to burning, intensification of agricultural practices, transport infrastructure, the use of biocides, hormones, etc. in forestry, as well as with the afforestation of open spaces with alien species. In the natural habitats, the most numerous threats are intensive grazing, burning, dispersed urbanization, afforestation with alien species and pollution.**

The main problem of land in Natura 2000 is that most farmers tend their land to become eligible for SAPS support, **leading to the removal of shrubs, trees, and in some cases complete plowing of valuable habitats.** Furthermore, there is a **shortage of investment in fencing for grazing animals, slow mowers, construction of reservoirs, etc. as well as specific knowledge and skills for the implementation of environmentally friendly actions.**

Institutes of the Agricultural Academy maintain 163 endangered varieties of native plants with varietal certificates and 152 varieties without varietal certificates which protection is of paramount importance for the conservation of genetic resources in the country.

Bulgaria is characterized by relatively significant fresh *water resources*, but unevenly distributed throughout the country and over time, thus leading to water shortages in certain areas, which will be exacerbated by the expected climate change. There is a trend for improvement the quality of surface waters, but however, there are still water bodies at risk referred to in the river basins management plans (RBMP) developed by the River Basins Directorates. ▸ Gradual improvement is observed also of the quality of groundwater for most of the indicators. Reducing the annual average concentrations is observed in general iron, ammonium ions, phosphates and chlorides, and lack of pronounced trends is observed in nitrates, nitrites, permanganate oxidation, manganese and sulphates. In 2011, the percentage of stations where excessive amounts of annual average concentration of nitrate is established was 13.27%. **The main source of diffuse pollution of surface water and groundwater is farming, issuing as nitrate and phosphate compounds, as well as pesticides and substances used for plant protection and treatment of animals.**

The total area of *nitrate vulnerable zones* established in 2010 is 34.5% of the territory and 69% of agricultural areas in the country and includes three main geographical areas: North, South and Southwest Bulgaria (partly or wholly within 96 municipalities). Initially designated areas in 2004 (59 thousand sq. km) are reduced by about 21 thousand sq. km – ter-

ritories occupied by forests, water areas, highly urbanized industrial and other areas of non-agricultural purpose.

In the period 2005-2012 soils in the country are in good ecological status regarding the availability of biogenic elements/organic matter and in terms of contamination with heavy metals, metalloids and persistent organic pollutants).

Significant part of the soils in Bulgaria are affected in varying extents of degradation processes that include all kinds of manifestation of soil erosion, acidification, salinisation, pollution, destruction, etc., which reduces the ability of soils to absorb carbon and increase greenhouse gases from inappropriate agricultural activities. In 2011, the total area of farmland affected by planar water erosion with intensity over 3 t/ha/year was 2.825 600 ha with an average intensity of 7.36 t/ha. The area affected by wind erosion remains relatively constant, as 1,156,063 hectares of arable land in the country are at risk of wind erosion with an average intensity 0.6 t/ha/year. Fields in the following areas: Dobrich, Pleven, Burgas and Veliko Tarnovo are at highest risk of wind erosion. One of the most important measures against wind erosion is the building of forest (wind-protecting) belts in Northeastern Bulgaria. These belts also contribute for increasing the carbon-absorbing afforested areas. In recent years, however, these belts are not maintained well, and building of new belts is very limited.

According to the Bulgarian Food Safety Agency (BFSA) in 2011 areas fertilised with nitrogen are 4.1% more compared to 2010. The trend is towards increasing the acreage fertilized with nitrogen, but with average less amount of nitrogen fertilizer per acre. In phosphorus is observed increasing of the areas fertilised in 2011 with 29.38% compared to 2010. In 2011 a sharp increase in the amount of used manure is reported – 200,118 t, which have fertilized approximately 15 042.24 ha. Mostly vegetables, vineyards, orchards, potatoes and industrial crops are fertilised.

The main cause of soil degradation processes is the low sowing practice – unbalanced use of fertilizers and low quantity of organic fertilizer, reduction in soil treatments, etc. Overgrazing and trampling of grasslands near settlements, which is particularly true for municipal pastures also leads to soil erosion and loss of soil fertility.

As of 31.12.2012 the total levels of emissions of SO₂, NO₂, NH₃, NMVOC are significantly lower than the country's commitments under Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants, the Gothenburg Protocol and 2015 tar-

gets of the National program for reducing the total annual emissions of above pollutants with respect to NO₂, NH₃, NMVOC. Domestic heating is a major source of PM10, emitting 59% of the total discharged into the atmosphere. The main air pollutants emitted from agriculture are ammonia (90%) and non-methane volatile organic compounds – 8% of the national emissions.

In 2012 *greenhouse gas emissions* from “Agriculture” sector are 10.4% of the total emissions in Bulgaria as the main source are the agricultural soils (56%). In recent years data show that **the quantity of used mineral fertilizers is constantly growing, and also areas (up to 2009) treated with fertilizers, mainly unilaterally with, have increased.** Livestock contributes for about 41% of the emissions associated with biological fermentation (22%) and manure management (19%), with observed downward trend in the emissions, mainly due to a reduction in the number of animals in the country.

Ingestion of greenhouse gases in the “Land use, change in land use and forestry” sector offsets between 11.4% – 19.9% of total greenhouse gas emissions in Bulgaria. The greatest role in absorbing and storing carbon (94-95% of the total absorption for the sector) play the territories occupied by forests.

Regarding the adaptation to climate change, the expected increase in temperatures in Bulgaria as a result of climate change range from 0.7 to 1,8°C until 2020, from 1.6 to 3,1°C until 2050 and 2.9 to 4,1°C until 2080. Climate change will impose additional irrigation of crops during the dry months of the growing season (June – September) to compensate for the lack of moisture in the soil.

Disadvantaged areas in Bulgaria are delimited in 2007. In 2013 mountain areas cover 38.2% of the territory and 16.6% of UAA. Other disadvantaged areas cover 9.8% of the UAA as in 2017 is expected, after redefining their scope, they to constitute 12-14% of the country. By the end of the same period areas with specific restrictions shall also be delimited.

At the end of 2011 the share of energy produced from renewable sources in gross final consumption of energy of Bulgaria reached 13.8% compared to the planned target of 16% by the end of 2020. The largest share in the production of renewable energy is of energy from biomass and renewable waste. Data for 2010 – 2011 on the production and consumption of renewable energy in agriculture and forestry show that **the majority of renewable energy produced originates from forestry**, while due to the higher energy intensi-

ty of technologies for growing agricultural production, actually, the main share of final energy consumption is that of agriculture.

Regarding the assessment of needs, analysis of the agricultural sector, respectively, respectively regarding in large part to the activities of production of fruits and vegetables focus on the following priorities:

- Restoring, preserving and enhancing biodiversity, including in Natura 2000 areas, and in areas facing natural or other specific constraints, and high nature value farming, as well as the state of European landscapes
 - Protection of endangered rare breeds and traditional endangered plant varieties
 - Preventing and reducing pollution from agriculture
- Improving water management, including fertiliser and pesticide management

Despite the improvement of the status of surface water and groundwater, the main source of diffuse pollution remains farming, issuing as nitrate and phosphate compounds, as well as pesticides and substances used for plant protection and treatment of animals.

Reduction of diffuse and point pollution from the production of fruits and vegetables requires investments in adequate equipment for implementing good agricultural practices on the use and storage of mineral fertiliser and manure and plant protection products.

Implementation of measures related to reduction of pressure on water bodies from agricultural activities will contribute to the improvement of their status and shall meet the requirements of the Water Framework Directive. Needs and possible policies for implementation are reviewed in the draft Common Strategy for management and development of irrigation and protection from the harmful effects of water submitted for discussion in April 2016⁹. Among the potential measures set out in the draft strategy relevant to water protection in “Fruit and vegetables” sector may be outlined:

⁹ <http://www.bia-bg.com/dialog/view/new/21998/>

- Promoting the application of technologies for farm irrigation in increasing the productivity of water and efficient use of water resources in irrigated agriculture;

Farmers have limited ‘know-how’ in terms of water needs for individual crops, methods of proper irrigation, good agricultural practices restricting the use of water (e.g. crop varieties that require less water), and the relationship between the irrigation and yields. Therefore one of the goals should be increasing the productivity of crops by improving the efficient use of water in agriculture, supported by science-based consultancy services in the field of water management in farms. This policy encourages the introduction of irrigation technologies in the farm in accordance with the standards of the International Standardisation Organisation (ISO), by using certified equipment – irrigation machinery, sprinkler devices, localized irrigation, etc.

- Promoting the provision of advisory services in irrigated agriculture based on science, knowledge, information and provided long-term financing

This policy encourages the organization and provision of advisory services in the field of irrigation, which aims to support Bulgarian farmers in many areas, including in the planning of irrigation on the farm based on agro-meteorological data and real time information, specific agro-economic services, such as information on budgeting in crops, prices and estimates of costs and benefits in terms of investment in irrigation.

- Storage and increasing soil fertility

There is a need for the introduction of soil fertility protection measures and reduction of soil degradation (including soil erosion). This purpose requires raising awareness of farmers on the problems of soil management and promotion of the implementation of environmentally friendly methods preventing soil degradation. There is also a need of fostering innovation and investment in techniques and technologies for implementation of environmentally friendly practices.

- Recovery and reconstruction of hydromeliorative infrastructure including:
 - Improving water management, including fertiliser and pesticide management;
 - Increasing efficiency in water use by agriculture;

- Increasing energy efficiency through the introduction of energy saving technologies in production and processing of agricultural products.
- Construction of new and reconstruction of existing facilities for processing waste residues and other materials in bioenergy

There is considerable unimproved potential for renewable energy from waste biomass in farms and in some processing plants. The utilization of this potential will not only reduce dependence on fossil fuels, but also shall reduce the net emissions of greenhouse gases in the atmosphere, thus increasing the carbon neutrality of the economy and somehow the energy independence and competitiveness of the supported businesses.

6. Target areas of the National framework for environmental actions

The purpose of environmental activities in the operational programs of producer organizations is to promote the application of requirements for environment in production and marketing of fruit and vegetables. Provided within this framework environmental actions contribute to the following target areas:

- Water protection
- Soil protection
- Contribution to mitigating climate change/ protection of air quality
- Protection of habitats and biodiversity
- Environmental management of packaging and waste (organic and inorganic)

Environmental activities included in the national framework must stimulate and direct the organizations of producers of fruit and vegetables to use environmental practices in their manufacturing activities – environmental practices and production methods, complementing the above target areas.

In accordance with Article 3(1) of the Commission Implementing Regulation (EU) No. 892/2017¹⁰ the National framework includes actions on the application of integrated pest management practices, referred to the common principles of integrated pest management, pointed in Annex III of the Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009¹¹.

For each of the target areas there is a non-exhaustive list of environmental actions. Producer organizations should include in their operational programs at least two of these actions or at least 10% of the costs under the operational program implemented by a producer organization should cover environmental activities. These actions may be considered eligible for funding only if they are over the appropriate reference level of environmental actions provided for in the legislation. Regarding any proposed environmental action PO should indicate whether the cost of any commitment that it takes to execute, fall into the category of purchase of tangible fixed assets, rental/leasing of tangible fixed assets or other forms of cost. In cases where PO provides for commitments related to training, consultancy or technical assistance in support of environmental actions taken, it can choose to group these commitments together under a single heading in preparing its operational program.

Eligibility for support is limited to commitments which go beyond the minimum requirements and mandatory standards established by the national legislation.

Training, consulting and technical assistance in case they are implemented independently might not generate direct benefits for the environment. However, they could be essential for the implementation and effectiveness of a number of environmental protection activities. Similarly essential may be other types of measures such as analysis of the use of energy/fuel or conducting inspections/audits that might contribute to the identification of needs, setting priorities and planning appropriate action for environmental protection that are to be imple-

¹⁰ Draft Commission Implementing Regulation (EU) 892/2017 laying down rules for the application of Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors

¹¹ Annex III of Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides

mented by the POs and their members. Such measures may include energy audits of buildings, facilities, means of transport, including analyzes of logistic production schemes and inner transport, meant to plan on / design activities to reduce energy consumption - renovation of installations, facilities, etc. Basic eligibility requirement for this type of action is to be executed with respect to the activities related to environmental protection, which are expected to derive direct benefits for the environment.

To be eligible for support, these actions must observe the following set of conditions:

- The operation will complement other environmental actions included in the national framework, which are part of the operational programs of the POs and its specific objective is to enhance the effects of the application of these environmental actions. Provided training activities, consultancy services and technical assistance should be listed in the operational programme of the PO;
- The implementation of training activities, consultancy services and technical assistance should be assigned to additionally qualified staff (internal or external);
- Operational programs should define the specific tasks that this extra staff shall perform.

Actions aimed at water protection

1. Actions aimed at water protection						
Rationale: supports protection of the quantity (reducing the volume of water used) and quality of water resources						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
1.1	Use of water-saving technologies for preparation of products for marketing	<p>Purchase and installation of new systems that allow for waste water treatment and reuse of refined water in the preparation of fruits and/or vegetables for marketing</p> <p>The investments should allow, in standard conditions, reduction of at least 15% of water used compared with the previous system. Minimum 5% reduction of water consumption might be considered if the investment enables other proven environmental benefits (e.g. reduction of energy consumption, pollutant emissions to water or soil). The expected decrease in water consumption should be proved in advance by the technical specifications that indicate the results that may be obtained, certified by an independent expert or body authorized by the competent authorities.</p>	<p>Costs of purchase and installation of the system, in terms of use of the system as intended for at least five years.</p> <p>Costs of system maintenance for five years are not eligible</p>	<p>Number of members of the PO using the system</p> <p>Value of investments, thousand BGN</p> <p>Number of systems built and commissioned</p> <p>Volume of collected/reused water, m³</p>	Change in the volume of collected/reused water, m ³	Increase of the volume of collected/reused water, m ³

1. Actions aimed at water protection						
Rationale: supports protection of the quantity (reducing the volume of water used) and quality of water resources						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
1.2	Use of water-saving technologies for processing of products	<p>Purchase and installation of new system that allow for waste water treatment and reuse of treated water in the preparation of fruits and/or vegetables for marketing</p> <p>Maintenance and intended use of the new system installed for at least five years.</p> <p>The investments should allow, in standard conditions, reduction of at least 15% of water used compared with the previous system. Minimum 5% reduction of water consumption might be considered if the investment enables other proven environmental benefits (e.g. reduction of energy consumption, pollutant emissions to water or soil). The expected decrease in water consumption should be proved in advance by the technical specifications that indicate the results that may be obtained, certified by an independent expert or body authorized by the competent authorities.</p>	<p>Costs of purchase and installation of the system</p> <p>Costs of system maintenance for five years are not eligible</p>	<p>Number of members of the PO using the system</p> <p>Value of investments, thousand BGN</p> <p>Number of systems built and commissioned</p> <p>Volume of collected/reused water, m³</p>	Change in the volume of collected/reused water, m ³	Increase of the volume of collected/reused water, m ³

1. Actions aimed at water protection						
Rationale: supports protection of the quantity (reducing the volume of water used) and quality of water resources						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
1.3	Use of water-saving technologies in greenhouse production	<p>Purchase and installation of a system for collection, treatment and reuse of drainage water in greenhouse production of vegetables, aimed at reducing water consumption and the risk of diffuse pollution of water and soil by leaking nutrient solutions.</p> <p>Maintenance and intended use of the new system installed for at least five years.</p> <p>The investments should allow, in standard conditions, reduction of at least 15% of water used compared with the previous system. Minimum 5% reduction of water consumption might be considered if the investment enables other proven environmental benefits (e.g. reduction of energy consumption, pollutant emissions to water or soil). The expected decrease in water consumption should be proved in advance by the technical specifications that indicate the results that may be obtained, certified by an independ-</p>	<p>Cost of investments, including costs associated with the design of the new system that will be installed and the costs strictly necessary for its installation. Eligible costs also include the cost of equipment needed to monitor the physical and chemical characteristics of nutrients in drainage water.</p> <p>Costs of system maintenance for five years are not eligible</p>	<p>Number of members of the PO using the system</p> <p>Value of investments, thousand BGN</p> <p>Number of systems built and commissioned</p> <p>Volume of collected/reused water, m³</p> <p>Number of analyses of nutrient solutions in greenhouse production</p>	Change in the volume of collected/reused water, m ³	Increase of the volume of collected/reused water, m ³

1.	Actions aimed at water protection					
	Rationale: supports protection of the quantity (reducing the volume of water used) and quality of water resources					
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		ent expert or body authorized by the competent authorities.				
1.4	Preparation and implementation of plans for irrigation, aimed at water use reduction	Preparation of plans for irrigation, aimed at water use reduction, including planning of farm irrigation based on agro-meteorological data and real time information Application of drawing up plans for irrigation for at least 3 years	Costs for preparing the plan for irrigation, incl. cost of soil analysis, purchase/rental of equipment required for the preparation and implementation of the plan	Number of PO members implementing the action Area covered by the action, ha	Water use reduction, m ³ per ton production	Reduction of the volume of used water, m ³

Actions aimed at soils protection

2	Actions aimed at soils protection					
	Rationale: helps the protection of soil resources					
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
2.1	Actions prevent-	Actions contributing for the preven-		Number of		Reduction of ar-

2	Actions aimed at soils protection					
Rationale: helps the protection of soil resources						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
	ing soil erosion and contributing to the soils protection	<p>tion of soil erosion and contributing to the soils protection (creation and maintenance of “wind belts”, mulching, grading, etc.)</p> <p>Purchase / hiring of specialized equipment intended for the implementation of activities to preventing soil erosion and preserving soil quality</p> <p>Eligibility for support is limited to commitments which go beyond the minimum requirements and mandatory standards established by the national legislation.</p>	<p>Costs for construction and maintenance of “wind belts”, mulching, terracing and other actions contributing to the prevention of soil erosion</p> <p>Costs for purchase / hiring of the equipment</p>	<p>PO members implementing the action</p> <p>Amount of the investment (BGN thousands)</p>	Area, covered by the action, ha	areas jeopardised by wind erosion, ha
2.2	Reduction of the use of fertilisers	<p>The measure applies to areas outside the nitrate vulnerable zones.</p> <p>Reducing the use of fertilizers for achieving a predetermined objective. According to the agri-environmental measures 15% reduction of the quantities of fertilizers used must be achieved (in accordance with the minimum requirements for use of</p>	<p>Specific costs for monitoring of argi-ecological soil characteristic</p> <p>Specific costs for analysis of organic fertilizer in case of use.</p> <p>Specific costs for pre-</p>	<p>Number of PO members implementing the action</p> <p>Area covered by the action, ha</p>	Reduction of liquid or gas emissions in soils (water, air), tons	Increase of the total area treated with reduced amount of fertilizers, ha

2	Actions aimed at soils protection					
Rationale: helps the protection of soil resources						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		<p>fertilizers, resulting from the Nitrates Directive).</p> <p>Monitoring of the agri-chemical characteristic of the soil.</p> <p>Carry out an analysis of organic fertilizers in case of use.</p> <p>Elaboration of a system of nutrition and effective and rational utilization of fertilizers based on chemical analysis of soil and plants, including choosing the optimal fertilization methods and periods.</p> <p>Pre-composting of organic fertilizers for the rapid increase of the humus soil, assuring low risk of pathogens contamination of the soil and weed seeds introduction.</p> <p>Purchase of specialized fertilization techniques in order to increase the efficiency of the process and reducing the necessary fertilizers.</p>	<p>paring a nutrition system and effective and rational use of fertilizers based on chemical analysis of soil and plants, including choosing an optimal fertilization methods.</p> <p>Specific costs for pre-composting of organic fertilizers for the rapid increase of the humus soil, assuring low risk of pathogenscontamination of the soil and weed seeds introduction</p> <p>Costs for purchasing specialized devices for fertilization to increase the efficiency of the process and to reduce the amount of fertilizer needed.</p>			

2	Actions aimed at soils protection					
	Rationale: helps the protection of soil resources					
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
2.3	Applying the techniques of steaming soil as a decontamination method	<p>Use of steam and air in heated greenhouses or steaming the soil by pouring boiling water therein and covering with polyethylene film or other heat-trapping material (matting, straw, etc.).</p> <p>Disapplication of chemicals for soil decontamination in registered plots/areas.</p> <p>The duration of the commitments is five years. In the event that the duration of the operational programme is less than five years, the action should be continued in the subsequent operational programme for producers participating in this activity. In justified cases, taking into account the results of the interim evaluation of the operational programme, the producer organization may not be allowed to continue the action in the subsequent operational programme.</p>	<p>Costs for purchase of new special equipment (aerial steam supply apparatus – steam currents) necessary for the implementation of the action.</p> <p>The costs for polyethylene films or other heat-trapping materials, used to cover the soil, are not eligible.</p>	<p>Number of PO members implementing the action</p> <p>Area covered by the action, ha</p> <p>Amount of investment, thousand BGN</p>	Change in the amount of used plant protection products for decontamination of soil, kg/ha.	Increasing the total area where chemical agents were not been used for decontamination of soil, ha
2.4	Use of ecological	At least 25% of oil used in agricul-	Additional costs for	Number of	Annual reduc-	Assessment of

2	Actions aimed at soils protection					
Rationale: helps the protection of soil resources						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
	lubricants and hydraulic oils for agricultural machinery	<p>tural machinery of a producer member and/or agricultural machines of the producer organization must be ecological, biological lubricants and hydraulic oils.</p> <p>The duration of the commitments is five years. In the event that the duration of the operational programme is less than five years, the action should be continued in the subsequent operational programme for producers participating in this activity. In justified cases, taking into account the results of the evaluation in the penultimate year of the operational programme, the producer organization may not be allowed to continue the action in the subsequent operational programme.</p>	purchase of ecological oils in comparison with the costs for purchase of conventional oils	<p>PO members implementing the action</p> <p>Area covered by the action, ha</p> <p>Amount of eco-oils used, litres</p>	tion of conventional oils amounts used (l/tons).	the total reduction of conventional oils amounts used (l/tons).

Actions aiming at mitigation of climate change/ protection of air quality

3	Actions aiming at mitigation of climate change/ protection of air quality					
Rationale: contributes to climate protection and air pollution by saving energy and using alternative energy sources for reducing the greenhouse gas emissions						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
3.1	Optimization of existing facilities for reduction of energy consumption and greenhouse gas emissions	<p>Purchase and installation of materials and/or equipment to optimize the existing facilities aiming at achieving low energy consumption and reducing greenhouse gas emissions;</p> <p>Maintenance and intended use of the optimised facilities for at least five years.</p> <p>Different types of actions are possible:</p> <ul style="list-style-type: none"> — Enhancing the insulation of buildings and premises; — Insulation of heat pipelines and containers; — Change of heating facilities; — Purchase and installation of energy-saving screens in greenhouse facilities; — Introduction of automated sys- 	<p>Investment costs for optimisation of the existing facilities for achieving low energy consumption and reducing greenhouse gas emissions.</p> <p>Eligibility for support is limited to commitments which go beyond the minimum requirements and mandatory standards established by the national legislation.</p>	<p>Number of PO members implementing the action</p> <p>Area covered by the action, ha</p> <p>Total amount of investments, thousand BGN</p> <p>Number of greenhouses where the action has taken place</p> <p>Number of other facilities where the action has</p>	<p>Change in the annual energy consumption by type energy source (litres/m³/KWh per ton marketed production).</p>	<p>Assessment of the change in the total energy consumption by type energy source (litres/m³/KWh).</p>

3	Actions aiming at mitigation of climate change/ protection of air quality					
Rationale: contributes to climate protection and air pollution by saving energy and using alternative energy sources for reducing the greenhouse gas emissions						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		<p>tems for controlling the micro-climate factors;</p> <ul style="list-style-type: none"> — Reconstruction of ventilation system in greenhouse facilities; — Purchase and introduction of thermal-pump systems; — Change of heating pipes in greenhouse facilities. <p>In order to be eligible investments should allow, in standard conditions, a reduction of at least 15% of energy consumption or greenhouse gas emissions compared to the previous system. Minimum 7% reduction of energy consumption or greenhouse gas emissions might be acceptable if the investment enables other proven environmental benefits (e.g. reduction of emissions resulting from air pollutants). The expected decrease of energy consumption or greenhouse gas emissions should be proved in advance by the technical</p>		taken place		

3	Actions aiming at mitigation of climate change/ protection of air quality					
Rationale: contributes to climate protection and air pollution by saving energy and using alternative energy sources for reducing the greenhouse gas emissions						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		specifications that indicate the results that may be obtained, certified by an independent expert or body authorized by the competent authorities.				
3.2	Retrofitting of existing vehicles for functioning with renewable energy sources	Hiring additional (internal or external) qualified staff for preparation of an energy audit of logistical schemes for the collection of production and its distribution in order possible ecological actions to be identified – analysis of the logistical schemes for the collection of the production and its distribution in order to minimization of the common carbon print. Retrofitting of existing vehicles to run with biodiesel Use of retrofitted vehicles	Costs for additional (internal and external) qualified staff for the analyses. Costs for retrofitting the existing vehicles	Number of analyses performed Number of retrofitted existing vehicles for running with biodiesel Number of PO members implementing the action	Change in the annual energy consumption by type energy source (litres/m ³ /KWh per ton marketed production).Assessment of the change of annual fuel consumption, tons	Reduction of total fuel consumption, tons
3.3	Promoting the	Using rail or sea transport instead of	Additional specif-	Production	Change of the annual	Reduction of

3	Actions aiming at mitigation of climate change/ protection of air quality					
Rationale: contributes to climate protection and air pollution by saving energy and using alternative energy sources for reducing the greenhouse gas emissions						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
	use of more sustainable means of transport (rail, sea) compared with road transport for delivery of production and/or materials	road transport	ic costs arising from the replacement of road transport by rail or sea transport	volume and other goods transported in a sustainable way, tons Number of PO members implementing the action	fuel consumption, tons	annual fuel consumption, tons

Actions aimed at protection of habitats and biodiversity

4	Actions aimed at protection of habitats and biodiversity					
Rationale: contributes to the protection of habitats and biodiversity						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
4.1	Application of alternative methods and procedures for	Use of mechanical, physical and/or biological methods to combat diseases and pests on registered plots aiming at	Cost for materials and products used for the implementation of	Number of PO members implementing	Change in area where alternative plant pro-	Assessment of environmental bene-

4	Actions aimed at protection of habitats and biodiversity					
Rationale: contributes to the protection of habitats and biodiversity						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
	<p>chemical plant protection and other actions for application of integrated pest management practices, referred to the Annex III of the Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009.</p>	<p>reduction of the risk of negative consequences for biodiversity and habitats associated with the use of authorized plant protection products (PPPs)</p> <p>Examples of eligible mechanical and physical methods to combat diseases and pests:</p> <ul style="list-style-type: none"> — Wrapping young trees with available materials – paper, corrugated board or straw in preparation for wintering. — Implementation of mechanical methods of weed control – hoeing, cultivating, plowing, etc. — Purchase and installation of nets protecting crops from birds and heating. — Purchase and installation of pheromone traps reducing the spread of pests. — Use of bio-agents to combat disease and pests – for example trichogramma against greenhouse 	<p>mechanical, physical and/or organic plant protection methods (e.g. safety nets, bio-agents, pheromone traps and other organic plant protection materials).</p> <p>Specific costs for undersowing, conservation plowing.</p> <p>Specific costs for purchasing sustainable / tolerant plant varieties and of standard / certified seed and seedlings</p> <p>Possible specific cost savings associated with disapplication of traditional chemical plant protection methods (e.g. cost savings associated</p>	<p>the action</p> <p>Area covered by the action, ha</p> <p>Total amount of investments, thousand BGN</p> <p>Number of greenhouses where the action has taken place</p> <p>Number of other facilities where the action has taken place</p>	<p>tection methods are applied (ha)</p>	<p>fits related to protection of habitats and biodiversity</p>

4	Actions aimed at protection of habitats and biodiversity					
Rationale: contributes to the protection of habitats and biodiversity						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		<p>whitefly, Chrysopidae against aphids, etc.</p> <ul style="list-style-type: none"> - Use of appropriate agricultural techniques (eg pre-prepared seedbed techniques, sowing time and density, undersowing, optimal crop distance, conservation pond, hygiene measures and tree pruning), - Use, where appropriate, of resistant / tolerant plant varieties and of standard / certified seed and propagating material, - Use of balanced fertilization, lime treatment and irrigation / drainage practices, - Prevention the spreading of harmful organisms through sanitation measures (eg by regular cleaning of machinery and equipment), <p>The length of commitment is five years. In the event that the duration of the operational programme is less than 5 years, the action should be contin-</p>	<p>with the purchase and application of chemical plant protection products) should be deducted.</p> <p>In case of deduction of possible reduced costs (from lesser quantities of purchased / imported fertilizers), a three-year monitoring of the costs saved as a result of the commitments could be implemented. Based on the results the corresponding amount could be deducted for the period of implementation of the operational program.</p>			

4	Actions aimed at protection of habitats and biodiversity					
Rationale: contributes to the protection of habitats and biodiversity						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		ued in the subsequent operational programme of the producer participating in this activity. In justified cases, taking into account the results of the interim evaluation of the operational programme, the producer organization may not be allowed to continue the action in the subsequent operational programme.				
4.2	Use of natural pollination methods	<p>Purchase/hiring and placing bee hives with bees (<i>Apis mellifera</i> L.) and/or bumblebees (<i>Bombus Terrestris</i> L.) in order organic pollination of orchards and/or vegetable crops to be ensured.</p> <p>The length of commitment is five years. In the event that the duration of the operational programme is less than 5 years, the action should be continued in the subsequent operational programme of the producer participating in this activity. In justified cases, taking into account the results of the interim evaluation of the operational programme, the producer organization</p>	<p>Costs for purchasing/hiring and installing beehives and bee families only for open areas at a distance of not less than 3 km from the Natura 2000 areas, based on the invoices presented.</p> <p>Costs for purchasing/hiring and placing <i>Bombus Terrestris</i> (bumblebees) in greenhouses, based</p>	<p>Number of producer members of the producer organization performing the action</p> <p>Number of purchased and placed hives and bee colonies.</p> <p>Number of purchased and placed bum-</p>	Change in area where the action is applied (ha)	Assessment of environmental benefits related to protection of habitats and biodiversity

4	Actions aimed at protection of habitats and biodiversity					
Rationale: contributes to the protection of habitats and biodiversity						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		may not be allowed to continue the action in the subsequent operational programme.	<p>on the invoices presented,</p> <p>Possible additional income resulting from the production of honey and other products from beekeeping should be deducted. In case of income from honey or other products from beekeeping, they shall be proved by financial documents and shall be deducted accordingly from the eligible costs declared. In case of no income, the organization/members shall provide a declaration that they do not place relevant products at the market.</p> <p>In cases where the</p>	blebees.		

4	Actions aimed at protection of habitats and biodiversity					
	Rationale: contributes to the protection of habitats and biodiversity					
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
			operational program of the producer organization includes this activity, the members of the producer organization shall be excluded from assistance provided for such activities eligible under the Bulgaria's National Beekeeping Programme (NBP).			

Actions targeted to the environmental management of packaging and waste (organic and inorganic)

5	Actions targeted to the environmental management of packaging and waste (organic and inorganic)					
	Rationale: contributes to the environmental management of packaging and waste (organic and inorganic)					
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
5.1	Environmental management of	Purchase and installation of equipment and infrastructure necessary for	Cost of investments, including,	Number of PO members	Change in total annual amounts	Assessment of the change in to-

5	Actions targeted to the environmental management of packaging and waste (organic and inorganic)					
Rationale: contributes to the environmental management of packaging and waste (organic and inorganic)						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
	plant residues and/or organic waste	<p>the storage and processing of crop residues and other organic waste from fruit and vegetables for production of compost that will be used for the needs of the members of the producer organization or for commercial purposes. The capacity of the composting plant should be proportional to the amount of crop residues and organic residues produced by the producer organization and its members.</p> <p>(b) Maintenance and intended use of the composting plant installed for a minimum of 5 years.</p> <p>(c) Collection of plant residues by members of the producer organization and their transportation to the composting plant.</p> <p>(d) Qualification of the final product before its use or sale.</p> <p>(e) Use of the compost produced by the members of the producer organization or selling the product.</p> <p>Requirements (b), (c), (d) and (e) are mandatory and are not eligible for</p>	where appropriate, the costs of appropriate equipment for crushing twigs or other vegetable waste subject to composting.	<p>implementing the action</p> <p>Value of investments, thousand BGN</p> <p>Volume of the produced compost, tons</p> <p>Area on which the produced compost is imported, ha</p>	<p>of organic waste produced (tons per ton of marketed production);</p> <p>Assessment of the change in annual consumption of mineral fertilizers/hectare, by type of fertilizer (N, P, K) (t/ha).</p>	<p>tal annual amounts of organic waste produced (tons per ton of marketed production);</p> <p>Assessment of the change in annual consumption of mineral fertilizers/hectare, by type of fertilizer (N, P, K) (t/ha).</p>

5	Actions targeted to the environmental management of packaging and waste (organic and inorganic)					
Rationale: contributes to the environmental management of packaging and waste (organic and inorganic)						
	Environmental actions	Commitments	Eligible expenditure	Performance indicators	Result indicators	Impact indicators
		<p>support.</p> <p>Production of compost must comply with the composting technology — providing optimal ratio of carbon and nitrogen 25:1, suitable temperature and humidity (60%), oxygen supply.</p>				

7. Monitoring and evaluation

The monitoring and evaluation of environmental actions should be carried out by using relevant indicators among the common performance indicators referred to in Annex II to Regulation (EU) No 892/2017 and, where appropriate, additional indicators specified in the description of eligible actions referred to in Section 6 of the National framework.