NATIONAL ACTION PLAN FOR SUSTAINABLE PESTICIDE USE IN THE REPUBLIC OF BULGARIA

CONTENTS

FOREWORD		**4**
INTRODUCTION		**5**
LIST OF ABBREVIATIONS		**6**
I.	**LEGAL BASIS**	**8**
II.	**COMPETENT BODIES**	**11**
III.	**MARKETING AND USE OF PLANT PROTECTION PRODUCTS**	**17**
IV.	**OBJECTIVES**	**19**
V.	**MEASURES:**	**20**
1.	**TRAINING OF PROFESSIONAL PESTICIDE USERS, DISTRIBUTORS AND CONSULTANTS**	**20**
2.	**REQUIREMENTS FOR SALE OF PESTICIDES**	**23**
3.	**HANDLING AND STORAGE OF PESTICIDES AND MANAGEMENT OF THEIR PACKAGING AND RESIDUES**	**28**
4.	**CHECKING THE EQUIPMENT USED TO APPLY PESTICIDES**	**34**
5.	**AERIAL SPRAYING**	**36**
6.	**INTEGRATED PEST MANAGEMENT**	**40**
7.	**REDUCING THE AMOUNT OF PESTICIDE RESIDUES IN FOODS OF PLANT ORIGIN (PRODUCED IN BULGARIA)**	**46**
8.	**SPECIAL MEASURES TO PROTECT THE AQUATIC ENVIRONMENT AND DRINKING WATER**	**49**
9.	**SUPPLEMENTARY MEASURES TO PROTECT THE ENVIRONMENT**	**56**
10.	**PUBLIC INFORMATION**	**57**
11.	**INFORMATION AND AWARENESS**	**59**
12.	**REDUCTION IN PESTICIDE USE OR RISKS IN SPECIFIC AREAS**	**61**

VI.	**INDICATORS USED IN THE NATIONAL ACTION PLAN FOR SUSTAINABLE USE OF PESTICIDES**	**63**
VII.	**FUNDING**	**67**
VIII.	**DEADLINES**	**70**
IX.	**REPORTING**	**71**
X.	**GLOSSARY OF TERMS**	**89**
XI.	**SUMMARY**	**94**

FOREWORD

With the accession of Bulgaria to the European Union, our country has been introducing a number of laws in the sphere of agriculture, and plant protection in particular, the implementation of which and reporting on are either currently under way or lie ahead for the years to come.

During the second half of the last century there was a clear trend towards increased use of plant protection agents in agriculture. As a result of studies and analyses of the side effects of pesticides on human health and the environment, the European Union has for the last 20 years been directing its farming policy towards reduced dependence on the use of pesticides and greater safety for consumers of agricultural produce.

One example of a new requirement in European policy is the 'sustainable use of pesticides', which is meant both to guarantee the production of quality agricultural produce and to ensure a high level of protection of human health and protection of the environment from the impact of pesticides.

This National Action Plan for Sustainable Pesticide Use has been drafted with the cooperation of, and expert assistance from, all competent state institutions as well as interested parties, namely agricultural associations, industry and non-governmental organisations. The Bulgarian Food Safety Agency were responsible for the initiation, coordination and overall development of the plan.

The Action Plan sets out the objectives that the state intends to meet in the coming years, along with the measures they require. A list of benchmarks is used to assess progress in the implementation of these objectives and measures. By summarising and analysing information on the use of plant protection products and their impact on human health and the environment, it will be possible to track progress towards the sustainable use of pesticides in Bulgaria in the years to come.

Successful application of this Action Plan by the relevant institutions will enable Bulgaria to fulfil the European Union's sustainable pesticide use requirements.

I have every confidence that we will achieve a high level of protection for human health and the environment.

Boyko Borisov
Prime Minister of the Republic of ia

INTRODUCTION

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 requires Bulgaria to draw up a National Action Plan for the Sustainable Use of Pesticides.

Although the licensing regime for plant protection products – testing, field trials, laboratory tests, evaluations, data, etc. – ensures that plant protection products that are placed on the market are safe for both humans and the environment, and effective against economically significant pests capable of compromising agricultural crop yields, the Sustainable Use of Pesticides Directive establishes special requirements to which Member States need to respond, concerning:

- access to initial and supplementary training of professional users of plant protection products, distributors and consultants and a certification system for individuals possessing the required knowledge;
- sale of pesticides;
- information and awareness programmes relating to pesticides;
- systems for gathering information relating to cases of acute and chronic pesticide poisoning;
- checking the equipment used to apply pesticides;
- aerial spraying;
- protection of the aquatic environment and drinking water;
- reduction of pesticide use or risks in specific areas;
- handling of pesticides and treatment of their packaging and residues;
- storage of pesticides;
- integrated pest management;
- risk indicators.

This National Action Plan describes the way in which Bulgaria will ensure implementation of the requirements in this sphere. It defines the objectives, measures, schedules and indicators for the reduction of risks and impact of the use of pesticides on human health and the environment. Pursuant to the requirements of the Directive, it sets out the actions to be taken to encourage integrated pest management and alternative approaches or technologies to reduce dependence on pesticide use. The Directive also envisages observation on the part of Member States of the use of plant protection products containing active substances which give rise to particular concern and the setting of schedules and objectives to cut down on their use, particularly when this represents a suitable way of reducing risk.

In drawing up Bulgaria's National Action Plan, consideration was given to the health, social, economic and ecological impact of the measures envisaged in the Plan, and to specific national and regional conditions.

LIST OF ABBREVIATIONS

International organisations and laws

EFSA	European Food Safety Authority
ISO	International Organisation for Standardisation
RASFF	Rapid Alert System for Food and Feed
EC	European Commission
EC	European Community
EU	European Union
ZV	Water Act
ZZR	Plant Protection Act

Ministries and state institutions

BABKh	Bulgarian Food Safety Agency
BD	Basin Directorate
ViK	Water and sewerage organisation
GD GVA	Civil Aviation Administration Central Directorate
IA BSA	Bulgarian Accreditation Service Executive Agency
IAOS	Environmental Executive Agency
IZR	Plant Protection Institute
KTI	Technical Control Inspectorate
MZ	Ministry of Health
MZKh	Ministry of Agriculture and Foods
MOSV	Ministry of Environment and Water
MS	Council of Ministers
MTITS	Ministry of Transport, Information Technologies and Communications
NRL	National Reference Laboratories
NSRZ	National Plant Protection Service
ODBKh	Regional Food Safety Directorate
RZI	Regional Health Inspectorate
RIOSV	Regional Environmental and Water Inspectorate
TsLVSE	Central Laboratory for Veterinary Sanitary Expert Appraisal
TsLKhIK	Central Laboratory for Chemical Testing and Control
TsOR	Risk Assessment Centre

Parameters, standards, plans, programmes, etc.

AER	Agro-environmental region
ARIB	Association for the Plant Protection Industry of Bulgaria
BDS	Bulgarian State Standard
GS	Limit values
DV	State Gazette
ZZV	Water protection zone
ZP	Agricultural producer

IUV	Integrated pest management
MDGOV (MRL)	Maximum residue level
MRL	Maximum residue level
NEM	National Ecological Network
NPD	National Action Plan
NPDUUP	National Action Plan for Sustainable Pesticide Use
PVT	Groundwater bodies
PDK	Admissible concentration limit
PIV	Economic harm threshold
POP	Persistent organic pollutant
PPP	Plant protection product
PURB	River basin management plan
SUK	Quality management system
UMBALSM N.I. Pirogov	N.I. Pirogov University General Hospital for Active Treatment and Emergency Medical Aid
ZS	Mandatory value

I. LEGAL BASIS

The National Action Plan for Sustainable Pesticide Use in the Republic of Bulgaria was drawn up and adopted on the basis of Article 4 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 (OJ L 309 of 24 November 2009) and the Plant Protection Act (ZZR).

The National Action Plan for Sustainable Pesticide Use was drawn up in line with other plans and measures that had already been drafted at national level under other EU regulations and legislation and national legislation relating to pesticide use:

I. Plans for implementation under other Community regulations on pesticides:

- Updated National Action Plan for Management of Persistent Organic Pollutants (POPs) in the Republic of Bulgaria, 2012-2020 (A-NPDUUOZ), adopted by Decision of the Council of Ministers of 5 September 2012
- National Plan for the Development of Organic Farming in Bulgaria for the period 2006-2013
- River basin management plans (Danube, Black Sea, Eastern Aegean and Western Aegean basins)

II. Other basic acts in European and national legislation linked to sustainable use of pesticides:

- Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC
- Commission Implementing Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the list of authorised active substances
- Commission Regulation (EU) No 544/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for active substances
- Commission Regulation (EU) No 545/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for plant protection products
- Commission Regulation (EU) No 546/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards uniform principles for evaluation and authorisation of plant protection products
- Commission Regulation (EU) No 547/2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards labelling requirements for plant protection products
- Commission Implementing Regulation (EU) No 1274/2011 of 7 December 2011 concerning a coordinated multiannual control programme of the Union for 2012, 2013 and 2014 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin
- Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC

- Commission Regulation (EC) No 669/2009 of 24 July 2009 implementing Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards the increased level of official controls on imports of certain feed and food of non-animal origin and amending Decision 2006/504/EEC
- Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the registration, evaluation, authorisation and restriction of chemicals
- Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC
- Council Regulation (EC) No 3922/91 of 16 December 1991 on the harmonisation of technical requirements and administrative procedures in the field of civil aviation
- Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the authorisation of organisations and personnel involved in these tasks
- Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation
- Commission Regulation (EC) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008
- Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
- Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy
- Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council
- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption
- Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral water
- Directive 2008/98 of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives
- Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
- Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
- the Foods Act
- the Animal Feed Act
- the Health Act
- the Healthy and Safe Conditions at Work Act
- the Environmental Protection Act
- the Water Act
- the Soil Act

- the Biodiversity Act
- the Protected Territories Act
- the Harmful Exposure to Chemicals and Mixtures Protection Act
- the Waste Management Act
- the Agricultural and Forestry Equipment Registration and Control Act
- the Civil Aviation Act
- the Urban Development Act
- Regulation No 104 of 22.08.2006 on control of the marketing and use of plant protection products
- Regulation No 11 on sanitary and hygiene requirements for the arrangement and functioning of agricultural pharmacies
- Regulation on the requirements for the warehousing, transportation and storage of plant protection products
- Regulation No 112 of 13 October 2006 on the specific requirements for the performance of fumigation and decontamination of areas, premises and plant products to combat pests
- Regulation No 15 of 3 August 2007 on the conditions and procedure for integrated production of plants and plant-based products and their marking
- Regulation No 15 of 8 April 2004 on measures to protect bees and bee communities from poisoning and plant protection and disinfection methods
- Regulation No 54 of 28 November 2002 on the observation, diagnosis, forecasting and signalling conditions and procedures for combating pests on agricultural crops
- Regulation No 31 of 29 December 2003 on standards for maximum admissible concentrations of pesticide residues in food
- Regulation No 119 of 21.12.2006 on measures to monitor certain substances and their residues in live animals, raw materials and food of animal origin intended for human consumption
- Regulation on the conditions and procedure for the marketing of biocides
- Regulation No 7 of 23 April 2008 on the conditions and procedure for the provision of information on the marketing of biocides and/or chemicals classified as hazardous on the basis of their physical, chemical and toxicological properties, and of information on each case of poisoning or suspected poisoning caused by chemicals, products and biocides
- Regulation No 4 on monitoring of soil
- Regulation No 3 of 1 August 2008 on standards for admissible harmful substances in soil
- Regulation No 1 of 11 April 2011 on water monitoring
- Regulation on environmental quality standards for priority substances and certain other contaminants
- Regulation No 9 of 16 March 2001 on the quality of water intended for drinking and household use
- Regulation No 11 on the quality of water for washing
- Regulation No 12 on quality requirements for surface water intended for drinking and domestic water supply
- Regulation on the requirements for bottled natural mineral, spring or table water intended for drinking
- Regulation No 5 of 30 May 2008 on management of washing water quality
- Regulation No 7 of 8 August 1986 on indicators and standards for determination of the quality of flowing surface water
- Regulation No 3 of 16 October 2000 on the conditions and procedure for the study, design, ratification and exploitation of public health protection zones around water

sources and equipment for drinking and domestic water supply and around sources of mineral water used for therapeutic, preventive, drinking and hygiene needs
- Regulation No 1 of 10 October 2007 for the study, utilisation and protection of groundwater
- Regulation No 13 of 2 April 2007 on the characterisation of surface water
- Regulation No 3 on mandatory preliminary and routine medical checks on employees
- Regulation No 24 of 15.02.2000 on the issue of certificates to aviation operators carrying out specialised aviation work
- Regulation on the procedure and methods of classifying, packing and labelling chemicals and mixtures
- Regulation No 3 of 1 April 2004 on classification of wastes

II. COMPETENT BODIES

THE BULGARIAN FOOD SAFETY AGENCY (BABKh) is the overall agency that controls the quality and safety of food in Bulgaria. Set up in early 2011, BABKh follows best European practices in the application of high standards of control in the sphere of food quality and safety, plant protection products and fertilisers, etc. BABKh lays down the requirements for plant protection products and fertilisers, and the regimens for the testing, authorisation and control of production, repackaging, storage, marketing and use, and exercises official control with a view to protecting the health of people and animals, and safeguarding the environment. It monitors raw materials and food of plant and animal origin and animal feed for their contaminant content, and each year implements a National Programme to monitor pesticides residues in and on food of plant and animal origin, animal feed, etc. It monitors the marketing and use of plant protection products in line with the overall Multi-Annual National Control Plan (EMNKP). The main objective of monitoring the marketing, storage, repackaging and use of plant protection products is to ensure the safety of food of plant origin.

The Plant Protection Products and Fertilisers Directorate in BABKh is responsible for the methodological guidance and coordination of the actions of regional food safety directorates in the sphere of plant protection where plant protection products and fertilisers are concerned. It administers and coordinates the authorisation of plant protection products for marketing and use. The Directorate organises, manages and controls the biological testing for efficacy and residual amounts of plant protection products at BABKh bases and at authorised bases of natural and legal persons, in compliance with the principles of Good Experimental Practice. It assesses whether plant protection products conform to the indicator values laid down at the time of authorisation. It compiles and updates lists of marketing authorisations and use authorisations for plant protection products and registered fertilisers, soil amelioration agents, biologically active substances and nutritional substrates. It manages and coordinates the actions of regional food safety directorates in implementing control of the marketing, trade in and use of plant protection products and fertilisers. It keeps registers of authorisations for trading in plant protection products, repacking plant protection products and providing specialist plant protection services. It also manages and coordinates control measures for the use of plant protection products for compliance with the principles of Good Plant Protection Practice and integrated production, in line with the requirements of the Plant Protection Act.

The Laboratory Actions Directorate in BABKh coordinates laboratory diagnostic testing, analyses and expert appraisals associated with plants, raw materials, food and so on. The Directorate takes part in the development of quality improvement programmes at

laboratories belonging to the Agency and keeps a register of laboratories belonging to BABKh.

The Central Laboratory for Chemical Testing and Control (TsLKhIK) is a specialist structure with the status of a BABKh Directorate. It was set up in 1966 as a source of information for greenhouse production in Bulgaria, and since 1986, by Decision of the Council of Ministers, it has been authorised to monitor plant produce for harmful chemicals content and the quality of agrochemicals. The Laboratory works in a number of different areas, and it monitors both products intended for agricultural use (pesticides and fertilisers) and raw materials and food of plant origin. Its fundamental task is to monitor food of non-animal origin for their pollutant content. Analyses are carried out at the Laboratory, in accordance with the existing regulations, to identify residual amounts of pesticides, mycotoxins and environmental pollutants, plant protection products, mineral and organic fertilisers, local production and imports, in order to check for conformity with physical and chemical indicators.

- Pesticide residues in: vegetables and fruit – fresh, frozen or dried and processed products; cereals (grains) and processed products; tea, herbs and seasonings; wine.
- Mycotoxins in: sweetbreads, dried fruits and processed products; cereals (grains) and processed products; roasted coffee, soluble coffee, green coffee, cocoa and cocoa products; tea, herbs and seasonings, juices, nectars and fruit-based concentrates, pectin.
- Elementary analysis in: vegetables and fruit – fresh, frozen or dried and processed products; tea, herbs and seasonings; cereals (grains) and processed products; beers and wines.
- Nitrates in: vegetables and fruit – fresh or frozen and processed products; processed cereal-based food and food intended for breast-fed infants and small children.
- Physical and chemical analyses of: inorganic single-component fertilisers; inorganic complex fertilisers; inorganic liquid fertilisers.
- Active plant protection product bases for compliance.

The TsLKhIK has an established and functioning Quality Control System and is accredited for everything that it does by the Bulgarian Accreditation Service Executive Agency in line with the requirements of Bulgarian State Standard EN ISO/IEC 17025.

By Order of the Minister for Agriculture and Food, the TsLKhIK has been established as the National Reference Laboratory that will carry out analyses of pesticide residues in fruit and vegetables.

The TsLKhIK is located in a modern building complex. It is fitted out with the most up-to-date analytical equipment and it employs highly skilled experts, which enables it to apply European standards in its activities.

Since 1990 the Laboratory has been continuously upgrading its conventional and analytical equipment, and it now has modern equipment for analyses in its sphere of activities: GC, GC/MS/MS, HPLC, AAS, ICP and others.

The Risk Assessment Centre (TsOR) is the BABKh unit for observation and data collection and analysis to enable risks with a direct or indirect impact on the safety of food and animal feed, human health, plant health, etc., to be identified and scientifically assessed by an independent body. The unit carries out independent scientific assessments at the request of state agencies and natural and legal persons, or at the request of the European Food Safety Authority (EFSA). The TsOR's activities are aimed at informing the public of risks and

hazards caused by the incorrect use of plant protection products, and the potential presence of excessive levels of their residues in food.

The Regional Food Safety Directorates (ODBKh). BABKh has 28 regional directorates in Bulgaria, which carry out their activities in the relevant regions. ODBKh inspectors draw up position statements on applications for authorisations to trade and repack plant protection products. They monitor the marketing of plant protection products and fertilisers and their use, and they monitor implementation of programmes to limit and prevent pollution by nitrates of agricultural origin in vulnerable zones. They also implement national programmes for the monitoring of pesticide residues in food, and carry out border controls of plant protection products and fertilisers; and so on.

THE MINISTRY OF AGRICULTURE AND FOOD (MZKh) is in charge of national policy for the development of crop cultivation and animal husbandry and associated activities. It is responsible for national policy in the areas of: cereal crop cultivation, trade in and storage of cereals and cereal processing; the production, trade in and use of animal feed; controls of food of plant and animal origin, raw materials, secondary animal products and products obtained from them, and specific plant products. It monitors compliance of the requirements applicable to food and the measures taken and conditions for them to be hygienic and safe for human health and for the environment. It also organises, coordinates and monitors activities associated with the preservation of agricultural land and forests. It implements the policy on finance for agricultural and rural projects and programmes from the national budget via special funds and via European Union (EU) funds. It organises, coordinates and monitors activities associated with the application of the common agricultural policy (CAP) and the EU's food safety policy.

The Animal Health and Food Safety Directorate supports the Minister in drafting, coordinating and applying the Ministry's policy in the sphere of food quality and safety and the safety of animal feed. It coordinates the drafting of a unified, multi-annual national plan for official control, which is ensures checks on compliance with the law in the sphere of animal feed and food, and draws up an annual report on implementation of the plan. It coordinates the effective functioning of Codex Alimentarius activities in Bulgaria, and is building and supporting a rapid alert system for food and feed (RASFF) in Bulgaria, too. It takes part in joint actions with the European Food Safety Authority (EFSA), the World Health Organisation, the Food and Agriculture Organisation and other international food and feed safety organisations.

The Crop Cultivation Directorate supports the Minister in carrying out and implementing state policy in the area of crop cultivation. Together with the Regional Agriculture Directorates, it analyses agricultural crops to establish their current status in respect of agroclimatic conditions and reports to the Minister. It is also involved in drafting, observing, updating and monitoring the Conditions for Maintaining the Land in a Good Agricultural and Ecological State (DZEU). It manages actions to implement the National Plan for the Development of Organic Farming in Bulgaria 2006-2013, and it takes part in the Implementation Management Committee for the National Plan for the Development of Organic Farming in Bulgaria 2006-2013, the Standing Committee on Organic Farming (SCOF) and European Union working groups.

The Agriculture and Land Relations Central Directorate supports the Minister in implementing state policy in the area of agriculture and in applying the EU's CAP. It coordinates and supports ministerial control in respect of integral action by specialised regional structures within the Ministry system. It also creates and updates the Agricultural Plot Identification System (SIZP) and associated specialised databases and registers. It

organises, coordinates and monitors actions to update the digital orthophoto map (TsOFK), and creates and continually updates physical blocks in accordance with the aims of various EU CAP systems and measures requiring the registration of areas. It maintains the information system for the register of agricultural producers at central level and at regional level, coordinates action to implement the Agricultural Property Protection Act (ZOSI), the Agricultural Land Protection Act, the Agricultural Land Ownership and Use Act (ZSPZZ), the Restitution of Ownership of Woodlands and Land from the Forestry Fund Act (ZVSGZGF) and the Agricultural Land Protection Act (ZOZZ), and their implementing regulations. It draws up an annual balance sheet for agricultural land and woodland. It also creates, processes and analyses statistical information in the sphere of agriculture, and designs, creates and maintains databases on agriculture. It coordinates the collection of statistical data from administrative structures of the Ministry; and it presents data and carries out analyses during European Commission audit missions related to area payments.

THE MINISTRY OF ENVIRONMENT AND WATER (MOSV) manages, coordinates and monitors the drafting and implementation of state policy in the sphere of environmental protection and water protection and use. The MOSV controls and monitors the chemical pollution of components of the environment (air, soil, surface and groundwater).

The Water Management Directorate implements state policy for water management. It develops national programmes on water protection and sustainable development. It organises and manages water monitoring and drafts state policy on bilateral and multilateral cooperation on water use and protection. It defines sanitary protection zones: for water intake installations for mineral water, for water intake installations located within national park boundaries, for complex and significant reservoirs used for drinking and domestic water supply. It also establishes a list of priority substances and priority hazardous substances, and it adopts methodologies for testing water in cases where there are no Bulgarian standards and for analysing the water monitoring data.

The National Nature Protection Service drafts regulations on nature protection. It is responsible for the designation and alteration of protected areas and protected zones, and for the allocation, acceptance and ratification of management plans for protected areas and protected zones. It allocates and ratifies action plans for plant and animal species. It develops and coordinates measures to verify compliance with the restrictive regimens for vulnerable biological resources. It also collects, continuously updates and stores data for the National Ecological Network and prepares specialist maps, registers and an information system based on these data. It provides methodological support for action by regional agencies to monitor protected areas and zones and biological diversity. It supports links and coordination with other authorities and organisations on issues concerning protected areas and zones and the protection of biodiversity.

Through the directors of the national park directorates, the Minister for the Environment and Water monitors compliance with the prohibitions and restrictions in national parks within the boundaries of sanitary protection zones. The Minister also observes and monitors environmental components and factors that have an impact on water condition.

The Waste Management and Soil Protection Directorate manages, coordinates and monitors the drafting and implementation of state policy on waste management, including hazardous waste, and soil protection.

The Preventive Action Directorate implements the policy for the prevention and control of environmental pollution, including: application of international chemicals management conventions, including the Conventions on Prior Informed Consent for Certain

Hazardous Chemicals and Pesticides in International Trade, Persistent Organic Pollutants and the Transboundary Effects of Industrial Accidents. It draws up proposals for the assessment of substances, the identification of particularly hazardous substances for authorisation and restrictions on chemicals. It implements measures concerning the import and export of hazardous chemicals, and provides information to the public on chemical risks and how to use chemicals safely.

The MOSV carries out its actions at national and regional level through **the Environmental Executive Agency (IAOS), the 16 Regional Environmental and Water Inspectorates (RIOSV)** and **the 4 Basin Directorates (BD).**

The Environmental Executive Agency (IAOS) is part of the Ministry of Environment and Water and has management, coordination and information functions in the area of environmental monitoring and protection. It draws up and manages the National Environmental Monitoring System and provides information on the status of environmental components and factors throughout the country. It is the national reference centre for the European Environment Agency (EEA).

Through the Environmental Executive Agency, the Ministry of Environment and Water carries out laboratory and field trials to establish water status and conducts water monitoring on a national level. It maintains a national geographical information system for water and prepares an annual report on water status. It also issues regular bulletins on the state of water resources in Bulgaria based on data from the monitoring of the ecological and chemical status of water. It creates and maintains specialist databases, maps, registers and a water information system.

The Environmental Monitoring and Assessment Directorate has numerous functions, including administration of the National Environmental Monitoring System. It also analyses and assesses the status of the environment in terms of components and factors, prepares nationally representative information on the status of the environment and natural resources, and prepares and processes information and reports it to the EEA and other international bodies. It prepares and processes information in a certain format, as appropriate, in accordance with the duty to report to the European Commission on the application of European environmental law. It analyses water quality on a national level and assesses water monitoring data, including monitoring of the marine environment. It compiles inventories of emissions, discharges and losses of all priority substances and pollutants to meet the requirements of Council Directive 2008/105/EC. It organises an information system for water at a national level, and compiles comprehensive documentation on calibration laboratory accreditation and re-accreditation procedures, in accordance with the requirements of Bulgarian State Standard EN ISO/IEC 17025:2006.

The Central Directorate for Laboratory Analysis Functions collects and analyses environmental samples to support actions by the National Environmental Monitoring System (NSMOS) to be applied by water management directorates, regional environmental and water inspectorates and external clients, and in response to notifications and complaints from citizens and from the government and non-governmental organisations. It carries out tests on the quality of atmospheric air, on the quality of surface, underground, waste, drinking and mineral water, and on soil quality.

The Directorate provides methodological assistance and monitors the quality of analyses in 14 regional laboratories. It drafts, harmonises and applies standardisation documents in accordance with European environmental monitoring law. It participates in inter-laboratory comparative tests at national, European and international level in order to

ensure and monitor the quality of analyses carried out. It also draws up comprehensive documentation on laboratory accreditation and re-accreditation procedures, in accordance with the requirements of Bulgarian State Standard EN ISO/IEC 17025:2006.

The 14 regional laboratories carry out sampling, field measurement and laboratory testing of: surface water (including stagnant water) from NSMOS points and the network for monitoring abiotic factors in national parks; groundwater from NSMOS points, and their own monitoring; waste water from sites that are subject to mandatory control, and their own monitoring; and surface water intended for the drinking and domestic water supply. It samples and tests soil from points included in the National Soil Monitoring System and the national parks soil monitoring network. It also carries out sampling and analysis for external clients. The regional laboratories handle control measures, complaints, notifications and emergencies linked to the state of the environment. Regional laboratories by the River Danube and the Black Sea sample and test the water of the Danube (they implement the River Danube observation programme) and sea water.

The regional laboratories use tried and tested modern laboratory measurement methods, and their appliances and equipment meet high international quality standards (ISO 9001). They have developed systems for internal laboratory control of all samples tested, in line with the requirements of good laboratory practice, and regularly take part in inter-laboratory comparative testing.

The Regional Environmental and Water Inspectorates (RIOSV) are administrative units belonging to the Ministry of Environment and Water which see to the implementation of state policy on environmental protection at the regional level.

Through the regional environmental and water inspectorates, and within their regional scope, the Ministry of Environment and Water monitors waste water, monitors facilities that affect waste water flows, including water treatment plants for residential areas, and monitors the parameters of, and compliance with, the conditions and requirements for waste water discharge authorisations and comprehensive authorisations issued under the Environmental Protection Act. It also monitors emergency waste water discharges; maintains a database of the monitoring carried out, including its own monitoring of holders of authorisations, of the quantitative and qualitative characteristics of waste water, and of the monitoring of the condition of waste water. It maintains and updates lists of the facilities that affect emissions of priority substances and priority hazardous substances, as well as general and specific pollutants.

Basin Directorates (BD): The director of a basin directorate implements state water management policy at basin level and drafts river basin management plans. The basin directorates also plan and carry out water monitoring, and summarise and analyse data, including data on the chemical and ecological status of water and waste water. They maintain specialised databases, maps, registers and a water information system, and they draft programmes of measures to improve, protect and maintain the status of water. They define sanitary protection zones around facilities for drinking and domestic water supply, issue regular water status bulletins, and set up and maintain databases for the monitoring carried out by them.

THE MINISTRY OF HEALTH (MZ) is the authority responsible for implementing European and national law on water intended for drinking and domestic purposes, bottled water (mineral, spring and table) intended for drinking, and water for bathing. In conjunction with its regional agencies, in the shape of the 28 Regional Health Inspectorates, it is responsible for monitoring the quality of drinking water (including the presence of plant

protection agents), together with water and sewage system operators. In cooperation with the producers of bottled, spring and table water, bottled water intended for use as drinking water is also monitored. In targeted controls and studies, pesticides in both bathing water and bottled water are analysed.

When water contamination is identified, the relevant measures are taken to eliminate the infringement, and to inform the public and consumers.

Information on the analyses and their results will be made available for the implementation of this national plan for drinking and bottled water and water for bathing.

In accordance with its duties under the Law on Protection from the Harmful Impact of Chemical Substances and Mixtures, the Ministry of Health (through the Toxicology Clinic at the N.I. Pirogov General Hospital for Active Treatment and Emergency Medical Aid) is also responsible for collecting and analysing information on instances of acute and chronic toxicity induced by plant protection products in Bulgaria. This information will also be made available for the implementation of the objectives of this programme.

THE TECHNICAL CONTROL INSPECTORATE (KTI) deals with public relations for the marketing, registration, entry into use, cessation, and monitoring of the technical status and safety of agricultural and forestry equipment and acquisition of the legal capacity to work with such equipment. The marketing, registration and use of wheeled and caterpillar-tracked tractors, trailers and substitute tractor equipment require a valid certificate of conformity with an authorised type. The KTI registers self-propelled vehicles with an engine power over 10 kW, non-self-propelled and stationary machinery and equipment, installations and apparatuses used in agriculture and forestry. The KTI has the right to monitor and temporarily suspend operation of equipment that is not registered, technically faulty or lacking safety devices, as well as equipment that has not passed its annual technical review. The KTI observes the requirements of the rules on training, testing and issuing of certificates of legal capacity to work with agricultural and forestry equipment.

THE MINISTRY OF TRANSPORT, INFORMATION TECHNOLOGIES AND COMMUNICATIONS

The Civil Aviation Administration Central Directorate is the national monitoring body for civil aviation and civil aviation equipment. Pursuant to Article 8(1) of the Civil Aviation Act, 'the Ministry of Transport, Information Technologies and Communications manages and monitors civil aviation and civil aviation equipment and facilities within Bulgaria'. Pursuant to Article 8(2) of the Civil Aviation Act, 'the Ministry of Transport, Information Technologies and Communications exercises its powers under paragraph 1 via the Civil Aviation Administration Central Directorate'.

III. MARKETING AND USE OF PLANT PROTECTION PRODUCTS

Plant protection products are authorised for marketing and use within Bulgaria when they comply with the requirements of Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.

In Bulgaria, plant protection products are marketed and used following an authorisation by the Executive Director of the Bulgarian Food Safety Agency.

Regulation (EC) No 1107/2009 (specifically, Article 55) states that plant protection products shall be used properly. Proper use includes application of the principles of good plant protection practice and compliance with the conditions for which the product is authorised and the instructions specified on the label. Proper use is also consistent with the provisions of Directive 2009/128/EC, and more particularly with the general principles of integrated pest management, as referred to in Article 14 of that Directive, as well as Annex III, which shall apply at the latest from 1 January 2014.

With reference to implementation of Regulation (EC) No 1185/2009 of the European Parliament and of the Council of 25 November 2009 concerning statistics on pesticides, the competent bodies in the sphere of statistics for plant protection products are as follows:

- the Ministry of Agriculture and Food, the Agriculture and Land Relations Central Directorate, Agrostatistics Department, with regard to statistics for annual plant protection product quantities consumed in agriculture;
- the Bulgarian Food Safety Agency, Plant Protection Products and Fertilisers Directorate, Plant Protection Products and Fertilisers Monitoring Department, with regard to statistics for annual plant protection product quantities placed on the market.

Table 1. Number of authorised plant protection products in Bulgaria and number of active substances contained in them (as of October 2012):

Function	PPP	Active substances
1. Fungicides	**165**	**67**
2. Insecticides, total:	**136**	**61**
- acaricides	15	
- nematocides	8	
- rodenticides	4	
- limacides	2	
- bio-insecticides	11	
- repellents	2	
3. Pheromones	**27**	
4. Herbicides, total:	**181**	**73**
- desiccants and defoliants	3	
5. Growth regulators	**10**	
TOTAL:	**519**	**201**

A current LIST OF PLANT PROTECTION PRODUCTS authorised for marketing and use in Bulgaria can be found on the Bulgarian Food Safety Agency website: http://www.babh.government.bg/bg/register1.html.

IV. OBJECTIVES

To reduce dependence on pesticide use, the National Action Plan for Sustainable Pesticide Use sets out **2 main objectives, each of which has defined sub-objectives, as follows:**

I. Reducing the risks and impact of pesticide use on human health and the environment, including:

- **Protection of human health:**

1. preventive protection of consumers – by reducing pesticide residues in food of plant origin;
2. reducing the risk of pesticide residues in food intended for children, as the most vulnerable consumer group;
3. avoiding and/or reducing the risk of pesticide residues in drinking water and bottled water;
4. protection of professional users, operators and agricultural workers – by reducing exposure to pesticides;
5. protection of residents and bystanders (people who happen to be present or passing by) in zones where pesticides are used – by avoiding and/or reducing their exposure to pesticides;
6. protection of the general public and vulnerable population groups – by avoiding and/or reducing the risks of pesticides in public spaces and recreational zones;
7. protection of recreational consumers using pesticides on their own crops, gardens, yards, etc.

- **Protection of the environment:**

1. avoiding and/or reducing pesticide pollution of water and soil;
2. avoiding and/or reducing the risk of pesticide residues in water sources – both surface and groundwater;
3. avoiding and/or reducing the impact of pesticides on biodiversity, with special attention being devoted to bees and other non-target organisms.

II. Promoting integrated pest management and alternative approaches or methods, including:

1. Developing integrated pest management systems and alternative plant protection approaches or methods.
2. Introducing integrated pest management – through information campaigns and incentives, including financial incentives, for agricultural producers applying general and/or specific principles of integrated pest management;
3. Encouraging the use of non-chemical alternatives to pesticides wherever possible.

V. MEASURES

MEASURE 1. TRAINING OF PROFESSIONAL PESTICIDE USERS, DISTRIBUTORS AND CONSULTANTS

Bulgaria will approve the system of basic and advanced training for professional users of pesticides, distributors and consultants, and will introduce a system of certification of individuals who handle plant protection products as part of their professional activities (distributors, consultants and professional users). This measure will ensure that individuals working with pesticides are familiar with the potential risks to human health and the environment, and with ways to reduce these risks as far as is feasible.

Since 2008, inspectors from the former regional plant protection services (now the provincial plant safety directorates) have been carrying out annual training courses on 'Basic training of agricultural producers in the use of category 2 plant protection products, as specified in Article 26 of Regulation No 104 of 22 August 2006 on supervision of the marketing and use of plant protection products' in all 28 provinces. These inspectors also provide training in integrated production, good plant protection practice, economically significant pests (by crops and typical of the region), legal requirements regarding plant protection products and fertilisers, forecasting and warning, quarantine pests, protection of bees, and other current topics relating to plant protection.

The programme for all of these courses includes information on the impact of pesticides on human health and the environment, and ways of using them safely and correctly.

Individuals who handle professional-category plant protection products as part of their work must be properly informed about the subjects listed in Annex 1 to Directive 2009/128/EC. To obtain a certificate, these individuals must pass a written test.

Exception: Individuals who have completed higher education in the agrarian sciences are legally entitled to receive an initial certificate , without having to sit a written test. For this certificate to be renewed on expiry, these individuals will have to sit a test to certify that their knowledge has been updated.

Certificates of basic and advanced training will be issued to professional users of pesticides, distributors and consultants by the Bulgarian Food Safety Agency (BABH). Certificates will be valid for five years. The certificate will be withdrawn in the event of two or more infringements of the ZZR during the period of validity of the certificate.

The table below, based on BABH data, shows the number of agricultural producers trained over the period 2008-2011:

TABLE 2. DATA:

- **No of agricultural producers trained as of 31.12.2011: 6 760**
- **No of registered agricultural producers of plant products as of 14.10.2011: 45 286**

year	No of AP trained
2008	**1698** (1 006 under Art. 26 of Order No 104)
2009	**1697** (1 152 under Art. 26 of Order No 104)
2010	**2045** (1 106 under Art. 26 of Order No 104)
2011	**1320** (886 under Art. 26 of Order No 104)

Training courses for acquisition of a qualification/legal capacity to work with plant protection products of **professional category**[1], and to upgrade an acquired qualification/legal capacity, will take place at higher education institutions within the occupational education and training system. The courses will be run using curricula authorised by the Bulgarian Food Safety Agency and first drawn up by the training institutions in accordance with the specific functions and responsibilities of the individuals who are to be trained and the level of their skills. The curricula must include as a minimum the subjects listed in Annex 1 to Directive 2009/128/EC:

TRAINING SUBJECTS:

1. All relevant legislation regarding pesticides and their use.
2. The existence and risks of illegal (counterfeit) plant protection products, and the methods to identify such products.
3. The hazards and risks associated with pesticides, and how to identify and control them, in particular:

a) risks to humans (operators, residents, bystanders, people entering treated areas and those handling or eating treated items) and how factors such as smoking exacerbate these risks;
b) symptoms of pesticide poisoning and first aid measures;
c) risks to non-target plants, beneficial insects, wildlife, biodiversity and the environment in general.

4. Notions on integrated pest management strategies and techniques, integrated crop management strategies and techniques, organic farming principles, organic pest control methods, information on the general principles and crop or sector-specific guidelines for integrated pest management.
5. Initiation to comparative assessment at user level to help professional users make the most appropriate choices on pesticides with the least side effects on human health, non-target organisms and the environment among all authorised products for a given pest problem, in a given situation.
6. Measures to minimise risks to humans, non-target organisms and the environment: safe working practices for storing, handling and mixing pesticides, and disposing of

[1] First-category (professional) lant protection products, which must be applied by or under the supervision of an agronomist specialised in plant protection

empty packaging, other contaminated materials and surplus pesticides (including tank mixes), whether in concentrate or dilute form; recommended way to control operator exposure (personal protection equipment).

7. Risk-based approaches which take into account the local water extraction variables such as climate, soil and crop types, and relieves.
8. Procedures for preparing pesticide application equipment for work, including its calibration, and for its operation with minimum risks to the user, other humans, non-target animal and plant species, biodiversity and the environment, including water resources.
9. 'Best practices (BP) for protection of water from contamination caused by point sources with use of PPP'.
10. Use of pesticide application equipment and its maintenance, and specific spraying techniques (e.g. low-volume spraying and low-drift nozzles), as well as the objectives of the technical check of sprayers in use and ways to improve spray quality. Specific risks linked to use of handheld pesticide application equipment or knapsack sprayers and the relevant risk management measures.
11. Emergency action to protect human health and the environment including water resources in case of accidental spillage and contamination and extreme weather events that would result in pesticide leaching risks.
12. Special requirements for pesticide use within the National Ecological Network (NEM) area and other special protection areas established under current legislation.
13. Information on any incidents or suspected incidents linked to pesticides from all types of health care establishments.
14. Collection and storage of data on any use of pesticides, in accordance with the ZZR.

ACTIONS under Measure 1:

1) Introduction of a system for preliminary and supplementary training for individuals who handle pesticides as part of their professional activities (professional pesticide users, distributors and consultants);
   Timeline: as in ZZR
   Responsible institution: Higher education institutions in the occupational education and training system
2) Introduction of a system of certification for professional pesticide users, distributors and consultants/vendors at an agricultural pharmacy (AP).
   Timeline: by 26.11.2013 for professional pesticide users and consultants
   Timeline: by 26.11.2015 for distributors and consultants/vendors at an agricultural pharmacy (AP)
   Responsible institution: BABKh
3) Creation and maintenance of a public register of individuals who hold a certificate to work with professional-use plant protection products.
   Deadline for setting up register: by 26.11.2013
   Timeline for register maintenance: continuous
   Responsible institution: BABKh

EXPECTED OUTCOME of Measure 1:

Reduction in risk and impact of use of pesticides on human health and on the environment as a result of the provision and acquisition of specialist knowledge by professional users, distributors and consultants.

MEASURE 2. REQUIREMENTS FOR THE SALE OF PESTICIDES

The sale of pesticides is an important element in the distribution chain and at the time of sale to the end user (agricultural producer) specific information needs to be provided on the safety instructions relating to human health and the environment. Non-professional users, who as a rule do not have the same level of education and have not undergone the same training, should be provided with recommendations relating specifically to the safe handling of plant protection products, their storage and the disposal of packaging.

Trade in PPP and the re-packing of PPP must comply with the procedures and conditions stipulated in the Plant Protection Act and the bylaws on application.

Pursuant to the Plant Protection Act, trade in plant protection products and the re-packing of PPP are to be carried out by individuals designated as traders under the Commerce Act who hold permits issued by the Executive Director of the Bulgarian Food Safety Agency. Such permits are issued for a five-year period and are non-transferable.

Trade in PPP is to be conducted at specialised facilities: warehouses for the storage of and trade in PPP and/or agricultural pharmacies. Re-packing is to be done at specialist re-packing departments. Facilities for the trade in, storage of and re-packing of plant protection products must comply with the Planning Act and the regulations on the type of facility for the trade in and storage of PPP, as issued pursuant to the ZZR, in order to ensure that the said products are being stored in a reliable and safe manner.

Plant protection products listed in the ‘professional use’ category are only to be sold by those who hold a certificate to work with this category of product. The certification system is described in the National Action Plan under ‘Training of professional users of pesticides, distributors and consultants’.

TABLE 3. Requirements for individuals who trade in PPP or re-pack plant protection products:

Individuals who trade in PPP or re-pack plant protection products must provide at least one person who:		
for trade in PPP **at a warehouse**	for trade in PPP **at an agricultural pharmacy**	for **re-packing** of PPP
has a higher qualification in agricultural science and is responsible for procedures at the facility	has a higher qualification in agricultural science and: • is involved in sales, or • oversees the procedures in a managerial role in the event that the consultant/vendor has secondary-level qualifications in crop cultivation.	has a higher qualification in agricultural science and is responsible for procedures at the facility
holds a certificate*	holds a certificate*	holds a certificate*
is present at the time of the sale and provides information on the use of plant protection products, the risks to human health, animals and the environment, and safety instructions. For sales to non-professional users, he shall also provide information on hazards, exposure, proper storage, handling and application of the products and safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives.	where an consultant/vendor is present at the time of the sale and provides information on the use of plant protection products, the risks to human health, animals and the environment, and safety instructions. For sales to non-professional users, he shall also provide information on hazards, exposure, proper storage, handling and application of the products and safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives.	is present during re-packing and monitors procedures at the facility.

***Note:** with effect from 26.11.2015*

When a trader in involved in the distribution of plant protection products from several warehouses, he must ensure that each facility has someone with a higher qualification in agricultural science who is responsible for procedures at the facility.

When a trader is involved in the distribution of plant protection products at one or more agricultural pharmacies, each of which has consultant/vendor with secondary qualifications in crop cultivation, it is essential to provide at least one individual with a higher qualification in agricultural science who shall be responsible for procedures at the said facility.

Managers of PPP trading facilities and consultants/vendors shall be included in the authorisation to trade.

Agricultural pharmacies may only sell and store plant protection products listed in categories '2' and/or 'non-professional' in packaging of up to 5 litres/kilogram inclusive; where the agricultural pharmacy is in a residential building, the capacity of the packaging shall be up to 1 litre/kilogram inclusive.

Plant protection products listed in use category '1' shall only be re-packed for distribution in packaging containing less than 1 litre/kilogram.

The following are prohibited under the terms of the Plant Protection Act and its enactments:

- holding unauthorised *and/or* defective plant protection products with a view to their sale, trade, re-packing, storage or distribution;
- trading in, distributing, selling and storing plant protection products at warehouses and agricultural pharmacies not in possession of a permit to trade in PPP;
- selling and distributing plant protection products in the absence of the individual named in the authorisation to trade;
- in the case of agricultural pharmacies, trading in, distributing, selling and storing plant protection products of professional use category '1' and/or contained in packaging of more than 5 litres/kilogram, and, in the case of pharmacies in residential buildings, in packaging containing more than 1 litre/kilogram;
- distributing plant protection products where the pack or label is no longer intact;
- re-packing plant protection products outside re-packing departments for which an authorisation has been issued.

During the performance of control actions relating to trade in plant protection products ODBKh inspectors shall carry out checks on registered facilities: agricultural pharmacies, warehouses for the storage and distribution of plant protection products and plant protection product re-packing departments; and on unregulated facilities (namely those not included above, for example markets, shops, trading areas, etc.); as well as checks subject to an alert.

Of the total number registered, the percentage of facilities checked annually is as follows, according to type:

- warehouse for the storage of and trade in PPP – 100% of registered facilities, at least twice a year;
- re-packing departments – 100% of registered facilities, at least twice a year;
- agricultural pharmacies – 100% of registered facilities, at least once a year;
- unregulated facilities – the number of inspections is governed by the number of assumed (potential) facilities where there is a risk of unregulated trade in PPP.

Table 4 shows the number and type of the most frequently encountered cases of non-compliance as found by inspectors during checks carried out in 2009-2011.

TABLE 4: Number and type of non-compliances found:

Type of non-compliance found	Calendar year		
	2009	2010	2011
	No of non-compliances		
No authorisation to act	20	19	25
Sale or storage of unauthorised plant protection products	24	16	19
Plant protection products with expired shelf life	20	20	19
Plant protection products not arranged by functional characteristics	51	23	41
Lack of specially set aside area at warehouse for storage of plant protection products with expired shelf life, damaged packaging or withdrawn from sale	24	15	11
Supplies Log not routinely kept	67	81	80
Essential documents not visibly displayed – authorisation for use, diploma, etc.	47	19	54

Source: BABKh

- Annual report for 2009 for the Republic of Bulgaria on control measures pursuant to provisions of Article 17 of Council Directive 91/414/EEC.

- Annual report for 2010 for the Republic of Bulgaria on control measures pursuant to provisions of Article 17 of Council Directive 91/414/EEC.

- Annual report for the Republic of Bulgaria on the scope and results of controls of plant protection products pursuant to provisions of Article 68 of Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.

ACTIONS under Measure 2:

1) Individuals who trade in plant protection products must provide as follows:

- For each warehouse trading in PPP – at least one individual with a higher qualification in agricultural science who holds a certificate to work with plant protection products of the professional use category.
- For each agricultural pharmacy – at least one consultant/vendor with a higher qualification in agricultural science or a secondary qualification in crop cultivation and a certificate* to work with plant protection products of the professional use category.

Period of requirement for individuals trading in PPP: continuous

*Period of requirement to hold a certificate: from 26.11.2015

Responsible institution: BABKh, PPP traders

2) Individuals named in the authorisation to trade are to be present during sales and are to provide information on the use of plant protection products, the risks to human health, animals and the environment, and safety instructions. For sales to non-professional users they shall also provide information on hazards, exposure, proper storage, handling and application of the products and the safe disposal of waste in line with the Waste Management Act, and on low-risk alternatives.

Duration: continuous

Responsible institution: BABKh, PPP traders and their associations

3) Plant protection products of the professional use category shall only be sold by individuals who hold a certificate to work with plant protection products of the professional use category.

Duration: from 26.11.2015

Responsible institution: BABKh, PPP traders

EXPECTED OUTCOME of Measure 2:

The observance of all legal requirements and provisions relating to the sale of pesticides will ensure a reduction in the risks and impact of pesticide use where human health and the environment are concerned, as a result of PPP only being sold and distributed by competent individuals and by those with acquired knowledge of their potential impact and of the proper way to use and store pesticides.

MEASURE 3. HANDLING AND STORAGE OF PESTICIDES AND MANAGEMENT OF THEIR PACKAGING AND RESIDUES

The handling of pesticides, in particular their storage, dilution and mixing, the cleaning of equipment after their application and the gathering and disposal of mixtures remaining in tanks, empty plant protection product packaging and unused quantities of working solution, presents a real risk for undesirable exposure of humans and the environment. For this reason the National Action Plan for Sustainable Pesticide Use includes specific measures relating to such activities over and above those contained in Directive 2008/98 of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

The measures also cover non-professional users whose lack of knowledge is highly likely to result in the improper handling of plant protection products. When selling to a non-professional consumer the consultant/vendor must therefore provide information on hazards, exposure, proper storage, handling and application of plant protection products and safe disposal of the waste in line with the Waste Management Act, and propose low-risk alternatives.

Plant protection products:

- are to be stored in the original sealed packaging supplied by the producer or the person who re-packaged them, in accordance with the producer's instructions printed on the label;
- which are not fit for use or have had their authorisation withdrawn, or whose grace period for use has expired, are to be clearly marked and stored in a secure, closed space specially set aside for this purpose in a plant protection product warehouse and are to be processed in accordance with the Waste Management Act (ZUO); the owner is responsible for the storage, handover and payment for the disposal of defective or unauthorised plant protection products;
- are to be used in accordance with Article 55 of Regulation (EC) No 1107/2009, and as specified in the provisions of the Plant Protection Act (ZZR) and its implementing provisions;

for PPP issued on the basis of the ZZR;

- Agricultural producers shall store plant protection products intended for use on farms in permanent or temporary warehouses for the storage of plant protection products; the permanent and temporary warehouses must have controlled access and ensure reliable and safe storage of the plant protection products in them;
- Preparation of a working solution of plant protection products and cleaning of equipment for the application of plant protection products shall be carried out in locations and ways that do not pollute the environment and in compliance with the instructions shown on the product label;
- Unused quantities of working solution shall be used under the same conditions and for the same ends, or, if there is no opportunity to make use of them, shall be treated as waste, in accordance with the instructions shown on the product label and in line with the Waste Management Act;
- When agricultural areas are being treated with plant protection products an appropriate protection zone and distance from adjacent sensitive crops must be left in accordance with the instructions shown on the plant protection product label;

– Empty PPP packaging shall be handled and treated in accordance with the instructions shown on the label and in line with the Waste Management Act.

Individuals who produce, cultivate, store and trade in plants and plant products must keep a log of plant protection products used. The log shall be kept as a hard copy or on an electronic medium and shall be archived for at least three years from the date of the last entry. On request, the log shall be presented to the Bulgarian Food Safety Agency. The log shall be examined and certified by plant protection inspectors from the plant safety directorate for the region where the field, facility or plant and plant product storage warehouse is located. Agricultural producers may receive help on log keeping from consultants on integrated pest management, agronomists or agricultural specialists with a crop cultivation profile. Plants and plant products that are produced, cultivated, stored or traded, for the purpose of processing or consumption, shall be accompanied by a copy of the relevant extract from the log.

The following shall be entered in the log:

– each application of a plant protection product, the product type and name, the crop, the area, the application dose, the time and the application equipment used, including treatment of seeds, and the quantity of plant protection products used for each field or plant and plant product storage warehouse;

– the type of pest that the plant protection products are being used against, the established pest density, the extent of its onslaught or spread, including predicted appearances;

– the results of analyses of pesticide residues or other pollutants in plant and plant product samples;

– data identifying the individual who is responsible for carrying out plant protection action; the responsible person must be in possession of a certificate.

Information relating to the use category of plant protection products:

The use category system allows each plant protection product to be allocated to a specific group with a view to limiting its use to a specified consumer category.

Pursuant to the Plant Protection Act (*Published in State Gazette [DV] No 91 of 10 October 1997 and after amendment in DV No 28 of 5 April 2011*), the three use categories are as follows:

1) PPP of use category 1 (professional), applied only by or under the supervision of an agronomist with special skills in plant protection;

2) PPP of use category 2 (restricted), applied only by individuals with a higher qualification in agronomy and with secondary agricultural qualifications with a crop cultivation profile;

3) PPP of use category 3 (free) may be applied by individuals who are 18 years of age or above.

A new PPP classification system is being introduced, as follows:

– Plant protection products are to be placed in two use categories: **professional and non-professional.**

– The professional use category is divided into two sub-categories: **professional 1 and professional 2.**

- The use category for a given plant protection product is determined by expert appraisal of the product, taking into account:
    - the conditions and restrictions for authorisation of the active substances;
    - the classification of plant protection products in one or more environmental and health hazard categories pursuant to Article 2 of the Harmful Exposure to Chemicals and Mixtures Protection Act, or one or more hazard classes pursuant to Regulation (EC) No 1272/2008;
    - risk assessment, including the need to use personal protection equipment;
    - authorised uses and consumer categories.
- A plant protection product containing an active substance classed as active substance – candidate for substitution shall be placed in the 'professional' category.
- Plant protection products containing only active substances classed as low-risk substances and basic substances in the sense of Articles 22 and 23 of Regulation (EC) No 1107/2009 shall be placed in the 'non-professional' category.
- When establishing the category of a given plant protection product additional criteria may be introduced, depending on its use specification the hazard it represents for the health of the consumer.
- The use category of plant protection products shall be established by the Plant Protection Products Council when the product is authorised.

  The range of consumers is also to be established on the basis of the use category for plant protection product licensing:

1) plant protection products in use category 'professional 1' are only to be applied by consumers holding a certificate and under the supervision of an agronomist;
2) plant protection products in use category 'professional 2' are only to be applied by consumers holding a certificate;
3) plant protection products in use category 'non-professional 1' are to be applied by individuals who are at least 18 years old.

A one-year transition period is envisaged to bring plant protection products that are placed on the market into line with the new category system, and to re-label them. The current plant protection product category system is to be aligned with the new system as follows:

1. '1 (professional)' becomes 'professional 1';
2. '2 (restricted)' becomes 'professional 2';
3. '3 (free)' becomes 'non-professional'.

The following are prohibited under the Plant Protection Act:

- use and storage with a view to using unauthorised or defective plant protection products;
- use of plant protection products for plant protection on crops and against pests which do not fall within the scope of authorised use;
- application of plant protection products in a dose/quantity or concentration which exceeds the maximum admissible dose/quantity per unit of area or percentage of working solution for the relevant use;

- harvesting of agricultural products before the end of the quarantine period for plant protection products used, as stated on the label.

TABLE 5. Plant protection product inspections carried out during 2009-2011

Inspections carried out	No of inspections per calendar year		
	2009	**2010**	**2011**
Total, comprising:	**1 778**	**2 468**	**3 943**
Agricultural producers	1 648	2 374	3 798
Aerial treatment	58	38	30
Seed decontamination	65	56	37
Performance of fumigation	7	–	78

Checks on agricultural producers carried out by ODBKh inspectors include:

- **Documentary control** – checks on logs;
- **Area control** – application of plant protection products using ground-based equipment, aerial equipment, seed decontamination, fumigation and decontamination of areas, premises and plant products to combat pests.

Checks are carried out on agricultural producers who apply plant protection products in the production of crops through cultivation. Data on registered agricultural producers are taken from the Register of Agricultural Producers of Plant Products, which is kept by the Ministry of Agriculture and Food.

Percentage of registered agricultural producers covered:
- between 1% and 5% of registered APs in 2009;
- between 3% and 5% of registered APs in 2010;
- 5% of registered APs in 2011.

Table 6 shows the number and type of the most common non-compliances found during inspections carried out in the period 2009-2011.

TABLE 6: Number and types of non-compliances identified:

Type of non-compliances identified	No of non-compliances identified, by calendar year		
	2009	**2010**	**2011**
No mandatory entries on PPP use	60	52	131
Use of unauthorised product	–	5	1
Unauthorised use of authorised product	17	50	46
Incomplete data in chemical treatments log	137	176	137
Inappropriate PPP storage conditions	57	9	22
Inappropriate empty pack storage conditions	49	5	29
Illegal disposal of empty PPP packaging	8	6	–
Failure to observe safety prescriptions	2	–	–

Following the identification of a non-compliance an order is issued giving a deadline for the elimination of the said non-compliance, failing which an established administrative offence

deed is drawn up, pursuant to the provisions of the Plant Protection Act and the Apiculture Act.

Source: BABKh

- Annual report for 2009 for the Republic of Bulgaria on control measures pursuant to provisions of Article 17 of Council Directive 91/414/EEC.
- Annual report for 2010 for the Republic of Bulgaria on control measures pursuant to provisions of Article 17 of Council Directive 91/414/EEC.
- Annual report for the Republic of Bulgaria on the scope and results of controls of plant protection products pursuant to the provisions of Article 68 of Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.

Empty plant protection product packaging must be stored under cover in specially provided and secured locations and are to be managed and handled in accordance with the instructions shown on the label and pursuant to the provisions of the Waste Management Act.

IMPORTANT!
It is prohibited to abandon, bury, discard, burn, dump or otherwise dispose of empty plant protection product packaging in an unregulated manner.

There is to be a staged introduction of a requirement for individuals who place plant protection products on the market, including those who re-pack plant protection products and trade in them, to draw up and apply a system whereby empty packaging are collected from the end consumer using a distribution network or some other appropriate means, in accordance with the provisions of the Waste Management Act.

For their part, end consumers of plant protection products shall be obliged to return empty packaging in line with the system in place for the collection of packaging under the Waste Management Act.

► THE TOPPS BULGARIA PROJECT – A VOLUNTARY INITIATIVE FOR THE HANDLING OF PESTICIDES AND THEIR PACKAGING

This project commenced in 2010 at the initiative of the Association for the Plant Protection Industry of Bulgaria (ARIB), together with the former National Plant Protection Service (NSRZ), as the official local partner, with the aim of training operators to avoid the pollution of water with plant protection products from point sources.

The TOPPS project is being implemented in 15 EU Member States. Its main objective is to ensure that the best practices already in existence at European level to safeguard water from pollution during the use of plant protection products are adapted to suit Bulgarian conditions and are disseminated via advice, consultation, training and demonstrations. This is being done to reduce the risk of pollution of underground and surface water with plant protection products from point sources. There is a need to alter the thinking of all those who are in any way associated with the use of plant protection products. This should involve more than merely emphasising the problems that currently exist – it should present the best solutions to these problems. Joint efforts are needed by all interested parties if positive results are to be achieved.

By applying a method of ‘training for trainers’, experts from the NSRZ (now BABKh), inspectors from the former regional plant protection services (now regional food safety directorates) and representatives of industry organisations in the sphere of plant

protection have been trained by experts from the ECPA and have received a trainer's certificate.

The TOPPS Bulgaria project currently organises training courses for interested parties – agricultural producers, consultants, PPP distributors, etc. – in all 28 regions on the subject of 'Best practices (BP) to safeguard water from pollution caused by point sources during the use of PPP'.

The training courses make use of photographs, films and demonstration material in the form of brochures, posters and folders to provide a visual and accessible display of the impact of using plant protection products at every stage. The trainers give demonstrations in the calibration and triple washing of spraying equipment. Every project trainee receives a certificate. In 2010 and 2011 a total of 756 interested individuals were trained under the project. The courses are continuing in 2012.

ACTIONS under Measure 3:

1) The creation and maintenance of a register of authorised PPP on the BABKh website – PPP authorisation, labelling and safety information leaflet in Bulgarian.
   Deadline for creation of register: end 2013
   Deadline for maintenance of register: continuous
   Responsible institution: BABKh
2) Regulation of requirements for PPP storage warehouses belonging to agricultural producers through the adoption of the Regulation on the Production, Trade In, Re-packing and Storage of Plant Protection Products, issued by the Minister for Agriculture and Food pursuant to the ZZR, and bringing warehouses into line with the requirements over a set transition period.
   Deadline: pursuant to the ZZR and the Regulation
   Responsible institution: BABKh, agricultural producers
3) The creation, introduction and application of a system for collecting empty PPP packaging.
   Deadline: pursuant to the ZZR
   Responsible institution: crop cultivation associations, producers, re-packers, traders, agricultural producers
4) Inclusion of the topic 'Best practices (BP) to safeguard water from pollution caused by point sources during the use of PPP' in training courses and seminars for professional pesticide consumers, distributors and consultants, under point 5 of the National Action Plan.
   Deadline: continuous
   Responsible institution: Higher education institutions in the professional education and training system, BABKh

EXPECTED OUTCOME of Measure 3:
Reduction in the risks and impact of pesticide use on human health and on the environment as a result of proper handling and storage and the proper packaging and treatment of unused quantities of working solution.

MEASURE 4: CHECKING THE EQUIPMENT USED TO APPLY PESTICIDES

Since Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery stipulates rules for the placing on the market of equipment for the application of pesticides, which ensure fulfilment of the requirements associated with the environment, in respect of restricting the extent to which such equipment has a harmful effect on human health and the environment, the Sustainable Use Directive envisages systems for the routine technical checking of equipment already in use for the application of pesticides – used equipment for pesticide application.

The requirements for placing equipment for pesticide application on the market, and the requirements for technical checks on used equipment for pesticide application, are laid down in the Registration and Control of Agricultural and Forestry Equipment Act (ZRKZGT). Pursuant to the ZRKZGT, pesticide application equipment that is in use is subject to mandatory inspections to ensure the safety and protection of human health and the environment. The checks are carried out by the Technical Control Inspectorate and the intervals between inspections on pesticide application equipment that is in use are:

1. one inspection before 26 November 2016
2. one inspection every five years up to 2020
3. one inspection every three years after 2020.

From 26 November 2016 it will be mandatory to use only pesticide application equipment that has successfully passed inspection for the safety and protection of human health and the environment.

New pesticide application equipment shall be inspected at least once within five years of its purchase.

Mandatory checks on pesticide application equipment that is in use, which are aimed at ensuring the safety and protection of human health and the environment, are to be carried out under the Technical Control Inspectorate by test engineers trained in mechanised agricultural equipment and using mobile sprayer test equipment.

The procedure for routine checks on pesticide application equipment, and the certification and control system for checks on pesticide application equipment and the recognition of certificates issued by other Member States, shall be stipulated by a Ministry of Agriculture and Food regulation.

With reference to the requirements of the Sustainable Use Directive, the following auxiliary pesticide application equipment shall be subject to mandatory inspections in respect of the safety and protection of human health and the environment:

- spraying equipment mounted on aircraft;
- spraying equipment mounted on trains;
- boom sprayers over 3 m in length, including those attached to sowing equipment.

Checks on spraying equipment mounted on aircraft are to be carried out annually by air worthiness inspectors from the Civil Aviation Administration Central Directorate (GD GVA) of the Ministry of Transport, Information Technologies and Communications.

Checks on spraying equipment mounted on trains and on boom sprayers over 3 m in length, which includes those attached to sowing equipment (including spraying attachments mounted on seeders, harrows, cultivators or other machines), are to be carried out by the Technical Control Inspectorate at the Ministry of Agriculture and Food. The intervals between checks on train-mounted spraying equipment and on boom sprayers over 3 m in length, including those attached to sowing equipment, are: one inspection before

26 November 2016; one inspection every five years up to 2020; one inspection every three years after 2020.

The following pesticide application equipment shall also be subject to mandatory checks, but with schedules and intervals that differ from those given above:

- seed decontamination equipment;
- granule applicators;
- aerosol generators.

Checks on this kind of pesticide application equipment are to be carried out by the Technical Control Inspectorate.

The following pesticide application equipment is exempt from mandatory inspection:

- manual sprayers (sprayers held in the hand);
- knapsack sprayers – manually driven;
- knapsack sprayers with electric motor;
- knapsack sprayers with petrol engine.

Given that this type of pesticide application equipment is exempt from inspection, operators of equipment of this kind are to be notified by the Technical Control Inspectorate (KTI) of the need for routine replacement of accessories and of the specific risks associated with such equipment.

In view of the requirement for the preliminary and supplementary training of individuals who handle pesticides as part of their professional activities, it is essential for operators to be trained in the proper use of pesticide application equipment.

ACTIONS under Measure 4:

1) Pesticide application equipment using ground-based machinery that is in use is subject to mandatory inspection for the safety and protection of human health and the environment.
   Timeline: one inspection before 26 November 2016; one inspection every five years up to 2020; one inspection every three years after 2020.
   Responsible institution: KTI
2) From 26.11.2016, only pesticide application equipment using ground-based machinery that has successfully passed inspection is to be used.
   Timeline: new pesticide application equipment using ground-based machinery shall be subject to inspection within five years of its purchase.
   Responsible institution: KTI
3) Equipment for the application of plant protection products from aircraft is to pass a technical inspection in line with the requirements of Annex No 10 to Article 47(1) of Regulation No 24 of 2000 on the issue of certificates to aviation operators carrying out specialised aviation work.
   Timeline: continuous
   Responsible institution: GD GVA

EXPECTED OUTCOME of Measure 4:

The use of inspected pesticide application equipment will ensure a reduction in the risks and impact of pesticide use on human health and the environment.

MEASURE 5. AERIAL SPRAYING

Aerial spraying of pesticides has the potential to cause a significant harmful impact on human health and the environment, especially if the spray is widely dispersed. The Sustainable Use Directive prohibits the aerial application of pesticides at European level, although a derogation is admissible in special instances.

The Plant Protection Act will prohibit the aerial spraying of agricultural crops and other areas using plant protection products. In exceptional cases, where there is no viable alternative for protecting plants and plant products from pests, or where there are obvious advantages in terms of reducing the impact on human health and the environment when compared to the ground-based application of plant protection products, aerial spraying may be carried out, but only with written permission issued by the Bulgarian Food Safety Agency. The competent bodies as far as aerial spraying is concerned are:

- the Bulgarian Food Safety Agency, which sets the specific conditions and special requirements under which aerial spraying may be authorised;
- the Civil Aviation Administration Central Directorate, which authorises the use of aircraft and equipment for the aerial application of plant protection products;
- the Civil Aviation Administration Central Directorate, which ensures that equipment for the application of plant protection products by aerial spraying complies with national legislative requirements.

Aerial spraying may be authorised in one of the following instances:

1. where a disaster or epiphytotic outbreak of economically significant crop pests has been declared for a specific district or region, or nationwide, by order of the Ministry of Agriculture and Food;
2. where there is a large-scale increase in pest numbers in a specific area in excess of the economic damage threshold;
3. where emergency restrictions are needed to control the spread of pests and/or quarantine pests in order to prevent a disaster or epiphytotic outbreak.

The Bulgarian Food Safety Agency may authorise aerial spraying in the aforementioned instances **when at least one of the following circumstances is present:**

1. where it is not feasible to use ground-based equipment because of unfavourable agroclimatic conditions or inundated areas;
2. where treatment has to be carried out within tight deadlines because of the transition to phenophases or pest development phases that are suitable for treatment;
3. where very rugged and inaccessible areas, including afforested areas, are involved.

For aerial spraying to be authorised **the following requirements must be met:**

1. the plant protection products used are authorised for aerial spraying at national level;
2. the aviation operator has a certificate to perform specialist aviation work, as obtained in accordance with Regulation No 24 of 2000 relating to the issue of certificates to aviation operators carrying out specialised aviation work for the Ministry of Transport, Information Technologies and Communications;
3. at least one member of staff of the aviation operator holds a certificate for working with PPP of the professional use category.
4. the equipment for the application of plant protection products has passed a technical review in accordance with the requirements of Annex No 10 to Article 47(1) of Regulation No 24 of 2000 on the issue of certificates to aviation operators carrying out specialised aviation work;

5. the aircraft possesses (is fitted with) equipment for the application of plant protection products which ensures the maximum reduction in spray dispersion;

6. treatment areas should not fall within protection zones I, II and III around water sources or surface water-fed drinking and domestic water supply equipment, or within zones I and II around water sources for drinking and domestic water supplied from groundwater, or for mineral water used for therapeutic, preventive, drinking and hygiene needs as defined in Regulation No 3 on the conditions and procedures for the study, design, ratification and operation of public health protection zones around water sources and equipment for drinking and domestic water supply and around sources of mineral water used for therapeutic, preventive, drinking and hygiene needs, as issued by the Minister for the Environment and Water, the Minister for Health and the Minister for Regional Development and Public Utilities.

To protect agricultural crops, ecosystems and biodiversity in areas adjacent to a zone which is to be treated with herbicides, the National Action Plan recommends the use of ground-based equipment, with aerial spraying of herbicides kept to a minimum.
IMPORTANT!

The Plant Protection Act PROHIBITS aerial spraying using TOTAL HERBICIDES!

To obtain authorisation for aerial spraying applicants are required to submit an application form to the regional food safety directorate for the area in which the treatment zone is located, this to be done 10 days before the treatment date.

Within five days of submission of the application plant protection inspectors examine the documents to verify that they meet the authorisation requirements for aerial spraying, and if necessary they carry out an on-site inspection.

In exceptional cases, when justified by special circumstances or emergencies, an application may be submitted up to five days prior to the treatment date.

The director of the regional food safety directorate shall either authorise the treatment or refuse to issue an authorisation, stating the reasons for such a refusal.

The authorisation will also contain measures for warning residents and bystanders, for protecting nearby sensitive crops and for protecting the environment in the vicinity of the treatment area.

Authorisations for the aerial spraying of crops on a specified area are issued for a period of no more than five consecutive days.

Aerial spraying operations must observe the provisions of Regulation No 15 of 2004, as laid down by the Minister for Agriculture and Food, on measures to protect bees and bee communities from poisoning and ways of carrying out plant protection, disinfection and disinfection actions, and the provisions of Regulation No 24 of 2000, as laid down by the Minister for Transport, Information Technologies and Communications, on the issue of certificates to aviation operators carrying out specialised aviation work.

The Civil Aviation Administration Central Directorate will provide the Bulgarian Safety Agency with a list of aviation operators who hold certificates to perform specialised aviation work issued under the provisions of Regulation No 24 of 2000 on the issue of certificates to aviation operators carrying out specialised aviation work, and will notify BABKh of any changes.

Regional food safety directorates will monitor the observance of the conditions under which authorisation is issued for aerial spraying by carrying out checks in accordance with the Regulation for the performance of controls on plant protection products and actions involving them, as laid down by the Minister for Agriculture and Food pursuant to the ZZR.

Should irregularities and non-compliances be discovered, plant protection inspectors from the Bulgarian Food Safety Agency shall have the right to prohibit or suspend aerial spraying.

The regional food safety directorates will publish all relevant information on authorisations linked to the performance of aerial spraying, along with the zone that is to be sprayed, the planned day and time of the spraying and the type of plant protection product. The information will be published on the Bulgarian Food Safety Agency's website and will be disseminated by regional food safety directorates via local authority offices and local mass media, or by some other suitable method.

ACTIONS under Measure 5:

1) Prohibition on the aerial spraying of agricultural crops and other areas using plant protection products.
   Timeline: as in ZZR
   Responsible institution: BABKh
2) Performance of aerial spraying only with written authorisation issued by BABKh, in exceptional cases when there is no other opportunity to protect plants and plant products from pests, or where there are obvious advantages as regards reducing the impact on human health and the environment compared with the ground-based application of plant protection products
   Timeline: as in ZZR
   Responsible institution: BABKh
3) Establishment of specific conditions and special requirements for the authorisation of aerial spraying.
   Timeline: as in ZZR
   Responsible institution: BABKh, ODBKh
4) Authorisation for the use of aircraft and equipment for the aerial spraying of plant protection products.
   Timeline: continuous
   Responsible institution: MTITS, GD GVA
5) Monitoring of compliance with the requirements of EU legislation and national legislation pertaining to equipment for the application of plant protection products by aerial spraying.
   Timeline: to 2013
   Responsible institution: MTITS, GD GVA
6) Prohibition on aerial spraying using total herbicides.
   Timeline: as in ZZR
   Responsible institution: BABKh
7) Authorisation of PPP for aerial spraying at national level.
   Timeline: from entry into effect of the Regulation on the conditions, procedures and methods for the use of plant protection products, as issued by the Minister for Agriculture and Food.
   Responsible institution: BABKh
8) Prohibition or suspension of aerial spraying when irregularities and non-compliances are discovered.
   Timeline: as in ZZR
   Responsible institution: BABKh, ODBKh
9) Provision of information to the public on authorisations issued that are linked to the performance of aerial spraying, along with the zone that is to be sprayed, the planned day

and time of the spraying and the type of plant protection product. The information will be published on the Bulgarian Food Safety Agency's website and will be disseminated by regional food safety directorates via local authority offices and local mass media, or by some other suitable method.
Timeline: as in ZZR
Responsible institution: BABKh, ODBKh, local authority offices, local mass media

EXPECTED OUTCOME of Measure 5:
Reduction in the risks and impact of pesticide use on human health and the environment as a result of the prohibition of aerial spraying, the increase in the extent to which the public is informed of aerial sprayings carried out and the prohibition of aerial spraying using total herbicides.

MEASURE 6. INTEGRATED PEST MANAGEMENT

The study and development of integrated pest management systems in Bulgaria date back to the late 1950s, when work began at the Institute of Plant Protection in Kostinbrod and at the Forestry Institute in Sofia. In 1961 the Institute of Plant Protection set up a specialist section that was then to become the Biological and Integrated Pest Management Laboratory.

The introduction and upgrading of integrated plant and plant product pest control methods lies at the heart of the Plant Protection Act of 1997 (*Promulgated in DV No 91 of 10.10.1997).* According to Regulation No 15 of 3 August 2007 on the conditions and procedures for the integrated production of plants and plant-based products and their marking, which is still in effect, agricultural producers may engage in the integrated production of plants and plant-based products by applying the general and specific principles of integrated pest management, and may mark their products with the label 'INTEGRATED PRODUCTION'.

Guides to integrated pest management have been compiled and published for 47 types of agricultural crops in the following seven groups:

- cereal crops: wheat, barley, oats, rye, maize;
- pulse crops: kidney beans, peas, lentils, soya, lucerne;
- industrial crops: sunflowers, oil-seed rape, tobacco, sugar beet, cotton, peanuts;
- vegetable crops: tomatoes (grown in the open and under glass), peppers (grown in the open and under glass), cucumbers (grown in the open and under glass), pumpkins, courgettes, melons, musk-melons, cabbages, cauliflowers, Brussels sprouts, onions, garlic, leeks, potatoes;
- fruit crops: apples, pears, quinces, plums, cherries, morello cherries, peaches, nectarines, apricots;
- vines and berry crops: grapes, strawberries, raspberries, blackcurrants;
- essential oil crops: rose, mint, lavender, coriander.

These guides may be obtained via the BABKh website and as printed copies supplied free-of-charge to the consumer. The guides explain the general principles of integrated pest management and present the specific principles of integrated pest management for each crop.

Agricultural producers have access to integrated pest management training at accredited institutions and higher education establishments specialising in plant protection (University of Agriculture in Plovdiv and the Forestry University in Sofia), whose curriculum has been drawn up by the training institution and endorsed by the executive director of BABKh.

Integrated plant protection includes the regulation and maintenance of pest species populations at a level that prevents them causing economic damage, with maximum protection given to natural and useful organisms. The presence of known numbers of harmful organisms is a prerequisite for the stability of the agrobiocenosis and for an increase in its self-regulation.

Decision-making in integrated pest management is based on a system of observation, diagnosis, forecasting and warning. Forecasting diseases and adversaries is chiefly based on data from pest diagnoses and information on the impact of the environment on the development of pests and the host plant. The correctness of the decision taken and the measures introduced will depend on multilateral information relating to the phytosanitary conditions in agrocenoses; the appearance, spread, density, development, level of attack of and anticipated losses caused by pests; the mutual relations between harmful and beneficial flora and fauna; the effect of plant protection actions put into effect; and the accuracy of the analysis work. The implementation of preventive or restorative measures based on forecasting will contribute to an additional diminution in the risks to human health and the

environment. Data from forecasting must also be taken into account when setting the optimal times for the implementation of agrotechnical actions in different districts.

The organisation of a system of observation, examination, forecasting and warning for economically significant agricultural crop pests, and the establishment of optimum times and agents to combat pests, formed part of the state policy that was implemented by the former National Plant Protection Service and its regional structures (now BABKh and ODBKh). The plant protection inspectors responsible for the above actions are agronomists with higher qualifications who have achieved the skills required by undergoing the relevant training courses. Since development dynamics and the level of pest attack are important factors for determining agricultural yields, plant protection inspectors must have a full understanding of the biology of their adversaries and of the aetiology of pathogens so that an accurate picture can be drawn up of the existing pest reserves in a given district and the qualitative status of the pest population. Visual diagnosis and the provision of advice on site at the agricultural producer's premises constitute an essential independent means for determining the level of attack and the exact time to carry out chemical control measures in a specific plantation.

Under the terms of the ZZR the BABKh issues bulletins providing notification of the appearance, development and spread of economically significant agricultural crop pests and the agents used to deal with them. The information gathered from pest monitoring is summarised, analysed and presented by the BABKh and ODBKh in 'Bulletins on the appearance, spread, density, development and level of attack of agricultural crop pests and times and methods of dealing with them'. The bulletins contain information on the biology, phenology and control of economically significant pests within a given region. Indicating the precise time when chemical control is to be brought into play increases spraying efficacy and reduces the surplus use of pesticides. In order to prevent any incompetent application of plant protection products the bulletins list PPP that are authorised for use to control the corresponding pests. The bulletins also notify agricultural producers about changes that have taken place in the regulations and provide information on pests that have been newly established in the country and methods of controlling them, as well as on forthcoming training courses, seminars and working meetings.

TABLE 7: Subscribers to plant protection bulletins in the period 2008-2011

Year	No of subscribers to plant protection bulletins
2008	**1520**
2009	**1471**
2010	**980**
2011	**696**

Plant protection products are an invariable constituent of modern agricultural crop cultivation processes. To limit the contribution made by chemical methods to plant protection, plant protection products must be used only when there is a proven need. One important precondition for the taking of a correct decision is to set economic harm thresholds (PIV) for the main adversaries and agricultural crop diseases. Damage to plants is a non-standard magnitude, and this means that a PIV scale needs to be worked out for each pest, which should reflect the particular features of the adversaries of one population under specific conditions.

The methods used to record pest density levels need to be upgraded and simplified. Where appropriate, direct recording is to be replaced by indirect indicators, which may be adopted as a PIV, for example the infestation percentage or the damaged crops percentage.

One important component of integrated plant protection is the use of mathematical models for pest forecasting. Models are exceptionally useful for the study of agricultural ecosystems and may be used to make forecasts of their development. These forecasting methods provide professional users with an opportunity for better decision making and help to determine the precise time for the deployment of chemical control measures. It is essential that mathematical models are produced for pest forecasting, beginning with the development of mathematical models for the forecasting of certain key pests.

Under the terms of Article 14 of Directive 2009/128/EC and Article 55 of Regulation (EC) No 1107/2009 compliance with the general principles of integrated pest management is to be introduced as a mandatory requirement from 2014.

The application of the general principles of integrated pest management by all agricultural producers will lead to a more targeted use of the available pest control measures and a reduction in the dependence on pesticides.

General principles of integrated pest management:

1. Protection from pests and/or their restriction should chiefly be achieved or facilitated by:
   - crop rotation,
   - implementation of certain agricultural measures (for example, preliminary preparation of seed beds, sowing time and density, undersowing, optimum distance between crops, anti-erosion treatments, sanitary measures and pruning),
   - use of suitably resistant/tolerant plant varieties and of standard/certified seeds and planting material,
   - application of balanced fertilisers, liming and irrigation and drainage practices,
   - preventing the spread of harmful organisms by applying sanitary measures (such as the routine cleaning of machinery and equipment),
   - protecting and supporting useful organisms, for example by applying appropriate plant protection measures or through the use of ecological infrastructures in or outside areas being treated;

2. Pests should be observed using suitable methods and means. Such methods should include scientifically-proven systems for preventing, forecasting and early diagnosis, and the use of professional consultations.

3. On the basis of observation results the professional user must decide whether and when to apply plant protection measures. The determining factor for such a decision will depend on established economic harm thresholds. Economic harm thresholds and the specific areas, crops and climatic conditions must all be taken into account, as far as is feasible, prior to treatment.

4. Sustainable organic, physical and other non-chemical methods should be given preference over chemical methods when they provide a satisfactory level of pest control.

5. Applied pesticides must be selective where the target is concerned and have minimal side effects on human health, useful organisms and the environment.

6. The professional user must limit the use of pesticides and other forms of intervention to the extent that is necessary, for example by employing lower doses, smaller numbers of treatments or partial treatment (for example by strip or focussed applications), when it is estimated that the level of risk to crops is acceptable and there is no danger of resistance building up in pests.

7. Where crop protection requires pesticides to be applied on more than one occasion in order to maintain product efficacy, the available strategies must be deployed in order to

combat the development of resistance among pests, where there is a risk of this. This may include using several pesticides with different action mechanisms.

8. The professional user must examine the pesticide usage figures and pest observation data to evaluate the degree of success of the applied plant protection measures.

For the protection of agricultural crops it is possible to apply the specific principles of integrated pest management, which provides for the integrated production of plants and plant products.

Specific principles of integrated pest management:

The specific principles of integrated pest management are set out in the guides.

Integrated plant and plant product production is aimed at reducing the impact of using plant protection products on human and animal health and the environment, and encompasses:

- priority application of organic, physical and non-chemical methods, means and products for plant protection with a low risk to human and animal health and to the environment;
- substitution of plant protection products by mechanisms for the natural regulation of economically significant agricultural product pests.

Under the terms of the ZZR, agricultural producers who produce certain plants and plant products using integrated production methods must do so in accordance with the Integrated Pest Management Guides for a continuous period of five years. Agricultural producers do not have a right, during this five-year period, to produce the same plants and plant products using a different form of agricultural production.

Producers engaged in the integrated production of plants and plant products shall be monitored by the Bulgarian Food Safety Agency.

The Bulgarian Food Safety Agency shall set up, maintain and store a national database on the appearance, spread, density, development and level of attack of economically significant agricultural product pests. The national database may be used as a basis for the creation and maintenance of an internet portal on plant protection, from which professional users may obtain data and information required for decision-making purposes. This includes information on agro-ecological areas (AER) in respect of crops (phenophases for AER), pests (development phase), reported density, PIV and trends. The national plant protection database will act as an independent source for the provision of specialised information, accessible to distributors, consultants and agricultural producers.

ACTIONS under Measure 6:

1) Updating of prepared integrated pest management guides.
   Timeline: by end 2014
   Responsible institution: BABKh, TsOR
2) Updating of scientific basis for economic harm thresholds for the main crops – ‘Economic harm thresholds for the main agricultural crop adversaries and diseases’ of 1997, ratified by the General Director of the National Plant Protection and Agrochemistry Service.
   Timeline: by end 2014
   Responsible institution: BABKh and others
3) Introduction of consultation services for integrated pest management.
   Timeline: as in ZZR
   Responsible institution: BABKh, individuals providing IUV consultancy services

4) Creation and maintenance of a public list of registered individuals who may provide consultancy services on integrated pest management.
   Timeline for setting up register: as in ZZR
   Timeline for register maintenance: continuous
   Responsible institution: BABKh
5) Creation and maintenance of a register of agricultural producers who are engaged in integrated plant and plant product production – ODBKhs manage the registers for their particular region while the BABKh central administration manages the national register containing data from the regional registers;
   Timeline for setting up register: as in ZZR
   Timeline for register maintenance: continuous
   Responsible institution: BABKh, ODBKh
6) Integrated production control and gathering of information on crops cultivated and harvested from these areas.
   Timeline: continuous
   Responsible institution: BABKh, ODBKh
7) Conducting information campaigns on the general principles of integrated pest management.
   Timeline: up to 01.01.2014
   Responsible institution: BABKh, ODBKh, agricultural producers' associations
8) Introduction of a legal duty on the part of agricultural producers to store documentation on each use of an organic agent.
   Timeline: as in ZZR
   Responsible institution: BABKh, ODBKh
9) The general principles of integrated pest management are to be applied for the protection of agricultural crops.
   Timeline: continuous from 01.01.2014
   Responsible institution: BABKh, agricultural producers
10) The specific principles of integrated pest management may be applied for the protection of agricultural crops, this involving the integrated production of plants and plant products.
   Timeline: continuous
   Responsible institution: BABKh, agricultural producers
11) When agricultural crops are being protected from economically harmful pests through integrated pest management, subject to assessments and recommendations from integrated production consultants, agricultural producers may apply plant protection products in doses that are lower than that authorised, the aim being to reduce the risks and impact of pesticide use on human health and the environment and maintain pest populations within limits that are below the PIV.
   Timeline: when there is proven potential
   Responsible institution: integrated production consultant
12) Increasing areas of organic farming by using agricultural land that is managed in an organic way.
   Timeline: up to 2013, under the National Plan for the Development of Organic Farming in Bulgaria for the period 2006-2013; after 2013 – in line with the updated National Plan for the Development of Organic Farming in Bulgaria
   Responsible institution: MZKh
13) Establishment of priority items in the form of active substances, crops, regions or practices that require special attention, or good practices in terms of reducing the risks and impact of pesticide use on human health and the environment.
   Timeline: continuous

Responsible institution: MZKh, SSA

14) Identification of active substances that give rise to particular concern, persistent or high-risk active substances (toxic, highly toxic, bio-accumulative, carcinogenic, mutagenic, reproductively toxic) for which there are safer alternatives, and their substitution by alternatives (list of active substances, candidates for substitution, pursuant to Article 24 of Regulation 1107/2011).
    Timeline: as in Regulation 540/2011
    Responsible institution: BABKh, TsOR
15) Creation and maintenance of an internet portal for plant protection.
    Timeline: to end of 2016
    Responsible institution: BABKh and others
16) Introduction and use of mathematical models to forecast the development of key pests for nationally-strategic agricultural crops.
    Timeline: in stages from 2015
    Responsible institution: BABKh, SSA, Universities

EXPECTED OUTCOME of Measure 6:

1. Reduction in the risks and impact of pesticide use on human health and the environment by achieving a balance between ecological and economic needs when plant protection products are used.
2. Production and placing on the market of safe, good-quality plant products.
3. Compliance with the principles of integrated pest management involves restricting the use of plant protection products to the essential minimum and applying alternative plant protection approaches or methods.
4. Raising awareness and safeguarding the interests of agricultural producers for the integrated production of plants and plant products and making the transition to organic production.
5. Preventing pests from becoming resistant to plant protection products.
6. Reducing the expenditure of agricultural producers on plant protection products.

MEASURE 7. REDUCING THE AMOUNT OF PESTICIDE RESIDUES IN FOODS OF PLANT ORIGIN (PRODUCED IN BULGARIA)

► ASSESSING THE RISK TO CONSUMERS RESULTING FROM PESTICIDE RESIDUES IN FOODS

Incorrect application of plant protection products in agriculture leads to increased levels of their residues in the environment and in food. It is of particular importance that residue levels in food products are safe for consumers, which means they should be as low as possible. The presence of pesticide residues at levels above the admissible limit represents a risk to consumers' health and may have serious adverse effects if not strictly controlled.

In order to regulate residue levels the European Union (EU) has introduced a system of **Maximum Residue Levels (MRLs)** for pesticides, which represent the highest legally-acceptable level of pesticide residues in food and animal feed. The European Food Safety Authority (EFSA) is mainly responsible for the harmonisation of MRL values in the individual Member States. As a member of the EU, Bulgaria must ensure that MRLs are observed and monitored.

Exceeding the MRL does not always mean that a product presents a health risk or is unfit for consumption. The MRL is not the toxicological risk boundary but rather is set on the basis of the maximum level of pesticide residues in the given crop. The identification of residual quantities of pesticides exceeding the set MRL value in a given product is an indication that the relevant DRZP was not observed during production; however, long-term and short-term exposure assessments are needed in order to establish whether there is a toxicological risk to consumers.

The exposure of consumers when ingesting food with a high established level of residues is being assessed with the aid of the European Pesticide Risk Assessment Model that has been developed by EFSA experts. This model links the analysis results for residual quantities of pesticides to food consumption data in EU Member States and World Health Organisation cluster diets and includes at-risk and especially sensitive population groups (the model differentiates between risks for adults and for children, since the latter are a more vulnerable consumer group). The risk of ingesting a given contaminated food product depends to a large extent on the amount ingested by the given consumer group, which is reflected in the diet.

To ensure that MRLs are observed Member States are required to implement official monitoring procedures aimed at identifying the presence of pesticide residues. As an EU Member State, Bulgaria is also under obligation to carry out product controls, in line with national and European monitoring and control programmes. The data obtained from the individual states are sent to the EFSA, which builds them into its annual reports on pesticide residues.

► MONITORING FOR PESTICIDE RESIDUES IN FOODS OF PLANT ORIGIN

Pesticide residues in food of plant origin, both imported and of Bulgarian production, need to be monitored in order to protect consumers from health risks arising from the presence of such residues. As an EU Member State, and in accordance with the provisions of Regulations (EC) No 178/2002, 882/2004 and 396/2005, Bulgaria draws up and implements on an annual basis a unified National Programme for the Control of Pesticide Residues in and on Foods of Plant and Animal Origin and, in addition, fulfils its commitments under the EU programme proposed in Commission Implementing Regulation (EU) No 1274/2011 of

7 December 2011 concerning a coordinated multiannual control programme of the Union for 2011, 2012 and 2013 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin.

The control programme is aimed at ensuring correct application of plant protection products that are authorised for use, in line with Good Plant Protection Practice.

The aim is to assess the level of pesticide residues in plant products when they are harvested and the degree of compliance of such levels with set maximum admissible pesticide quantities; and to ensure correct application of plant protection products that are authorised for use (application doses, quarantine periods, use solely for the purposes for which they are authorised).

The objective of the control programme is to reduce the number of abuses associated with excessive doses, failure to observe quarantine periods or use of prohibited pesticides.

The choice of agricultural products is based on a rotation principle for products of plant origin consumed in the greatest quantities in a typical Bulgarian diet, and is consistent with the results of research into products obtained from previous years, the economic significance of the products and the recommendations of the European Commission for the monitoring of pesticide residues in food each year, with the aim of protecting the health of consumers from an unjustified risk of pesticides.

The programme chiefly covers agricultural districts and crops where there is intensive use of plant protection products. Samples of plant products were taken from their place of production (field, greenhouse), during harvesting and prior to marketing, by trained inspectors from ODBKhs and in full compliance with the provisions of Directive 2002/63/EC.

► NATIONAL REFERENCE LABORATORIES FOR THE ANALYSIS OF RESIDUAL PESTICIDE QUANTITIES

The national reference laboratories (NRL) used by the Bulgarian Food Safety Agency for the analysis of residual pesticide quantities in and on food of plant and animal origin are the Central Laboratory for Chemical Testing and Control (TsLKhIK) and the Central Veterinary Sanitary Expert Appraisal Laboratory (TsLVSE).

The TsLKhIK is the national reference laboratory for pesticide residues in fruit and vegetables. It has a fully-developed and functioning quality management system (QMS). It is accredited in accordance with the requirements of the Bulgarian State Standard EN ISO/IEC 17025 by the IA BSA for the analysis of residual pesticide quantities in plant raw materials and products.

The BABKh has set up contracts with the external laboratories of the Regional Health Inspectorates (RZI of Sofia, Varna, Burgas, Pleven, Plovdiv and Veliko Tarnovo), which are also accredited under the Bulgarian State Standard EN ISO/IEC 17025 by the IA BSA for the analysis of residual pesticide quantities in plant raw materials and products.

When residual pesticide quantities above the maximum admissible levels are found in samples of food products, the Risk Assessment Centre at BABKh carries out an evaluation of consumer exposure and, depending on the findings, a decision is made as to subsequent product sale – for consumption or for non-food purposes.

ACTIONS under Measure 7:

1) Reinforcing controls of pesticide residues in plants and plant products intended for use as food by taking and analysing a greater number of samples from fields or greenhouses, of more species of crops.
   Timeline: from 01.01.2013
   Responsible institution: BABKh, TsLKhIK
2) Reinforcement of control over the use of plant protection products – by taking and analysing plant samples from field or greenhouses, to identify the PPPs used.
   Timeline: from 01.01.2014
   Responsible institution: BABKh, TsLKhIK
3) Expanding the range of active substances analysed, by developing and validating new methods of analysis and purchasing new equipment in order to ensure that analyses are carried out in the scope required under the terms of the control programme for residual pesticide substances coordinated with the EU.
   Timeline: continuous
   Responsible institution: TsLKhIK
4) Performance of a risk assessment for food of plant origin with an established elevated pesticide residues content that is above maximum admissible levels.
   Timeline: continuous
   Responsible institution: TsOR
5) Publication on the BABKh website of information relating to the contamination of food of plant origin by pesticides.
   Timeline: continuous
   Responsible institution: TsOR

EXPECTED OUTCOME of Measure 7:

1. Reduction in pesticide residues in food of plant origin (of Bulgarian production) constituting a significant contribution to the preventive protection of consumers.
2. Increase in interest and demand on the part of consumers where plant products from Bulgaria are concerned.
3. Increase in consumer trust – products that are safe from a health point of view.

MEASURE 8. SPECIAL MEASURES TO PROTECT THE AQUATIC ENVIRONMENT AND DRINKING WATER

Since the aquatic environment is especially sensitive to pesticides, it is essential to prevent pollution of surface and groundwater by itaking appropriate steps to reduce the exposure of water bodies to spray-drift and to the drainage or leakage of pesticides. Similarly, the observance of appropriately-sized buffer zones around water bodies would be a useful preventive action to protect the aquatic environment and drinking water. The sizes of buffer zones are determined with reference to soil characteristics, pesticide properties, the agricultural specifications of the relevant areas and so on. Use of pesticides in catchment areas for water sources intended for drinking and domestic water supply, on or along transport routes such as railway lines or on impermeable or highly permeable surfaces, may present a greater risk of pollution of the aquatic environment, as a consequence of which actions need to be taken to reduce the use of pesticides in such areas as far as is feasible, or to cease such activities completely.

The national legislation currently in effect lays down the following main requirements in respect of measures to protect the aquatic environment and drinking water:

- requirements relating to the quality of water intended for drinking and domestic purposes; Annex No 1, Table B 'Chemical indicators', of Regulation No 9 of 16 March 2001 on the quality of water intended for drinking and household use, sets a maximum value for pesticides of 0.1 µ§/l for each individual active substance, metabolite or reaction product, and for total pesticides, 0.5 µ§/l as the sum of the concentrations of all the individual pesticides identified in the monitoring process, determined quantitatively. The maximum value for aldrin, dieldrin, heptachlor and heptachlor epoxide is 0.03 µ§/E;
- requirements for the quality of fresh surface water that, following suitable treatment, is to be used as, or is a possible source for, drinking and domestic water supply; requirements apply to all water from surface water sources delivered via water mains for drinking and domestic purposes; Annex No 1 'Requirements for the quality of surface water intended for the extraction of drinking water' of Regulation No 12 on the quality requirements for surface water intended for drinking and domestic water supply sets the mandatory value (ZS) for the indicator 'pesticides – total' for surface water of categories A1, A2 and A3, as follows: ZS for category A1 is 0.001 mg/L; ZS for category A2 is 0.0025 mg/L; ZS for category A3 is 0.005 mg/L;
- requirements for bottled natural mineral, spring and table water intended for drinking; the maximum values and regularity of monitoring for pesticides in bottled spring and table water are laid down in the Regulation on the requirements for bottled natural mineral, spring or table water intended for drinking, and pursuant to Regulation No 9 of 16 March 2001 on the quality of water intended for drinking and household use;
- requirements for the quality of natural water intended for washing, with a view to the protection of the health of people using natural water for washing; the quality of water for washing is to be determined in line with the microbiological indicators listed in Regulation No 5 of 30 May 2008 on the management of washing water quality; there is no obligation to test washing water for pesticides; such tests may be conducted if there are concerns or specific data suggesting possible pesticide contamination of washing water. Pursuant to Regulation No 11 on the quality of water for washing (in effect until the end of 2013) the recommended pesticides content (total) value is 1 µg/L.
- prohibitions and restrictions, including those relating to the application of pesticides in various belt areas of public health protection zones, are set in Regulation No 3 of

16 October 2000 on the conditions and procedures for the study, design, ratification and exploitation of public health protection zones around water sources and equipment for drinking and domestic water supply and around sources of mineral water used for therapeutic, preventive, drinking and hygiene needs;

- requirements for the admissible level of pollution of various categories of flowing surface water are regulated by Annex No 1 'Indicators and standards for setting the admissible level of pollution of flowing surface water of various categories' of Regulation No 7 of 8 August 1986 on indicators and standards for determination of the quality of flowing surface water (e.g. the admissible value for the substances formaldehyde, fenitrothion, atrazine, difenzoquat, etc.);
- requirements for surface water regulated by Annex No 2 part A 'Environmental quality standards' of the Regulation on environmental quality standards for priority substances and certain other pollutants (e.g. the maximum admissible concentration for the substances atrazine, endosulfan, trifluralin, chlorpyriphos/chlorpyriphos-ethyl, etc.) and by point 9 'Biocides and plant protection products' of Annex No 3 'List of main pollutants' of Regulation No 13 of 2 April 2007 on the characterisation of surface water;
- requirements for groundwater; in Annex No 1 'Groundwater quality standards' of Regulation No 1 of 10 October 2007 for the study, utilisation and protection of groundwater: for pesticides – 0.1 µ§/Ь for each individual active substance; for total pesticides – 0.5 µ§/Ь as the sum of the concentrations of each individual pesticide; for aldrin, dieldrin, heptachlor and heptachlor epoxide – 0.03 µ§/Ь;
- Water Protection Zones (ZZV), as specified in the Water Act (WA), are determined in the River Basin Management Plan, which lists the measures and timelines for achievement of the objectives of a specific ZZV.

The Ministry of Environment and Water, with its Basin Directorates (BDs) and the Environmental Executive Agency (IAOS), and the Ministry of Health are the competent authorities in charge of the monitoring programmes on water quality.

Through the IAOS, the Ministry of Environment and Water undertakes monitoring of underground and surface water in line with the Water Monitoring Order of the Ministry of Environment and Water, including water monitoring in ZZVs. This monitoring is part of the National Water Monitoring System. The National Water Monitoring System is the main source of information on water quantity and quality. The water monitoring system identifies the causes of surface and groundwater pollution (total pollution, toxic substances, biogenic elements, etc.) and the pollution sources (point and diffuse), determines the efficacy of various monitoring programmes and identifies water quality trends and the measures to be taken to improve water quality.

The basic legislation at European level, where water is concerned, is Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, also known as the Water Framework Directive. The Water Framework Directive sets the requirements for water with a view to attaining a good status for all water and for ZZVs by 2015. The main strategic objective of the Water Act is to ensure adequate quantity and good quality of water used for various purposes.

- **Surface water monitoring**

The monitoring of surface water quality and the evaluation of the results obtained provides an opportunity to characterise the chemical status of rivers, reservoirs, lakes and the Black Sea. Each point in the monitoring network characterises a particular section of river that may be polluted by agriculture and other contaminants.

The total number of points in Bulgaria is 533, and these are distributed over four Basin Directorates – the Danube District, the Black Sea District, the Eastern Aegean District and the Western Aegean District.

The indicators that are monitored are divided into three main groups – basic physical/chemical, priority substances and specific pollutants, their monitoring frequency ranging from 4 to 12 times a year. Between 22 and 30 indicators are tested. For example, the active substances endosulfan, lindane, etc., are included under the priority substances heading, while aldrin, dieldrin, endrin and DDT are classed as specific pollutants.

- **Monitoring of surface water for the supply of drinking and domestic water**

Monitoring of the pesticides content in water from surface sources used to supply drinking and domestic water is conducted by Basin Directorates via IAOS Regional Laboratories and ViK organisations. The Basin Directorates draw up programmes for control monitoring and for their own monitoring of drinking water.

The sampling frequency is between 1 and 12 times a year – this depends on the size of the population served by the water source.

- **Groundwater monitoring**

The groundwater monitoring networks comprise 292 points for the control and operational monitoring of the chemical status of groundwater and monitoring points for the water protection zones. According to Order No RD- 715/02.08.2010, the number of samples taken is 628. Analyses are carried out for the following groups of indicators:

- Physical/chemical:
    - Group I – basic physical/chemical indicators;
    - Group II – supplementary physical/chemical indicators.
- Specific pollutants:
    - Group I – metals and metalloids;
    - Group II – organic substances, including pesticides.

The basic physical/chemical indicators are sampled at a frequency of two to four times a year, while the frequency for the supplementary physical/chemical indicators is between one and four times a year; for metals and metalloids the frequency is one to two times annually, and for organic substances (inc. pesticides) the frequency is once a year.

Pesticide monitoring is not planned or carried out for all groundwater monitoring points – pursuant to Order No RD-715/02.08.2010, pesticides are tested for at 119 groundwater monitoring points. Monitoring networks keep track of the quantitative status of groundwater (where levels of wells and the yields of springs and artesian wells are measured) do not, as far as the majority of points are concerned, match up with the monitoring points for chemical status, and are serviced by the National Meteorology and Hydrology Institute. The IAOS (via Regional Laboratories) only takes measurements of levels and yields at a small proportion of monitoring points, where sampling for chemical testing is also carried out.

To protect groundwater from pollution, an assessment is made of the risk to groundwater bodies (PVTs) from relevant point and diffuse sources – in river basin management plans (PURB). They also identify water bodies that are at risk of not fulfilling the objectives under Article 4 of the Water Framework Directive. Risk assessments and the development of monitoring networks for the chemical and quantitative status of groundwater are carried out on the basis of a conceptual model (appreciation) for each individual PVT and action programmes are planned in the PURB where there is a proven risk or a tendency for a rise in concentrations of certain groundwater pollutants. Groundwater areas are considered as receptors that may be exposed to risk – aquatic or terrestrial ecosystems or human health (drinking water supply, animal watering, etc.), for the setting of quality standards or threshold

values for various pollutants. Agricultural activities, residential areas without sewage systems, etc. are viewed as diffuse pollutants; waste depots, mines, spoil heaps and tailings ponds, etc. are regarded as point pollution sources.

The Ministry of Health carries out monitoring of drinking water (from points for water distribution networks and at the end user's tap), washing water and mineral water.

The main legislation at European level in respect of drinking water, washing water and mineral water are:

- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption
- Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral water
- Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs

– **Control of drinking water, washing water and bottled water**

The competent authority for drinking water, washing water and bottled natural mineral water, spring and table water is the Ministry of Health and its 28 regional structures – the Regional Health Inspectorates (RZI).

Monitoring of drinking water quality in its full scope is the responsibility of the water supply organisations, in their capacity as suppliers of water for drinking and domestic purposes. Monitoring is planned and carried out as part of the joint monitoring programmes set up between water and sewage operators and RZIs, with the water supply organisations having an obligation to carry out 100% of the minimum level of monitoring required, in line with the normative requirements in set water supply zones, while the RZIs have an obligation to carry out a further 50% or so of the full scope of monitoring.

Monitoring of washing water is carried out by the RZIs in line with the requirements of Regulation No 5 of 30 May 2008 on management of washing water quality.

The specific measures to protect the aquatic environment and drinking water from the impact of plant protection products are set in accordance with the provisions of the Water Act and Regulation (EC) No 1107/2009, and are part of the Programmes of Measures included in the River Basin Management Plans. The measures include:

- giving preference to plant protection products which:
  - are not classed as hazardous for the aquatic environment, in line with the Regulation on the procedure and methods of classifying, packing and labelling chemicals and mixtures and/or Regulation (EC) No 1272/2008;
  - do not contain priority hazardous substances as determined under the Water Act;
- giving preference to the most effective methods of application and use of equipment for the application of plant protection products with limited spray-drift, particularly for crop areas such as hop gardens, fruit orchards and vineyards;
- limiting the risks of pollution outside the area of application by spray-drift, drainage, leakage, including establishment of:
  - untreated buffer zones near surface water to protect non-target aquatic organisms – buffer zones are to be established on an individual basis for each plant protection product during the process of its assessment and licensing and are to be listed on the product label;
  - prohibitions and restrictions on actions with plant protection products in public health protection zones for surface water and groundwater that is used for drinking and domestic water supply.

– reducing or ceasing the application of plant protection products on or along highways, railway lines, highly permeable surfaces or other infrastructure located in the vicinity of surface water or groundwater, or on impermeable surfaces for which there is a major risk of leakage into surface water or into the drainage network.

ACTIONS under Measure 8:

In respect of drinking water:

1) Monitoring drinking water quality.
   Timeline: continuous
   Responsible institution: ViK operators (full scope); MZ, RZIs (up to 50% of full scope);
2) Monitoring surface water and groundwater used for drinking and domestic water supply.
   Timeline: continuous
   Responsible institution: MOSV, BDs, IAOS, ViK operators
3) Improving the collection and exchange of information on the types of pesticides used in water catchment areas and public health protection zones for water sources intended for drinking and domestic water supply purposes and for water sources for mineral water used for therapeutic, preventive, drinking and hygiene purposes.
   Timeline: continuous from 2014
   Responsible institution: BABKh, MZ, MOSV, BDs
4) Prioritising measures included in the River Basin Management Plans (PURB) associated with the protection of drinking and mineral water sources from pesticide pollution.
   Timeline: continuous
   Responsible institution: MOSV, BDs
5) Publishing on the websites of the Ministry of Environment and Water and Basin Directorates of information on specific public health protection zones for drinking water sources in the form of zone registers.
   Timeline: continuous
   Responsible institution: MOSV, BDs
6) Improving measures to monitor compliance with the requirements for the prohibition and restriction of pesticide use in public health protection zones.
   Timeline: from entry of ZZR into effect
   Responsible institution: MZ, RHIs, MOSV, BDs, legal persons operating water sources
7) Updating the legislation on public health protection zones around water sources intended for drinking and domestic water supply, and sources of mineral water.
   Timeline: 2013
   Responsible institution: MOSV, MZ

In respect of the aquatic environment:

8) Giving preference to plant protection products that are not classed as hazardous to the aquatic environment, in line with the Regulation on the procedure and methods of classifying, packing and labelling chemicals and mixtures and/or Regulation (EC) No 1272/2008, and that do not contain priority hazardous substances as specified in the provisions of the Water Act.
   Timeline: continuous

Responsible institution: BABKh, MOSV, plant protection industry, associations of agricultural producers, others

9) Giving preference to the most effective methods of application, using equipment for the application of plant protection products with limited jet dispersal, especially for hop gardens, fruit orchards and vineyards.
   Timeline: continuous
   Responsible institution: KTIs, associations of agricultural equipment traders, associations of agricultural producers, others
10) Reducing the risks of pollution outside the area of application from jet drift during spraying, drainage or leakage, including the establishment of untreated buffer zones of a suitable size to protect non-target aquatic organisms: buffer zones are to be set on an individual basis for each plant protection product when it is assessed and authorised and are to be stated on the product label.
   Timeline: continuous
   Responsible institution: BABKh, agricultural producers, associations of agricultural producers, others
11) Reducing or stopping the application of plant protection products on or along roads, railway lines, highly permeable surfaces or other infrastructure located in the vicinity of surface water or groundwater, or on impermeable surfaces where there is a major risk of leakage into surface water or into the drainage network.
   Timeline: as per ZZR
   Responsible institution: BABKh
12) Complying with the prohibitions and restrictions on plant protection product use in protection zones for water intended for drinking and domestic purposes and mineral water, and in public health protection zones for surface water and groundwater intended for use as a drinking and domestic water supply.
   Timeline: continuous
   Responsible institution: MOSV, BDs, MZ, agricultural producers, associations of agricultural producers, others
13) Laying down specific measures to protect the aquatic environment as ordered by the Minister for the Environment and Water and agreed with the Minister for Health: specific measures to protect water used for drinking and domestic water supply from exposure to pesticides.
   Timeline: as per Water Act
   Responsible institution: MOSV
14) Prohibiting the use of plant protection products of the professional use category in protected areas defined under the terms of the Water Act, or other areas defined in orders of the Minister for the Environment and Water. Should there be a need to treat such areas, plant protection products of the non-professional use category, low-risk plant protection products or organic agents shall be used.
   Timeline: as per ZZR
   Responsible institution: MOSV, BABKh
15) Ensuring integrated water management in the public interest and to protect public health, along with the conditions needed to reduce the release of priority substances and priority hazardous substances, in line with the Water Act.
   Timeline: timeline specified in PURB
   Responsible institution: MOSV, BDs
16) Monitoring surface water, in line with the Order of the Minister for the Environment and Water on water monitoring.
   Timeline: continuous

Responsible institution: BDs, IAOS

17) Monitoring groundwater, in line with the Order of the Minister for the Environment and Water on water monitoring.
Timeline: continuous
Responsible institution: BDs, IAOS

EXPECTED OUTCOME of Measure 8:

1. Implementation of measures to reduce the risks of pesticide residues in drinking and bottled water will decrease the pesticide risk and its impact on human health.
2. Prevention of and/or reduction in water pollution by pesticides will reduce the risks and impact of pesticide use as regards human health and the environment.
3. Prevention of and/or reduction in the risks of pesticide residues in water sources will reduce the risks and impact of pesticide use as regards human health and the environment.
4. Protection of water and of water protection zones (ZZVs).

MEASURE 9. SUPPLEMENTARY MEASURES TO PROTECT THE ENVIRONMENT

To reduce the risks and impact of pesticide use as regards the environment, in addition to the requirement for special measures to protect the aquatic environment and drinking water, the National Action Plan for Sustainable Pesticide Use lays down a broader requirement, which is to protect the environment, and specifically to protect the environment by preventing and/or reducing pesticide pollution, not just of water but also of soil. Pesticide pollution of both water and soil will be preventing and/or reduced through measures and actions that have been implemented and that are set out in the National Plan in respect of mandatory initial and supplementary training of individuals who handle pesticides as part of their professional activities – professional pesticide users, distributors and consultants – mandatory checking of equipment used to apply pesticides, mandatory application of the general principles of integrated pest management by agricultural producers, prohibition of aerial spraying, etc.

The existing national legislation includes a requirement to monitor only certain pesticides that are persistent organic pollutants in the soil. The standards for the admissible content of persistent organic pollutants, including organochlorine pesticides, are laid down in Regulation No 3 of 1 August 2008 on standards for admissible harmful substances in soil. According to Article 8 of Regulation No 4 on monitoring of soil, the National Soil Monitoring System is organised on three levels. Different parameters are observed at different levels. At the first level – extensive monitoring – observations are carried out for just 8 (eight) persistent organic pollutants (aldrin, DDT/DDD/DDE, dieldrin, endrin, alpha- and beta-HCH, gamma-HCH (lindane), hexachlorobenzene (HCB), mirex and heptachlor). From 2013, monitoring is envisaged for a further four persistent pesticides – endosulfan, lindane, chlordecone and pentachlorobenzene, because of their inclusion in the Annexes to the Stockholm Convention. Extensive monitoring includes observations over an evenly distributed 16x16 km grid of land used for agriculture, with 397 points. The frequency of observations with extensive monitoring is every five years in autumn.

Water monitoring programmes are described in the measure ‘Special measures for protection of the aquatic environment and drinking water’.

ACTIONS under Measure 9:

1) Monitoring persistent organochlorine pesticides in soil, in line with soil monitoring schemes pursuant to the Order of the Minister for the Environment and Water.
   Timeline: continuous
   Responsible institution: MOSV, IAOS
2) Monitoring active substances included in the Regulation on environmental quality standards for priority substances and certain specific pollutants
   Timeline: continuous
   Responsible institution: MOSV, IAOS

EXPECTED OUTCOME of Measure 9:

Information available on the content of pesticides – persistent organic pollutants (POPs) in soil, and of certain priority substances and other specific pollutants in the environment.

Protection of the environment, in particular soil and water.

MEASURE 10. PUBLIC INFORMATION

Pursuant to the provisions of Directive 2009/128/EC, when plant protection products are used, it is essential that individuals who might be exposed to spray drift are made aware of this.

To this end, when aerial spraying is being carried out, information is to be made available to the public concerning the authorisations that have been issued for aerial spraying, and in particular:

- the zone that is to be sprayed;
- the planned day and time of spraying;
- the type of plant protection product.

BABKh will publish information on its website on all authorisations for aerial spraying. In order to reach the general public, this information will also be disseminated via ODBKhs, local authorities and local mass media outlets, or in some other appropriate way.

The conditions and procedures for announcing aerial treatment and ground treatment with insecticides and vegetative herbicides, and protective zones for treatment using plant protection products, are set out in Regulation No 15 of 2004 on measures to protect bees and bee communities from poisoning and plant protection and disinfection methods, and in Regulation No 104 of 22 August 2006 on control of the marketing and use of plant protection products, of the Minister for Agriculture and Food, under the terms of which:

- The contracting organisation for each aerial treatment or ground treatment with insecticides and vegetative herbicides must notify the local authorities of any residential area near the location of the spraying five days in advance.
- No less than 3 working days (72 hours) prior to the treatment, the local mayor shall notify, in writing and by telephone, the owners of apiaries in the area, and post a notice in a visible location in the relevant residential area, and shall notify the mayors and deputy mayors of residential areas bordering the areas to be treated.
- When agricultural land is being treated with PPPs, the following minimum protection zones must be observed, depending on the wind direction:
    - using ground-based equipment – not less than 50 m when the wind is blowing away from the residential area, and not less than 150 m when the wind is blowing towards the residential area;
    - using aerial equipment – not less than 200 m when the wind is blowing away from the residential area, and not less than 800 m when the wind is blowing towards the residential area.
- When the wind speed is not more than 2 m/s, plant protection products are to be applied to agricultural and forestry crops:
    - on areas that are not less than 50 m from residential areas and apiaries, when the treatment is carried out using ground-based equipment;
    - on areas that are not less than 300 m from residential areas and apiaries, when the treatment is carried out using aerial equipment.
- Treatment of areas with flowering vegetation and pastures and water-providing zones bordering such areas must not be treated.
- Use of ground-based equipment for insecticide treatment is not allowed between 11.00 and 18.30 up to the end of May and between 10.00 and 19.30 from June through to October.

– Until the end of the quarantine period, treated areas where group 1 PPPs have been used must display warning signs saying **'POISONOUS!'** in visible locations along the access road.

MEASURE 11. INFORMATION AND AWARENESS CONCERNING THE IMPACT OF PESTICIDE USE ON HUMAN HEALTH AND THE ENVIRONMENT

It is essential that the public be better informed about the overall impact of pesticides and the potential risks associated with their use, through campaigns to raise awareness, the provision of information at the time of sale by PPP retailers and other measures. In this regard, actions have been taken to:

- inform the general public, by encouraging and facilitating information and awareness programmes and by making available accurate and balanced information about pesticides, especially as regards the risks and possible acute and chronic consequences for human health, non-target organisms and the environment, and as regards the use of non-chemical alternatives;
- collection of information concerning cases of acute poisoning caused by plant protection products, and the development of chronic poisoning among groups that may be routinely exposed to plant protection products, such as professional users, operators, agricultural workers or people living near zones where plant protection products are utilised.

At a European and national level, measures will be taken to encourage research programmes analysing the impact of pesticide use on human health and the environment, including studies of high-risk groups. To make it easier to improve the information available, by 26 November 2012 a strategic document will be being drawn up by the European Commission, in conjunction with Member States, containing guidelines on the observation and study of the impact of pesticide use on human health and the environment.

For the plant protection industry, the Association for the Plant Protection Industry of Bulgaria has instigated a number of actions aimed at making the general public aware of the risks involved in using illegal plant protection products. A video on illegal pesticides has been made and shown on television, a free telephone line – 08000 18 112 – has been set up for individuals to provide information on counterfeit and illegal plant protection products, and joint seminars have been held with the Bulgarian Food Safety Agency on ‘Combating illegal plant protection products’. The free telephone line is currently working and it is free and completely confidential. It is also important to raise awareness among agricultural producers about this phone line: why it was set up, types of call received, etc. Brochures are being published for agricultural producers on prohibited plant protection products and on the periods for which PPPs may be stored and used. Seminars are also being organised with interested parties, at which information will be disseminated on the problems caused by use of illegal and counterfeit pesticides, and there will be discussion of measures to combat the dissemination and use of illegal and counterfeit pesticides.

This information material is aimed at various target groups: professional and non-professional users of pesticides, distributors of plant protection products, ordinary citizens, state agencies, etc.

ACTIONS under Measure 11:

1) Provision of information for the general public, via the BABKh website, on plant protection products, the risks and potential acute and chronic consequences for human

health, non-target organisms and the environment, and the use of non-chemical alternatives.
Timeline: continuous
Responsible institution: BABKh, TsORs

2) Annual presentation to BABKh of all available information on lack of anticipated efficacy, development of resistance and any unexpected impacts on plants, plant products or the environment, and information from observations of the impact of a product on professional users.
Timeline: continuous
Responsible institution: holders of an authorisation to place on the market and use plant protection products
3) Collection of information on cases of acute poisoning by plant protection products and the development of chronic poisoning among groups routinely exposed to plant protection products, such as professional users, operators and agricultural workers.
Timeline: continuous
Responsible institution: MZ (up to 01.06.2015), *N.I. Pirogov Hospital* (from 01.06.2015)
4) Collection of information on cases of acute poisoning by plant protection products and the development of chronic poisoning among groups routinely exposed to plant protection products, such as people living near areas where plant protection products are used.
Timeline: continuous
Responsible institution: MZ (up to 01.06.2015), *N.I. Pirogov Hospital* (from 01.06.2015)

EXPECTED OUTCOME of Measure 11:

1. Availability of information on cases of acute poisoning caused by plant protection products and the development of chronic poisoning among groups that may be routinely exposed to plant protection products, such as professional users, operators and agricultural workers.
2. Availability of information concerning cases of acute poisoning caused by plant protection products and the development of chronic poisoning among groups that may be routinely exposed to plant protection products, such as people living near areas where plant protection products are used.
3. Greater awareness among the general public, institutions, professional and non-professional users of pesticides, operators and agricultural workers, distributors of plant protection products and consultants of the impact of plant protection products on human health and on the environment.
4. Reduction in the risks and impact of pesticide use on human health, through greater awareness on the part of the individuals listed above.
5. More information available to institutions and users on the requirements for the sale and use of plant protection products.
6. More information available to institutions, distributors and agricultural producers on the risk associated with the sale and use of unauthorised, illegal and counterfeit plant protection products.

MEASURE 12. REDUCTION IN PESTICIDE USE OR RISKS IN SPECIFIC AREAS

Pesticide use may be particularly hazardous in highly sensitive areas, for example Natura 2000 land that is protected under Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. In other areas, for example, public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions, the risks arising from exposure to pesticides are considerable.

In view of this, the use of professional-category plant protection products will be prohibited in:

- areas used by the general public or vulnerable groups, defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions;
- protected territories as defined in the Water Act, or other areas defined in an order of the Minister for the Environment and Water;

If these areas need to be treated, plant protection products in the non-professional use category or low-risk plant protection products, where the active substances meet the requirements of Article 22 and Article 47 of Regulation (EC) No 1107/2009, or organic agents are to be used.

Access to areas treated with plant protection products is restricted for agricultural workers for the period indicated in the product user instructions.

ACTIONS under Measure 12:

1) Ban on the use of professional-category plant protection products in areas used by the general public or vulnerable groups, defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions. If these areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or organic agents are to be used.
   Timeline: as in ZZR
   Responsible institution: BABKh, municipalities, local authorities
2) Ban on the use of professional-category plant protection products in protected territories defined in the Water Act or other areas defined in an order of the Minister for the Environment and Water. If these areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or organic agents are to be used.
   Timeline: as in ZZR
   Responsible institution: BDs, BABKh
3) Access to areas treated with plant protection products is restricted for agricultural workers for the period indicated in the product user instructions.
   Timeline: as in ZZR
   Responsible institution: BABKh

SUPPLEMENTARY ACTIONS:

4) Ban on the use of pesticides in specified districts, including certain protected territories, and pastures and meadows in some zones in the Natura 2000 network.
   Timeline: continuous
   Responsible institution: MOSV
5) Compliance with legislative requirements for the protection of bees and bee communities from pesticide poisoning.
   Timeline: continuous
   Responsible institution: MZKh, BABKh, accredited laboratories for analysis of pesticide residues in bees and in plant material
6) Implementation of supplementary measures to protect bees from pesticide poisoning.
   Timeline: continuous
   Responsible institution: MZKh, BABKh, TsORs, associations of agricultural producers, the plant protection industry, beekeepers' associations

EXPECTED OUTCOME of Measure 12:

1. Prevention of and/or reduction in risks of use of pesticides in public spaces and recreational areas, thereby ensuring the protection of the general public and vulnerable population groups.
2. Prevention of and/or reduction in water and soil pollution by pesticides reduces the risks and impact of pesticide use on human health and the environment.
3. Reduction in exposure to pesticides and thus protection for agricultural workers.

ANTICIPATED SUPPLEMENTARY RESULT

Prevention of and/or reduction in the impact of pesticides on biodiversity and natural habitats, including soil biodiversity, non-target organisms, bees, etc.

VI. INDICATORS USED IN THE NATIONAL ACTION PLAN FOR SUSTAINABLE USE OF PESTICIDES

In accordance with Article 15 of Directive 2009/128/EC, harmonised risk indicators are to be introduced at the European level. Following their introduction, Member States may continue to use existing national indicators or adopt other appropriate indicators in addition to the harmonised indicators.

To determine the progress made on the objectives laid down in the action plan and the corresponding measures, Bulgaria will use indicators that are divided into **3 groups** according to their ecological, health, social and economic impact:

I. Ecological and health indicators

1. Pesticide residues in food of plant origin

1.1. Number of samples taken and analysed for pesticide residues in food of plant origin.
1.2. Number of active substances analysed.
1.3. Number of crops from which samples are taken for pesticide residues in food of plant origin.
1.4. Number of analysed samples without pesticide residues in food of plant origin.
1.5. Number of analysed samples containing pesticide residues below the maximum residue levels (MRL) in food of plant origin.
1.6. Number of analysed samples containing pesticide residue that is above the MRL in food of plant origin.
1.7. Number of analysed samples containing several pollutants.
1.8. Number of analysed samples containing one or more prohibited active substances.
1.9. Number of risk assessments carried out on food in which the pesticide residue MRL was exceeded.
1.10. Number of RASFF notifications in respect of instances where the pesticide residue MRL was exceeded, which led to withdrawal of food of plant origin from the market (as a % of all communications/warnings).

2. Pesticide residues in water

2.1. Number of samples taken and analysed for pesticide residues in drinking and bottled water and in water from surface and groundwater sources used for drinking and domestic water supply.
2.2. Number of analysed samples of drinking and bottled water and water from surface and groundwater sources used for drinking and domestic water supply with a pesticide level below the MRL.
2.3. Number of analysed samples of drinking and bottled water and in water from surface and groundwater sources used for drinking and domestic water supply with a pesticide level found to be above the MRL.
2.4. Number of analysed samples of surface water with a pesticide level below the MRL, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
2.5. Number of analysed samples of surface water with a pesticide level above the MRL, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.

2.6. Number of analysed samples of groundwater with a pesticide level below the MRL, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
2.7. Number of analysed samples of groundwater with a pesticide level above the MRL, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.

3. Pesticide residues in soil

3.1. Number of soil samples taken and analysed with a persistent organochlorine residue level below the MRL, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
3.2. Number of soil samples taken and analysed with a persistent organochlorine residue level above the MRL, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.

4. Pesticide application equipment

4.1. Pesticide application equipment that has passed a check (as a % of the total number of items of pesticide application equipment).

5. Integrated pest management

5.1. Number of infringements identified in respect of application of the general principles of integrated pest management.
5.2. Number of agricultural producers voluntarily applying the specific principles of IUV (area as a % of total area worked).
5.3. Number of registered agricultural producers for organic farming (as a % of the total number of agricultural producers registered).
5.4. Area used for organic farming as a % of the total area worked.
5.5. Number of registered individuals providing IUV consultancy services.
5.6. Number of registered agricultural producers implementing integrated production of plants and plant products within the country.
5.7. Number of infringements identified in connection with integrated production.
5.8. Number of information campaigns conducted, and number of brochures, posters, etc. produced in relation to IUV.
5.9. Number of crops and number of pests for which economic harm thresholds (PIV) have been updated.

6. Plant protection product control

6.1. Number of individuals holding an authorisation to trade in PPPs. Number of PPP trading centres.
6.2. Number of individuals holding an authorisation to re-pack PPPs. Number of PPP re-packing units.
6.3. Number of individuals holding an authorisation to carry out fumigation using PPPs. Number of fumigated sites (from 2013).
6.4. Number of registered individuals implementing specialist plant protection actions: fumigation and disinfection of seeds for sowing, number of sites.
6.5. Data relating to control actions on the plant protection product market.

6.6. Data relating to control actions on the use of plant protection products.
6.7. Number of legal infringements relating to the sale and use of plant protection products (e.g. offer and sale of PPPs by unauthorised individuals; sale of professional-category PPPs by individuals not holding a certificate; sale or use of unauthorised PPPs; other).
6.8. Number of compliances with cross-observance linked to PPP use (from 2014).

7. Aerial spraying

7.1. Number of written authorisations for aerial spraying.
7.2. Number of justified refusals to issue an authorisation for aerial spraying.
7.3. Number of infringements identified during aerial spraying.

8. Human poisoning by pesticides

8.1. Number of cases of acute and chronic pesticide poisoning of professional users, operators and agricultural workers.
8.2. Number of cases of acute and chronic pesticide poisoning of residents and bystanders in zones where pesticides are used.

9. Pesticide poisoning of non-target organisms

9.1. Number of proven cases of pesticide poisoning of bees.
9.2. Number of proven cases of pesticide poisoning of animals, birds and other non-target organisms.

10. Areas used by the general public, protected territories and other specific areas (pursuant to Article 12 of Directive 2009/128/EC)

10.1. Number of infringements involving use of professional-category PPPs on areas used by the general public, protected areas and other specific areas (as in Article 12 of Directive 2009/128/EC).
10.2. Number of infringements involving use of PPPs on protected areas and zones in the Natura 2000 ecological network where a prohibition on pesticide use has been introduced.

II. Social indicators

1. Number of individuals trained up to 26.11.2013.
2. Number of certificates issued to professional pesticide users and consultants up to 26.11.2013.
3. Number of certificates issued to distributors and consultants/sellers at an AP after 26.11.2015.
4. Number of certificates revoked after 26.11.2013.
5. Number of warnings from citizens of legal infringements relating to the sale and use of PPPs.
6. Number of proven cases of lack of anticipated effectiveness, development of resistance, and any unexpected impact on plants, plant products or the environment, and information from observations of a product's impact on professional users.

III. Economic indicators

1. Size of agricultural areas treated by individuals holding a certificate (% of total area treated).
2. Attacks above the PIV of economically significant pests – areas, crops.
3. Declared disaster or epiphytotic outbreak – areas, crops.
4. Statistical data on PPP use.
5. Statistical data for placing of PPPs on the market.

The relevant competent authorities are responsible for collection of the information relating to the indicators listed and data computation and analysis.

Notes:

1. Information on a number of indicators is being gathered at present, e.g. information on the presence of pesticide residues in food of plant origin; information on legal infringements linked to the placing on the market and use of plant protection products, etc.
2. For other indicators, information will be gathered after a certain period of time, e.g. after 26.11.2013 for the number of revoked certificates, and so on.

VII. FUNDING OF NATIONAL ACTION PLAN

The necessary funding to support the actions of state-financed organisations in implementing the National Action Plan is to be provided out of the budget of the relevant ministries, within their expenditure ceilings.

To reinforce administrative capacity, create a database and purchase equipment, studies will be carried out of the potential to secure external funding under the relevant EU operational programmes or from other donor programmes.

The anticipated expenditure (in BGN) has been set, as an indication, for the supplementary actions to be implemented by each authority under the National Action Plan. See below for details of the funds for maintenance and capital expenditure:

TABLE 8: Financial calculation of anticipated outlay of state-financed organisations for supplementary actions required to implement the National Action Plan for Sustainable Pesticide Use

№	Action	Source of funding/ Responsible institutions	2013	2014	2015	Anticipated expenditure BGN
1.2	Introduction of system of certification of professional pesticide users, consultants and distributors	BABKh	10 000	15 000	15 000	40 000
1.3	Creation and maintenance of public register of individuals who hold a professional-category plant protection product user authorisation	BABKh	15 000	2 500	2 500	20 000
3.1	Creation and maintenance of register of authorised PPPs on BABKh website – PPP authorisation, label and safety information sheet in Bulgarian	BABKh	48 000	5 000	5 000	58 000
4.1	Provision of essential kit for mandatory checking of ground-based pesticide application equipment that is in use with regard to safety and protection of human health and the environment	KTI	0	1 024 000	0	1 024 000
4.2	Implementation of mandatory checking of ground-based pesticide application equipment that is in use with regard to safety and protection of human health and the environment, since from 26.11.2016 only pesticide application equipment that has successfully passed a check will be usable	KTI	0	239 000	239 000	478 000
5.2	Implementation of area checks for authorisation for aerial spraying and control, in exceptional instances when there is no other	BABKh	30 000	30 000	30 000	90 000

	possibility of protecting plants and plant products from pests, or there are evident advantages in terms of reducing the impact on human health and the environment compared to ground-based application of plant protection products					
5.9	Making information available to the public on the BABKh website on authorisations for aerial spraying and the zone that will be sprayed, the planned day and time of spraying and the type of plant protection product	BABKh	1 200	1 200	1 200	3 600
6.1	Updating and printing integrated pest management manuals	BABKh, TsOR	10 000	10 000	50 000	70 000
6.2	Updating scientific basis for economic harm thresholds for the main crops – 'Economic harm thresholds for the main adversaries and diseases of agricultural crops' of 1997, ratified by the General Director of the National Plant Protection and Agrochemistry Service	BABKh, others	20 000	20 000	0	40 000
6.4	Creating and maintaining a public list of individuals who are registered and may provide consultancy services on integrated pest management	BABKh	5 000	1 200	1 200	7 400
6.5	Creating and maintaining registers of agricultural producers who carry out integrated production of plants and plant products – by ODBKhs for the relevant region and by the BABKh Central Administration for a national register containing data from regional registers	BABKh, ODBKhs	5 000	1 200	1 200	7 400
6.6	Control of agricultural producers to check on compliance with the general principles of integrated pest management	BABKh, ODBKhs	0	250 000	250 000	500 000
6.7	Conducting information campaigns on the general principles of IUV	BABKh, ODBKhs	40 000	0	0	40 000
6.13	Establishing priority targets such as active substances, crops, regions or practices requiring special attention, or good practices with regard to reducing the risks and impact of pesticide use on human health and the environment	MZKh, SSA	10 000	10 000	10 000	30 000
6.14	Identification of active substances that are a source of particular concern, and persistent or high-risk active substances (toxic, highly toxic, bio-accumulative, carcinogenic, mutagenic, reproductively toxic) for which there are safer alternatives (list of	BABKh, TsOR	9 600	9 800	9 950	29 350

	active substances that are candidates for substitution, as per Article 24 of Regulation 1107/2011).					
6.15	Creating and maintaining an internet portal on plant protection	BABKh and others	15 000	1 200	1 200	17 400
6.16	Introducing and using mathematical models for forecasting pests in the forecasting system	BABKh and others	0	125 000	125 000	250 000
7.1	Strengthening controls of pesticide residues in plants and plant products intended for food – by taking and analysing a greater number of field and greenhouse samples, from more crop types.	BABKh, TsLKhIK	80 000	1 080 000	80 000	1 240 000
7.2	Strengthening controls of the use of plant protection products – by taking and analysing field or greenhouse plant samples, to identify PPPs used	BABKh, TsLKhIK	30 000	40 000	50 000	120 000
8.1	Monitoring drinking water quality	MZ, RZIs (up to 50% of full scope)	60 000	730 000	350 000	1 140 000
12.1	Controls of the ban on the use of professional-category plant protection products on areas used by the general public or vulnerable groups, defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, areas for sport and recreation, school and playgrounds and in the immediate vicinity of health care institutions.	BABKh	4 600	4 600	4 600	13 800
12.10	Supplementary measures (seminars, meetings, information material, etc.) to protect bees from pesticide poisoning	MZKh, BABKh, TsOR	2 400	2 450	2 500	7 350
13.	Introducing specialised software for maintenance of database linked to BABKh control actions for PPP marketing and use	BABKh	0	62 000	5 000	67 000
14.	Analysing the impact of the application of the measures in the National Action Plan for Sustainable Pesticide Use	BABKh	0	0	50 000	50 000
15.	Printing the National Action Plan for Sustainable Pesticide Use	BABKh	5 000	0	0	5 000
	TOTAL		**400 800**	**3 664 150**	**1 283 350**	**5 348 300**

VIII. DEADLINES

With reference to the National Action Plan, **deadlines have been set for implementation of the measures and actions laid down, as follows:**

1. Deadlines stipulated in EU law and in national law:

The legal deadlines for implementation of the commitments of the Member States are linked to the national action plans, specifically:

- Bulgaria must submit its national action plan to the European Commission and the other Member States by 26 November 2012;
- the national action plan will be reviewed at least once every five years, and the European Commission must be notified of all major amendments to it as soon as possible.

2. Deadlines for implementation of actions laid down in the NPD:

Deadlines for the implementation of the actions laid down in the national action plan are listed separately for each action in Table 9 ‘Measures, actions, timelines, indicators and anticipated results of implementation of the National Action Plan for Sustainable Pesticide Use’ in Chapter IX ‘Reporting’ of this Plan.

With timely implementation of the actions laid down in the NPD, it is expected that progress will be made on sustainable pesticide use in Bulgaria in the subsequent years.

IX. REPORTING

The Ministry of Agriculture and Food, the Ministry of Environment and Water and the Ministry of Health are developing a system for collecting and analysing information relating to actions, measures and indicators set out in the National Action Plan for Sustainable Pesticide Use in their respective areas of competence. Each competent institution shall prepare, collect and analyse these data and this information annually.

In their specific areas of competence, the Ministry of Agriculture and Food, the Ministry of Environment and Water and the Ministry of Health shall present to the Bulgarian Food Safety Agency each year the data and information available. If necessary, this information may also be requested from other competent organisations.

At least once every five years, the impact of the actions and measures applied under the National Action Plan for a specific period of time will be evaluated and a report drawn up. The evaluation shall be based on the information obtained from each competent authority and organisation; its status will be tracked, the results analysed and trends identified, and suggestions will be made as to the amendments needed. The impact of the actions and measures under the National Action Plan shall be assessed by competent organisations, structures or individuals with a view to determining the degree to which the objectives of the Sustainable Use Directive have been achieved.

Table 9 indicates the measures, actions, deadlines, indicators and expected outcome of the National Action Plan for Sustainable Pesticide Use.

TABLE 9: MEASURES, ACTIONS, DEADLINES, INDICATORS AND EXPECTED OUTCOME OF THE NATIONAL ACTION PLAN FOR SUSTAINABLE PESTICIDE USE

Main objectives:

1. **Reduction in risks and impact of pesticide use on human health and the environment.**
2. **Promotion of integrated pest management and alternative approaches or methods.**

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
1. Training						
1.1	Introduction of system of initial and supplementary training for individuals handling pesticides as part of their professional activities (professional pesticide users, distributors and consultants)	Higher education institutions in the professional education and training system	as in ZZR	No of individuals trained by 26.11.2013	High	Reduction in risks and impact of pesticide use on human health and the environment, as a result of provision and acquisition of specialist knowledge on the part of professional users, distributors and consultants.
1.2	Introduction of system of certification of professional pesticide users, consultants, distributors and SSA vendor-consultants.	BABKh	by 26.11.2013 for professional pesticide users and consultants; by 26.11.2015 for distributors and SSA vendor-consultants	1. No of certificates issued to professional pesticide users and consultants after 26.11.2013. 2. No of certificates issued to distributors and SSA vendor-consultants after 26.11.2015. 3. No of certificates revoked after 26.11.2013. 4. Size of agricultural areas treated by individuals holding a certificate (% of total area treated).	High	
1.3	Creation and maintenance of a public register of individuals who hold a certificate to work with plant protection products of the professional user category.	BABKh	by 26.11.2013 for creation of register; continuous – for maintenance of register		High	
2. Requirements for sale of pesticides						
2.1	Persons who trade in plant protection products need to provide: • For each PPP trade warehouse – at least one individual with higher education in the agrarian sciences	BABKh, PPP traders	for requirements for persons trading in PPPs: continuous for the requirement to hold a certificate:	1. No of persons holding an authorisation to trade in PPPs. No of facilities for trade in PPPs. 2. No of persons holding an	High	Compliance with all legal requirements and provisions relating to the sale of pesticides will ensure a reduction in the

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	sphere who holds a certificate* to work with plant protection products of the professional user category. • For each agricultural pharmacy – at least one vendor-consultant with higher education in the sphere of agrarian sciences or secondary occupational education in the sphere of crop cultivation and a certificate* to work with plant protection products of the professional user category.		from 26.11.2015	authorisation to re-pack PPPs. No of PPP re-packing sections. 3. No of persons holding an authorisation to fumigate using PPPs. No of targets fumigated. 4. No of registered persons carrying out specialist plant protection actions – fumigation and disinfection of seeds for sowing. No of targets. 5. Date on control actions on plant protection product market. 6. No of legal infringements relating to sale of plant protection products (e.g. offer and sale of plant protection products by unauthorised persons; sale of plant protection products of the professional use category by persons who do not hold a certificate; sale of unauthorised plant protection product; other). 7. No of warnings from citizens on legal infringements relating to PPP sales. 8. Statistical data on the placing of PPPs on the market.		risks and impact of pesticide use on human health and the environment, as a result of sales of PPPs by competent individuals only and only by individuals with acquired knowledge of the impact of pesticides and their proper use and storage.
2.2	The individuals named in the trading authorisation are to be present when sales are made and are to provide information on the use of plant protection products and the risks to human health, animals and the environment and safety instructions. When sales are made to non-professional users, information is to be provided on safety questions, exposure and proper storage, handling and application of the products and safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives.	BABKh, PPP traders and their associations	continuous		High	
2.3	Plant protection products of the professional use category are only to be sold by persons who hold a certificate to work with plant protection products of the professional use category.	BABKh, PPP traders	from 26.11.2015		High	
3. Handling and storage of pesticides and management of their packaging and residues						
3.1	Creation and maintenance of a register of authorised PPPs on the BABKh website – PPP authorisation, label and safety	BABKh	for creation of register – by end 2013; for register	1. Data on control actions relating to use of plant protection products.	High	Reduction in risks and impact of pesticide use on human health and the

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	information sheet in Bulgarian		maintenance – continuous	2. No of legal infringements relating to use of plant protection products (e.g. for use of unauthorised plant protection product; other). 3. No of compliances with cross-observance linked to PPP use 4. No of warnings from citizens on legal infringements relating to PPP use. 5. Statistical data on the use of PPPs.		environment as a result of proper handling
3.2	Regulation of requirements for PPP storage warehouses belonging to agricultural producers through adoption of Regulation on the production of, trade in, re-packing and storage of plant protection products, issued by the Minister for Agriculture and Food on the basis of the ZZR and bringing warehouses into line with requirements over a set transition period.	BABKh	as in ZZR and			
3.3	Development, introduction and application of a system of collection of empty PPP packaging.	Plant protection associations, producers, re-packers, traders, agricultural producers	as in ZZR			
3.4	Inclusion of the topic 'Best practices for protection of water from contamination caused by point sources with use of PPP' in training courses and seminars conducted with professional pesticide users, distributors and consultants, as in Section 5 of the National Action Plan.	Higher education institutions in the occupational education and training system	continuous		High	
4. Checking of equipment used to apply pesticides						
4.1	Equipment for the application of pesticides with ground-based technology that is in use is subject to mandatory checking in respect of safety and protection of human health and the environment.	KTIs	one check prior to 26.11.2016; check every 5 years up to 2020; check every 3 years after 2020	Equipment for the application of pesticides that has passed a check (as a % of the total number of items of equipment for pesticide application).	High	Use of checked pesticide application equipment ensures a reduction in the risks and impact of pesticide use on human health and the environment.
4.2	After 26.11.2016, only equipment for the application of pesticides with ground-based technology that has successfully undergone checking will be useable.	KTIs	new pesticide application equipment is subject to checking			

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
			within 5 years of its purchase			
4.3	Equipment for the application of plant protection products using aviation technology has to undergo a technical review in line with the requirements of Annex No 10 to Article 47(1) of Regulation No 24 of 2000 on the issue of certificates to aviation operators carrying out specialised aviation work	GD GVA	continuous		High	
5. Aerial spraying						
5.1	Prohibition on aerial spraying of agricultural crops and other areas using plant protection products.	BABKh	as in ZZR		High	Reduction in the risks and impact of pesticide use on human health and the environment as a result of the prohibition of aerial spraying and increase in the level of public awareness of aerial sprayings carried out, and as a result of the prohibition on aerial spraying using total herbicides.
5.2	Performance of aerial spraying only with written authorisation issued by BABKh, in exceptional instances where there is no other potential to protect plants and plant products from pests, or there are clear advantages, with regard to reducing the impact on human health and the environment, compared to ground-based application of plant protection products.	BABKh	as in ZZR	1. No of written authorisations to carry out aerial spraying. 2. No of justified refusals to issue an authorisation to carry out aerial spraying. 3. No of established infringements while aerial spraying is being carried out.	High	
5.3	Establishment of specific conditions and special requirements under which performance of aerial spraying may be authorised.	BABKh, ODBKhs	as in ZZR		High	
5.4	Authorisation of use of aircraft and equipment for aerial spraying of PPPs.	MTITS, GD GVA	continuous		High	
5.5	Control of compliance with requirements of EU law and national law for equipment for the application of PPPs by aerial spraying.	MTITS, GD GVA	from 2013		High	
5.6	Prohibition of aerial spraying using total herbicides.	BABKh	as in ZZR		High	
5.7	Authorisation at national level of PPPs for	BABKh	from entry into		High	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	aerial spraying.		effect of regulation of Minister for Agriculture and Food on conditions and procedure for and method of use of plant protection products			
5.8	Prohibition or suspension of aerial spraying when irregularities and discrepancies are identified.	BABKh, ODBKhs	as in ZZR		High	
5.9	Availability of information to the public on authorisations issued for aerial spraying, such as the zone to be sprayed, the scheduled day and time of spraying and the type of plant protection product. Information to be published on the BABKh website and disseminated by ODBKhs via local authorities and local mass media, or in some other suitable way.	BABKh, ODBKhs, local authorities, mass media	as in ZZR		High	
6. Integrated pest management						
6.1	Updating of existing integrated pest management manuals	BABKh, TsOR	by end 2014		High	1. Reduction in the risks and impact of pesticide use on human health and the environment through the achievement of a balance between ecological and economic needs with plant protection product use. 2. Production and placing on the market of safe and good-quality plant produce. 3. Observance of principles of integrated
6.2	Updating of scientific basis for economic harm thresholds for the main crops 'Economic harm thresholds for the main agricultural crop adversaries and diseases' of 1997, ratified by the General Director of the National Plant Protection and Agrochemistry Service.	BABKh, others	by end 2014	No of crops and no of pests for which PIV is updated.	High	
6.3	Introduction of consultancy services for integrated pest management.	BABKh, persons providing IUV consultancy services	as in ZZR	No of registered persons providing IUV consultancy services.	High	
6.4	Creation and maintenance of a public register of persons who are registered and	BABKh	for creation of register – as in		High	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	may offer integrated pest management consultancy services.		ZZR; for maintenance of register – continuous			pest management supports restriction of plant protection product use to the essential minimum and application of alternative approaches or methods of plant protection. 4. Increasing and supporting the interest of agricultural producers in an integrated process of production of plants and plant products and a transfer to organic production. 5. Prevention of the appearance of pest resistance to plant protection products. 6, Reduction in outlay on plant protection products by agricultural producers.
6.5	Creation and maintenance of registers of agricultural producers engaged in integrated production of plants and plant products – by ODBKhs for the relevant regions and by the BABKh Central Administration for a national register which holds the data from the regional registers.	BABKh, ODBKhs	for creation of registers – as in ZZR; for maintenance of registers – continuous		High	
6.6	Control of integrated production and gathering of information on crop cultivation and areas occupied by such crops.	BABKh, ODBKhs	continuous	1. No of registered agricultural producers who are engaged in integrated production of plants and plant products within the country. 2. No of infringements identified in connection with integrated production.	High	
6.7	Conducting information campaigns relating to general principles of IUV.	BABKh, ODBKhs, associations of agricultural producers	to 01.01.2014	No of information campaigns conducted, no of brochures, posters, etc., produced relating to IUV.	Medium	
6.8	Introduction of legal duty on the part of agricultural producers to store documentation on each use of an organic agent.	BABKh, ODBKhs	as in ZZR		High	
6.9	General principles of integrated pest management applied to agricultural crop protection.	BABKh, agricultural producers	continuous after 01.01.2014	No of infringements identified in respect of application of general principles of integrated pest management	High	
6.10	The specific principles of integrated pest management may also be applied in the protection of agricultural crops, under	BABKh, agricultural producers	continuous	No of agricultural producers voluntarily applying specific IUV principles area involved	High	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	which integrated production of plants and plant products is practised.			as a % of total treated area).		
6.11	In protecting agricultural crops from economically significant pests, following the assessment and recommendation of an integrated production consultant, an agricultural producer may apply a plant protection product in a dose that is lower than that authorised to reduce the risks and impact of pesticide use on human health and the environment, and to maintain pest populations in a range below the PIV.	integrated production consultant	where the potential so justifies			
6.12	Increase in areas for organic farming – agricultural land managed in an organic manner.	MZKh	to 2013 under the National Plan for the Development of Organic Agriculture in Bulgaria for the period 2006-2013; from 2013 – in line with updated National Plan for the Development of Organic Agriculture in Bulgaria	1. No of registered agricultural producers for organic farming (as a % of the total no of registered agricultural producers). 2. Area used for organic farming agriculture, as a % of the total treated area.	Medium	
6.13	Establishment of priority targets, as active substances, crops, regions or practices requiring special attention, or good practices from the aspect of reduction in risks and impact of pesticide use for human health and the environment.	MZKh, SSA	continuous		High	
6.14	Identification of active substances giving rise to particular concern, persistent or high-risk active substances (toxic, highly toxic, bio-accumulative, carcinogenic,	BABKh, TsOR	as in Regulation 540/2011		Average	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	mutagenic, reproductively toxic) for which there are safer alternatives and substituting them by alternatives (list of active substances, candidates for substitution, in line with Article 24 of Regulation 1107/2011).					
6.15	Creation and maintenance of an internet portal for plant protection.	BABKh and others	to end 2016	1. Economically significant pest attack above PIV – areas, crops. 2. Disaster or epiphytotic outbreak declared – areas, crops.	High	
6.16	Introduction and use of mathematical models to forecast the development of key pests for agricultural crops that are of strategic significance for the country.	BABKh, SSA Universities	in stages, to 2015		High	
7. Reduction in level of pesticide residues in food of plant origin (Bulgarian production)						
7.1	Enhanced monitoring for pesticide residues in plants and plant products intended for food, by taking and analysing more field or greenhouse samples, from more crop types.	BABKh, TsLKhIK	from 01.01.2013	1. No of samples taken and analysed for pesticide residues in food of plant origin. 2. No of crops from which samples are taken for pesticide residues in food of plant origin. 3. No of samples without pesticide residues in food of plant origin. 4. No of samples with residues below maximum residue level for pesticides in food of plant origin. 5. No of samples with pesticide residue content above maximum residue level (>MRL) in food of plant origin.	High	1. Reduction in pesticide residues in food of plant origin (Bulgarian production), representing a significant contribution to preventive protection of consumers. 2. Increase in interest in and demand for Bulgarian plant products on the part of consumers. 3. Increase in consumer trust – produce that is safe for health.

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
				6. No of samples containing several pollutants. 7. No of samples containing prohibited active substance(s). 8. No of RASFF notifications in respect of instances where the maximum admissible pesticide residue concentration was found to be present, leading to withdrawal of food of plant origin from the market (as a % of all reports/warnings).		
7.2	Enhanced monitoring of plant protection product use, by taking and analysing field or greenhouse samples to identify PPPs used.	BABKh, TsLKhIK	01.01.2014	No of active substances analysed.	High	
7.3	Performance of risk assessment for food of plant origin with pesticide residue quantities found to be above maximum residue levels.	TsOR	continuous	No of risk assessments carried out for food with pesticide residue quantities found to be above maximum residue level (>MRL).	High	
7.4	Publication on BABKh website of information material in connection with pesticide pollution of food of plant origin.	TsOR	continuous		High	
8. Special measures to protect the aquatic environment and drinking water						
8.1	Monitoring of drinking water quality.	ViK operators (in full scope), MZ, RZIs (up to 50% of full scope)	continuous	1. No of samples taken and analysed for pesticide residues in drinking and bottled water and in water from surface and groundwater sources used for drinking and domestic water supply. 2. No of samples of drinking and bottled water and water from surface and groundwater	High	1. Taking of measures to reduce the risk of pesticide residues being present in drinking and bottled water will lead to a lowering of the risks to and impact on human health. 2. Prevention of and/or reduction in pesticide

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
				sources used for drinking and domestic water supply with a pesticide content below MRL. 3. No of samples of drinking and bottled water and water from surface and groundwater sources used for drinking and domestic water supply with a pesticide level above MRL.		pollution of water will ensure a reduction in risks and impact of use of pesticides on human health and the environment. 3. Prevention of and/or reduction in the risks of pesticide residues being present in water sources will lead to a reduction in risks and impact of use of pesticides on human health and the environment. 4. Protection of water and of water protection zones (ZZV).
8.2	Monitoring of surface water and groundwater used for drinking and domestic water supply.	MOSV, BD, IAOS water and sewage operators	continuous			
8.3	Improvement in the gathering and exchange of information on types of pesticides used in water catchment areas and public health protection zones of water sources intended for drinking and domestic water supply and of water sources for mineral water used for therapeutic, preventive, drinking and hygiene purposes.	BABKh MZ MOSV BD	continuous			
8.4	Assignation of priority to measures included in River Basin Management Plans associated with protection of drinking and mineral water sources from pesticide pollution.	MOSV, BD	continuous		High	
8.5	Publication on MOSV and BD websites of information on specific public health protection zones of drinking water sources in zone register form.	MOSV, BD	continuous		High	
8.6	Improvement to monitoring of observance of the requirements to prohibit and restrict the use of pesticides in public health protection zones.	MZ, RZIs, MOSV, BDs, legal persons operating water sources	continuous		High	
8.7	Updating of the legislation on public	MOSV, MZ	2013		High	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	health protection zones around water sources intended for drinking and domestic water supply and sources of mineral water.					
8.8	Giving preference to plant protection products which are not classified as hazardous to an aquatic environment, in line with the Regulation on the procedure and methods of classifying, packing and labelling chemicals and mixtures and/or Regulation (EC) No 1272/2008, and which do not contain priority hazardous substances as defined in the Water Act.	BABKh, MOSV, the plant protection industry, associations of agricultural producers, and others	continuous		High	
8.9	Giving preference to the most effective application equipment, and making use of plant protection product application technology with restricted spray drift, particularly for crops such as hop gardens, fruit orchards and vineyards.	KTIs, associations of agricultural equipment traders, associations of agricultural producers, and others	continuous		High	
8.10	Reduction in risks of pollution outside the application area caused by spray drift during spraying, leakage or drainage, etc., including the establishment of untreated buffer zones of appropriate size to protect non-target aquatic organisms – buffer zones to be specified on an individual basis for each plant protection product during the process of its evaluation and authorisation, and listed on the product label.	BABKh, agricultural producers, associations of agricultural producers, and others	continuous		High	
8.11	Reduction in or end of application of plant protection products on or along roads, railway lines, highly permeable surfaces or other infrastructure located in the vicinity of surface water or groundwater, or on impermeable surfaces, where there is a	BABKh	as in ZZR		Medium	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	major risk of leakage into surface water or drainage networks.					
8.12	Compliance with prohibitions and restrictions on activities with plant protection products in water protection zones intended for drinking and domestic water supply and for mineral water, and in public health protection zones for surface water and groundwater that are used for drinking and domestic water supply.	MOSV, BD, MZ, agricultural producers, associations of agricultural producers, and others	continuous		Medium	
8.13	Establishing specific measures to protect the aquatic environment by order of the Minister for the Environment and Water, subject to agreement from the Minister for Health – specific measures to protect water used for drinking and domestic water supply from exposure to pesticides.	MOSV	pursuant to the Water Act		High	
8.14	Prohibition on the use of plant protection products of the professional use category on protected areas determined pursuant to the Water Act, or other areas established by order of the Minister for the Environment and Water. If such areas have to be treated, plant protection products of the non-professional use category or low-risk plant protection products are to be applied, or organic agents.	MOSV, BABKh	as in ZZR		High	
8.15	Ensuring integrated water management in the interests of the public and to protect public health, and creation of conditions to reduce the release of priority substances and priority hazardous substances, pursuant to the Water Act	MOSV, BD	timeline given in PURB		High	
8.16	Monitoring of surface water, pursuant to Order of the Minister for the Environment and Water on water monitoring.	IAOS	continuous	1. No of samples with pesticide residues below MRL in surface water, pursuant to		

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
				Order of the Minister for the Environment and Water on water monitoring. 2. No of samples with pesticide residues above MRL in surface water, pursuant to Order of the Minister for the Environment and Water on water monitoring.		
8.17	Groundwater monitoring, pursuant to Order of the Minister for the Environment and Water on water monitoring.		continuous	1. No of samples with pesticide residues below MRL in groundwater, pursuant to Order of the Minister for the Environment and Water on water monitoring. 2. No of samples with pesticide residues above MRL in groundwater, pursuant to Order of the Minister for the Environment and Water on water monitoring.	High	
9. Supplementary measures to protect the environment						
9.1	Monitoring of persistent organochlorine pesticides in soil, in line with ratified soil monitoring schedules, pursuant to Order of the Minister for the Environment and Water.	MOSV, IAOS	continuous	1. No of soil samples taken and analysed with persistent organochlorine pesticide residues below MRL, where such residues are the subject of annual IAOS monitoring. 2. No of soil samples taken and analysed with persistent organochlorine pesticide residues above MRL, where such residues are the subject of annual IAOS monitoring.	High	Available information on the persistent organochlorine pesticide content in soil, and of certain priority substances and other pollutants in the environment. Protection of the environment – particularly soil and water.
9.2	Monitoring of active substances included in the Regulation on environmental quality	MOSV, IAOS	continuous			

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	standards for priority substances and certain other pollutants.					
11. Information and raising awareness concerning the impact of pesticide use on human health and the environment						
11.1	Provision to the general public via the BABKh website of information on plant protection products, on the risks and possible acute and chronic consequences for human health, non-target organisms and the environment of use of these, and on the use of non-chemical alternatives.	BABKh, TsOR	continuous	No of instances of acute and chronic poisoning of professional users, operators and agricultural workers by pesticides.	High	1. Increased awareness among the general public, at institutions, among professional and non-professional pesticide users, operators, agricultural workers, plant protection product distributors and consultants concerning the impact of plant protection product use on human health and the environment. 2. Reduction in risks and impact of use of pesticides on human health, as a result of the above persons being more aware. 3. Increased awareness at institutions and among users concerning requirements for the sale and use of plant protection products. 4. Increased awareness at institutions and among distributors and agricultural producers concerning the risk arising from the sale and use of unauthorised, illegal and counterfeit
11.2	Annual submission to BABKh of all available information on lack of anticipated efficacy, development of resistance and any unexpected impact on plants, plant products or the environment, as well as information from observations of product impact on professional users.	marketing authorisation holders and persons authorised to use plant protection products	continuous	No of reported instances of lack of anticipated efficacy, development of resistance and any unexpected impact on plants, plant products or the environment, as well as information from observations of product impact on professional users.	High	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
						plant protection products.
11.3	Gathering of information on instances of acute poisoning with plant protection products, and development of chronic poisoning, among groups routinely exposed to plant protection products, such as professional users, operators and agricultural workers.	MZ *(to 01.06.2015)*, N.I. Pirogov Hospital *(from 01.06.2015)*	continuous	No of instances of acute and chronic pesticide poisoning affecting professional users, operators and agricultural workers.	High	Available information on instances of acute plant protection product poisoning, and of the development of chronic poisoning, among groups who may be routinely exposed to plant protection products, such as professional users, operators and agricultural workers.
11.4	Gathering of information on instances of acute poisoning with plant protection products, and development of chronic poisoning, among groups routinely exposed to plant protection products, such as people living in the vicinity of an area where plant protection products are used.	MZ *(to 01.06.2015)*, N.I. Pirogov Hospital *(from 01.06.2015)*	continuous	No of instances of acute and chronic pesticide poisoning affecting residents and bystanders in a zone in which pesticides are used.	High	Available information on instances of acute plant protection product poisoning, and of the development of chronic poisoning, among groups who may be routinely exposed to plant protection products, such as people living in the vicinity of a zone in which plant protection products are used.
12. Reduction in use or risks of pesticides in certain areas						
12.1	Ban on use of plant protection products of the professional use category on areas used by the general public or by vulnerable groups, defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds and areas located in the immediate vicinity of health care institutions. If these areas	BABKh, municipalities, local authorities	as in ZZR	No of infringements involving use of professional-category PPPs on areas used by the general public, protected areas and other specific areas (as in Article 12 of Directive 2009/128/EC).	High	Prevention and/or reduction in risks of pesticide use in public spaces and zones for recreation, thus ensuring protection of the general public and vulnerable population groups.

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	need to be treated, plant protection products of the non-professional use category , low-risk plant protection products or organic agents are to be used.					
12.2	Ban on the use of professional-category plant protection products in protected territories as defined in the Water Act, or other areas defined in an order of the Minister for the Environment and Water. If these areas need to be treated, plant protection products of the non-professional use category , low-risk plant protection products or organic agents are to be used.	BD, BABKh	as in ZZR		High	Prevention of and/or reduction in pollution of water and soil by pesticides ensures a reduction in the risks and impact of pesticide use on human health and the environment.
12.3	Restriction on access by agricultural workers to areas treated with plant protection products for the period indicated product user instructions.	BABKh	as in ZZR		High	Reduction in exposure to pesticides and corresponding protection of agricultural workers.
12.4	Ban on the use of pesticides in specified districts, including certain protected territories, and in pastures and meadows in some zones in the Natura 2000 network.	MOSV	continuous	1. No of infringements involving use of PPPs on protected areas and zones in the Natura 2000 ecological network where a ban on pesticide use has been introduced. 2. No of proven cases of pesticide poisoning of animals, birds and other non-target organisms.	High	Prevention of and/or reduction in the impact of pesticides on biodiversity and natural habitats, including the impact on soil biodiversity, non-target organisms, bees, etc.
12.5	Compliance with requirements set by law for the protection of bees and bee communities from pesticide poisoning.	MZKh, BABKh, accredited laboratories for analysis of pesticide residues in bees and	continuous	No of proven cases of bee poisoning by pesticides.	High	
12.6	Implementation of supplementary measures to protect bees from pesticide	MZKh, BABKh, TsOR,	continuous		High	

№	Measure/Action	Responsible institutions	Implementation deadline	Progress indicators	Priority	Expected outcome
	poisoning.	associations of agricultural producers, plant protection industry, beekeepers' associations				

X. GLOSSARY OF TERMS

Active substances – substances or micro-organisms, including viruses, which have a general or specific effect against pests or on plants, parts of plants or plant products.

Active substance – candidate for substitution – an active substance which meets one or more of the supplementary criteria set out in point 4 of Annex II to Regulation (EC) No 1107/2009.

Consultant - any person who has acquired adequate knowledge and advises on pest management and the safe use of pesticides, in the context of a professional capacity or commercial service, including private self-employed and public consultancy services, commercial agents, food producers and retailers where applicable.

Aerial spraying – application of plant protection products from an aircraft (plane or helicopter).

Agricultural pharmacy – a specialist facility for trading in plant protection products of professional 2 or non-professional use category, in packaging containing up to 5 litres/kilograms inclusive to an end user.

Agricultural producer – a natural or legal person who produces plants and plant products within the country that are intended for sale.

Authorised plant protection product – any plant protection product for which an authorisation that is in effect has been issued by the Executive Director of the Bulgarian Food Safety Agency for it to be placed on the market and used within Bulgaria.

Authorisation of a plant protection product - an administrative act by which the competent authority of a Member State authorises the placing on the market of a plant protection product in its territory.

Authorised use – application of a plant protection product for a given crop, against a specific pest, at a dose and subject to conditions of application as listed in the authorisation issued by the Executive Director of the Bulgarian Food Safety Agency for it to be placed on the market and used. All authorised uses are to be listed on the product label.

Behaviour of a plant protection product in the environment – the impact of products on components of the environment and the potential for them, under their conditions of use, to get into soil, to pollute groundwater and surface water and to be dispersed in the atmosphere.

Organic agent – an organic entity capable of self-reproduction which is used to combat harmful organisms.

Commissioner of aerial spraying – a person who assigns/commissions the application of plant protection products from an aircraft with the aim of protecting plants from pests, and who must submit a written application to the relevant municipalities, regional food safety directorates and regional forestry authorities before commencing treatment.

Counterfeit or illegal plant protection products – products which are not authorised for sale and use in Bulgaria as plant protection products, or which pretend to be plant protection products.

Disaster – large-scale manifestation of a harmful event significant losses of plants, over a certain period of time, within a specific district, region or the whole country.

Distributor – any natural or legal person who is not the person who places a product on the market, who makes a plant protection product available on the market, including wholesalers, retailers, vendors and suppliers.

Economically significant pests – diseases, adversaries and weeds which appear on an annual basis, cause significant losses to agricultural production and have an impact on the safety and quality of plants and plant products.

Economic harm threshold – the quantity of a certain type of adversary, disease causative factor or weed on average per unit of area at which the harm caused by it, expressed as a value, is more than double the outlay needed to conduct chemical warfare on it.

Environment – water (including surface water and groundwater), air, soil, wild species of fauna and flora and any interrelationship between them, and their relationship with other living organisms.

Epiphytotic outbreak – large-scale manifestation of a disease linked to significant plant losses, over a certain period of time, within a specific district, region or the whole country.

Fumigation – a method of destroying pests that is based on use of gases, in enclosed spaces.

Good agricultural crop health – a state in which it is established that pests are below the economic harm threshold.

Good plant protection practice – a practice whereby the treatments with plant protection products applied to given plants or plant products, in conformity with the conditions of their authorised uses, are selected, dosed and timed to ensure acceptable efficacy with the minimum quantity necessary, taking due account of local conditions and of the possibilities for cultural and organic control.

Integrated pest management – careful consideration of all available plant protection methods and subsequent integration of appropriate measures that discourage the development of populations of harmful organisms and keep the use of plant protection products and other forms of intervention to levels that are economically and ecologically justified and reduce or minimise risks to human health and the environment. 'Integrated pest management' emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

Integrated production – a system for producing plants and plant products through the application of specific principles of integrated pest management.

Maximum residue level for pesticides (MRL) means the upper legal level of a concentration for a pesticide residue in or on food or feed set in accordance with Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin.

Member States – member states of the European Union.

Non-chemical methods – alternative methods to chemical pesticides for plant protection and pest management, based on agronomic techniques or physical, mechanical or organic pest control methods.

Original pack – the pack of the producer of plant protection products with label and batch number, which is presented and authorised in the process of authorisation for type, capacity and material specification.

Aerial sprayer/Aviation operator – a person with proven ability to carry out specialist aviation work under the terms of Regulation 24 of 2000, certified an aviation operator for specialist aviation work by the Civil Aviation Administration Central Directorate.

Pest – any plant or animal species, genus or biotype, or pathogenic agent that is harmful to plants and/or plant products.

Pesticide – a plant protection product.

Pesticide residues – one or more substances present in or on plants or plant products, edible products, drinking water or elsewhere in the environment and resulting from the use of a plant protection product, including their metabolites, breakdown or reaction products.

Plant products - products of plant origin (including grain) in an unprocessed state or having undergone only simple preparation, in so far as they are no longer plants.

Plant protection inspectors – experts with an education in agronomy who are appointed at regional food safety directorates and possess the necessary qualifications to carry out official

controls of plant protection products, fertilisers, soil improvement agents, organically active substances and food substrates and actions involving them.

Plant protection product application equipment – any apparatus specifically intended for the application of pesticides, including accessories that are essential for the effective operation of such equipment, such as nozzles, manometers, filters, strainers and cleaning devices for tanks.

Plant protection product formulation – the form of a plant protection product in which it is placed on the market.

Plant protection products – products in the form in which they are supplied to the user, comprising or containing active substances, antidotes or synergists and intended for one of the following uses:

a) protection of plants or plant products against all harmful organisms or prevention of the action of such organisms, unless such products are considered as being intended fundamentally for hygiene purposes, and not for protection of plants or plant products;
b) influencing the life processes of plants, for example substances that affect growth, other than nutrients;
c) preserving plant products, in so far as such substances or products are not subject to special Commission provisions on preservatives;
d) destroying undesired plants or parts of plants, with the exception of aquatic plants, except when the products are applied to soil or water for plant protection purposes;
e) halting or preventing undesirable growth of plants, with the exception of aquatic plants, except when the products are applied to soil or water for plant protection purposes.

Plants - live plants and live parts of plants, including seeds, live parts of plants being: fruit in the botanical sense without deep-frozen preserved tubers, bulbs, roots, cut flowers, branches and leaves; felled trees, parts of them and leaves; textile crops.

Pollutant – a substance that is contained in plant raw materials as a result of actions to cultivate and store them or in soil or water as a result of environmental pollution.

Professional user – any person who uses plant protection products in the course of their professional activities, including operators, technicians, employers and self-employed people, both in the farming and in other sectors.

Quarantine period – the minimum admissible time interval (in days) between the last application of plant protection products and harvesting of the crop (including pastures) which allows the earliest safe use of the treated product by consumers, including agricultural animals.

Quarantine pest – a pest that is of potential significance for the economy of the threatened zone, and which is not as yet represented in that zone, or is already in it but is not widespread and is an object of official control.

Re-packing departments – specialised detached facilities in which, under set conditions, the content of plant protection products is transferred from one pack to another, usually smaller pack, for trading purposes.

Re-packing of plant protection products – production process in which the content of a plant protection product is transferred from one pack to another, usually smaller, pack.

Risk indicator – the result of a method of calculation that is used to evaluate risks of pesticides on human health and/or the environment.

Sensitive crops – crops which react to one or another extent on contact with a plant protection product, whereupon the plants may die or undergo irreversible physiological changes.

Specialist plant protection actions – application of plant protection products by aerial spraying, fumigation and disinfection of premises, plants and plant products to combat pests or treat seeds for sowing that are intended for sale.

Temporary warehouse – a warehouse for the storage of plant protection products, used by agricultural producers only during the vegetation period of agricultural crops.

Trade in plant protection products – any actions comprising purchase/sale, acquisition, importation or exportation, supply, storage or provision of plant protection products.

Unauthorised use – application of an authorised plant protection product outside the uses listed in the authorisation for the product to be placed on the market and used.

Use category – allocation of a plant protection product to a certain group with the aim of restricting its use to a certain category of user.

Warehouse – a facility for wholesale trade and/or storage of plant protection products, including a warehouse for storage of plant protection products by agricultural producers.

XI. SUMMARY

The National Action Plan for Sustainable Pesticide Use in the Republic of Bulgaria was drawn up and adopted in accordance with Article 4 of Directive 2009/128/EC on the sustainable use of pesticides and the Plant Protection Act.

The Action Plan lists the main legal requirements in the sphere of plant protection, and specifically as regards plant protection products – their sale, proper use and so on – with the aim of protecting human health and taking care of the environment.

The National Action Plan sets two main objectives: reducing the risks and impact of pesticides on human health and the environment, and promoting integrated pest management and alternative approaches and methods for plant protection. It sets out specific measures and actions to achieve these objectives, along with a schedule for their implementation and indicators to measure their progress.

Timely implementation of the measures and actions set out in the National Plan and achievement of the objectives will ensure a high level of protection of human health and the environment from pesticides.[1] With the entry into force of the new ZZR, Bulgaria will move from three PPP use categories two. Prior to this change, the three use categories were as follows:

2) PPPs of the second (restricted) use category are to be applied by individuals with higher education in agronomy, or with secondary education in agriculture, focusing on crop cultivation;

3) PPPs of the third (free) use category may be applied by individuals aged 18 and over.

In the new ZZR, plant protection products are placed in two use categories: professional and non-professional. The professional use category is divided into two sub-categories: professional 1 and professional 2. Plant protection products of the professional use category are to be applied only by users who hold a certificate, and use of PPPs of professional 1 category must be under the supervision of an agronomist. Plant protection products of the non-professional use category may also be applied by individuals who are at least 18 years old.