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NATIONAL STRATEGY OF THE REPUBLIC OF BELARUS FOR SUSTAINABLE SOCIO-ECONOMIC DEVELOPMENT FOR THE RERIOD UNTIL 2030

6. Preservation of ecological capital for future generations and environment improvement

6.1. *Environmental safety and favorable environment*

6.2. *Efficient use of natural resources potential*

6.3. *Preservation and sustainable use of biological and landscape diversity*

6.4. *Effective waste management*

6. Preservation of Ecological Capital for Future Generations and Environment Improvement

Great nation, we do not our wealth,
but how we use it.

Theodore Roosevelt

The strategic objective of the National policy in the field of environmental protection is to ensure environmentally friendly conditions for the society and citizens' livelihoods.

The stated objective intends to tackle issues as follows:

- advance efficiency of natural resources potential use, ensuring ecosystem integrity and satisfying present and future needs of society;
- ensure sustainable reduction of adverse effects on the environment in exercising economic or any other activity by means of socio-economic development at national, industrial (sectorial) and regional levels, as well as by improvingof organizational, technical and planning solutions to mitigate negative effects on the environment;
- provide environmental security, reduce threat to the public livelihood and harm to the national economy as a result of dangerous hydrometeorological phenomena and emergencies of technogenic character;

- rehabilitation (remediation) of contaminated and other ecologically destabilized areas, restoration of their biosphere functions.

Implementation of the stated objectives should be based on the following fundamental principles: observance and assurance of citizens' rights to a favourable environment; full compensation for the harm caused to the natural environment; completeness, openness, integrity and promptness of ecological information; forecast and accountability of possible impacts (ecological risks) of all kinds of economic or any other activity, the effect of which is unpredictable for the environment and human health; liability for the breach of legislation on environmental protection; preservation of natural ecosystems, natural landscapes and natural complexes; cooperation of state bodies, businesses and the public sector in solving issues of natural potential conservation of the Republic of Belarus and environmental improvement.

Priority directions to ensure ecological sustainability shall be as follows:

- extension of opportunities for citizens, NGOs and business communities in the development and implementation of the National ecological policy;
- raising the level of competence and professional training of senior executives (Managerial Human Resources) engaged in decision-making on the Environmental Resources Management (ERM);
- improvement of legal, organizational economic and awareness-raising conditions to promote responsible and resource-saving consumption of goods, as well as ecological safety in their production by economic entities;
- promotion of technological, organizational and administrative innovations to reduce volumes of toxic materials in technological processes; resource-intensiveness of production and products, primarily at the industrial facilities that have an integrated effect on the environment;
- further introduction at national enterprises of integrated environmental permits, ecological certification, an environmental management system and audit, environmental labelling;
- development of the National Environmental Monitoring System and control in the field of environmental protection with a view of pollution prevention or other negative impacts instead of neutralization of their effects;
- enhancement of reliability and effectiveness of financial mechanisms in the environmental activity, resuming the practice of the Nature Conservation Fund establishment, identifying priority directions and transparent mechanisms for allocation of funds and introducing payments mechanisms for ecosystem services;
- extension of international cooperationin the field of environmental protection and ensuring of ecological safety by accession to or ratification of important for the Republic of Belarus international treaties and agreements, carrying out joint scientific researches and developments, implementation of international ecological standards;
- carrying out of ecological certification for facilities in accordance with international standards.

Criteria for the environmental policy efficiency:

- environmental expenses, % in relation to the GDP (gross domestic product);

- Belarus international rating by ecological efficiencyindex.

Key directions of ecological policy:ensuring of ecological safety and preserving favourable environment; rational use of natural resources potential; conservation of biological and landscape diversity; effective waste management.

6.1. Environmental Safety &Favourable Environment

The primary objective: ensure ecological safetyand favourable environment – preserve local and regional ecosystems for present and future generations, protect population from possible adverse effects resulting from emergencies of natural and technogenic character.

To achieve this objective we need to:

- prevent the onset (mitigate consequences) of ecological threats to sustainable socio-economic development, primarily conditioned by effects of climate change, loss of biodiversity and degradation of agricultural lands;
- ensure the establishment of system for specially protected natural areas, representational in relation to all typical and rare natural landscapes and biotopes;
- reduce the likelihood of emergency situations occurrence of natural and technogenic character and in cases of their occurrence, guarantee minimizing ultimate loss to the environment and cure of negative effects for ecosystems;
- increase the level of territorial ecological safety by optimizing the allocation of industrial facilities and residential areas management/regulation (life support systems);
- consistently lower the environmental load of territories to the level that provides constant enrichment of natural environment;
- ensure the rehabilitation of contaminated and other ecologically destabilized territories, restoration of their natural properties.

Priority directions of the National policy:

Nature tells us:
"You either study my laws, derive benefits
orI'll enslave you, and yielding
no benefits,
I will cause yet more adversities"

Mikael Nalbandian

- establishment of a system to manage ecological risks of natural and technogenic character, development of a legal framework to ensure ecological safety;
- strengthening of the Strategic Environmental Assessment institution (SEA), integrating the SEA elements into methodology, methods and practice of documents' elaboration on

planning and forecasting of socio-economic development of administrative-territorial and territorial units, belonging to different levels;

- bringing to a modern technological level of all systems that enable to obtain hydrometeorological and radiation ecological information by integrating of computer-aided measurement and data processing, using new techniques for remote sensing and monitoring, forecasting, timely submission of information to different customers and joining Global Information Networks;
- regulation of environmental loads and their territorial distribution, strengthening of control over compliance with the standards for admissible environmental impacts;
- integration of the planning function of the environmental conservation activity into the planning system of sectorial and territorial socio-economic development;
- fosteringuse of energy- and resource-saving technologies in the context of warning ecological policy, advancement of technologies for disordered environmental systems' restoration .

To address the adaptation issue of Belarus socio-economic development to climate changes the following is stipulated:

- establishment of the Scientific Center for Climatology and Polar Research that carries out works on the study and analysis of global, regional and local climatic changes, assessment of their effects on the socio-economic system, elaboration of multivariate adaptive measures in climate-dependent types of economic activity;
- establishment of the economically feasible adaptive systemof arable farming in Agriculture characterized by well-grounded agricultural crop rotation and rational structure of crop sequence, genetically resistant varieties, mixed sowing, compliance with optimal timescales for agricultural measures' accomplishment and phytocenotic weed vegetation control measures;
- levelling of the forest age structure (an increase in share of mature stands of trees and saplings) by regulating forest management and organization of forest sanitation and forest restoration works;
- mainstreaming of water-efficient technologies;
- systematic forest improvement activity in river basins; development of a reliable hydrometeorological monitoring system, extensive use of radar and satellite data to evaluate snow cover characteristics and water management planning.

The Atmospheric Air Protection objective: improve the atmospheric airquality to provide ecologically safe livelihood forhumans by minimizing pollutant emissions of stationary and mobile sources into the air basin.

To achieve this objective the following is required:

- improvement of legal framework and economic mechanisms that stimulate pollutant emissions reduction;
- elaboration of an action plan for each base pollutant;
- use of best available techniques, cutting-edge technologies, scientific and technical achievements for construction of new and reconstruction of existing productions, removal

out of operation of facilities in industry, agriculture, forestry, housing and utilities infrastructure, construction and transport industry;

- improvement of traffic management, building up the optimal road density;
- staged introduction for mobile sources of EU standards,set for pollutant emissions;
- output and use of motor fuel with improved ecological characteristics, expansion of biodiesel fuel and bioethanol use, as well as use of non-oil fuel types by transport means, an increase in share of electric transport means up to 6% by 2030;
- increase in share of public transportwith improved ecological characteristics in settlement areas with the population over 100 K people by 2030;
- reach a total share of mechanical transport means of high ecological classes (4 and higher) over 50%;
- air park renovation;
- cease by 2025 of the production and import of paints and varnishes with 50% or higher content of volatile organic compounds, transition of big production paint lines on paints and varnishes with less than 20% of volatile organic compounds' content;
- further re-equipment and reconstruction of the dust and gas treatment equipment at large production facilities to reduce by 2020 the release of emissions that have solid aggregate state to concentrations not higher than 50 mg/m3; for waste use and neutralization facilities of hazard classes 1-3 -- not higher than 30 mg/m3; for asphalt concrete plants – not higher than 100 mg/m3;
- implementation of international treaties and agreements in the area of the Atmospheric Air Protection, accession to or ratification of till 2020 the High-density Metals Protocol, the Persistent Organic Pollutants Protocol, the Goteborg Protocol to the Convention on Long-range Transboundary Air Pollution, the Minamata Convention on Mercury.

The key objective of the National policy on the ***rectification of the consequencesof the Chernobyl Atomic Electric Power Station disaster*** includes further steps to risk mitigation of its adverse effects on citizens' health, ensuring sustainable socio-economic development of contaminated territories without limiting the economic activity by a radiation factor.

To achieve the stated objective, the following measures should be implemented:

- development of dose and radioecological monitoring systems, radiation control by optimizing of instrumental identification volumes with regard to the nucleotide content in a human organism, environmental objects, foodstuffs, products of Agriculture and Forestry, identification of emergency territories and population risk groups;
- high level maintenance of corresponding scientific investigations aimed at specifying radiation factor effects on the oncological diseases rate and other long-run radiation and epidemiologic consequences;
- continue the study of biological effects of small radiation exposures, complex radiation and other factor impacts of the existing radiation situation on the environment and biota;
- constant population health surveillance to reduce risks of health effects for present and future generations; enhancement of therapeutic, diagnostic and rehabilitation assistance to children that reside in the areas of radioactive contamination;

- arrangement of favourable conditions to attract domestic and foreign investments, facilitate innovation activity, develop small and medium businesses, individual labour activity, create new jobs in contaminated areas;
- ensuring of phased return to economic use of the agricultural lands taken out of rotation, taking into account of radiological safety and economic viability requirements;
- actualization of organizational, agrochemical and agrotechnical measures and technologies aimed at the production of regulatory clean agricultural products in individual subsidiary, peasant (farming) husbandries and the public sector;
- improvement of systems to promote public awareness and enlightenment on the radiation situation (environment) and other aspects associated with the disaster at the Chernobyl Atomic Electric Power Station to finally overcome the "Chernobyl victim" syndrome by the population.

The main objective in ***hazardous chemical substances' management*** is the reduction of risks and the exposure level of hazardous chemical substances on the environment and public health. To achieve it, the following issues should be tackled:

- reduction of emissions of hazardous chemical substances into the environment;
- dilution of hazardous chemical substances in environmental objects;
- enhancement of foodstuffs, drinking water and consumer products safety;
- prevention of chemical substances' import into the territory of the Republic of Belarus with no available information on their hazardous properties and effects on human health and the environment.

To achieve the stated objectives, the following should be implemented:

- establish the integrated coordination mechanism for the regulation of and control overhazardous chemical substances treatmentin the Republic of Belarus;
- improve legislation in the area of chemical substances management, which should be based on precautionary principles, including: "polluter pays", "no data, no market", "right to know", as well as on the synergetic approach that stipulates the integrated implementation of international treaties (agreements) in the area of hazardous chemical substances management;
- accede to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;
- accomplish the transition to the Globally Harmonized System of Classification and Labelling of Chemicals and approve, as its integral part, the information on chemical substance potential risks, precautionary measures and the delivery of first medical aid;
- destroy the reserves of persistent organic pollutants accumulated in the Republic, reduce emissions of persistent organic pollutants from non-deliberate sources in accordance with the Stockholm Convention on Persistent Organic Pollutants;
- make an inventory of hazardous chemical substances, establish the infrastructure to maintain a database on hazardous chemical substances;
- take measures to develop amonitoring system for hazardous chemical substance effects on public health and the environment, including the introduction of biomonitoring technologies in the areas of hazardous facilities exposure;

- elevate information exchange between designated government institutions and involved establishments, provide the transparency of information, improve accessibility of the wide public to the data on hazardous chemical substances;
- strengthen both human and technological capacity of Customs Control Services over export (import) of hazardous chemical substances on the Republic of Belarus border.

The main objective in the area of ***biotechnological safety*** is to ensure the guaranteed high protection level of human life, health and the environment from possible adverse effects as a result of biotechnological products' use, including by means of the legal frameworkimprovement that regulates legal aspects of bioactivity, by raising public awareness of modern scientific developments in the field of biotechnologies.

6.2. Efficient Use of Natural Resources Potential

The ***strategic objective*** in the area of restoration, rational use and protection of the natural potential consists in reaching decoupling, which involves use of fewer natural resources per unit of economic performance.

To achieve the stated objective, the following should be implemented:

- increase volumes of renewable and recoverable resources' use in the production of higher-value-added goods;
- reduce the raw- material resource level loss at stages of their extraction and management;
- ensure non-renewable for renewable resource substitution, taking into account the depletion dynamics of natural resource stocks.

The National policy will focus on the development of an effective management system and market relations in the area of natural resource management, adoption of ecologically-safe innovation technologies for extraction and processing, payment optimization for the natural resource extraction with adjusted economic assessment.

For sustainable use of land resources, the following is required:

- development of the National policy concept in the area of land use and protection up to 2030 and the State Programme for efficient use and protection of land resources;
- building of the human resource capacity by optimization of higher educationprogrammes and by economic stimulation of specialists'training in line with stage II for higher education and stage I for postgraduate studies;
- modernization and development of a land-information system on the basis of the feasible issues diversification, use of state-of-the-art technologies for data collection, processing, storage and submission;
- development of a baseline model profile for the land management ISO 19152:2012 "Geographic Information –Domain Model for Land (Property) Administration" (LADM);

- establishment of the National Spatial Data (Information) Infrastructure, taking into account of experience in implementation of Directive 2007/2/EC of the European Parliament and of the Council of Europe of 14 March 2007 "On Establishment of Infrastructure for Spacial Information in the European Community" (INSPIRE);
- development of e-Government that provides services in administrative procedures, associated with the construction or other on-ground activity (e.g. obtaining of construction permits, acceptance of equipment into service, issuance of permits for excavations);
- development of electronic administrative procedures and instruments for public debates on decisions to be taken by local Executive Committees for land-use management, land possession and urban development issues;
- improvement of procedures for the Unified State Register of Real Property Titles formation, rights to it, transaction with it of the State Land Register (Cadaster) in a part of transition from a sporadic approach to a mixed strategy for the land plot formation;
- improvement of the State Cadastral Land Registration in a part of simplification of land classification according to land types, taking into account of international experience and including legislative consolidation of organic kinds of agricultural lands;
- improvement of cadastral valuation of agricultural lands, belonging to agricultural organizations and peasant (farm) households and forestry fund lands in a part of bringing techniques and evaluation results into compliance with the Republic of Belarus standards in the area of land plot evaluation;
- development of a unified system for the socio-economic and territorial planning within administrative-territorial and territorial entities of different levels;
- ecologization (greening) of land-use management and land holding, improvement of planning and arrangement of lands, belonging to agricultural organizations;
- optimization of a building land size by roads and other transport communications in compliance with compactness and balancing principals in relation to urban areas,graded development of social urban infrastructure;
- establishment of a State control effective system over land use and protection on the basis of remote sensing data on the Earth, geographic information systems and crowdsourcing information processing technologies;
- establishment of an operative record-keeping system for protection and use modes of natural areas (including the use of Geographic Information System (GIS) technologies) subject to separate and (or) special protection (specially protected natural areas and their protective zones, water protection areas and shoreland of water objects, typical and rare natural landscapes and biotopes and wildlife habitats, belonging to the species included into the Red Book of the Republic of Belarus, etc.);
- improvement of regulatory and legal framework in the area of land use and protection, including the elaboration of Laws of the Republic of Belarus "On Land (soil) Protection", "On the Unified Territorial Planning", the Decree of the President of the Republic of Belarus "On the Unified Classifier of Environmental Requirements and Land Use Limitations", etc.

Taking into account high estimates of the probability and scale of global risks' effects associated with the aggravating deficit of quality water resources over the globe, as well as high indicators

of water supply in the Republic,ways and mechanisms of this competitive advantage of Belarus should be worked out in detail.

The main objective in the area of the national water potential conservation consists in more effective use and protection of water resources, improvement of their quality in alignment with public requirements and possible climate changes.

To achieve this objective, the following should be implemented:

- minimization of surface water bodies' pollution by effluents, snowmelt and rain waters from urbanized territories and pollutants front adjoining territories, elimination of untreated sewage disposal into water bodies;
- increase the capacity of water and wastewater treatment facilities;
- introduction of instrument metering for withdrawal and use of water and sewage disposal into water bodies;
- guaranteed provision of the country population with the standard quality drinking water from underground sources, building of centralized sanitary-engineering systems;
- effective environmental awareness-buildingof the population.

The priority activity directions should be as follows:

- refining of a pricing policy for water to eliminate unreasonable use of drinking water for production needs;
- infusion of progressive water-saving technologies and production processes that reduce per-capita water consumption, development of recirculated and reused water supply systems;
- economic encouragement of decreasing discharges into surface water bodies of pollutants as part of waste water composition;
- reduction of water losses and non-revenue water expenditures, including the ones that occur during its transportation to water consumers;
- re-estimation of underground water reserves with due account for their compliance with quality standards;
- use of underground waters for drinking needs before their use for other purposes;
- improvement of regulatory and legal framework with regard to use and protection of water resources in accordance with international practices;
- restoration of disturbed water ecosystems;
- estimation of possible climate change effects on water resources.

<u>In the period of 2016-20120</u> it is essential to focus on implementation of the following directions:

- strategic assessment of the Republic of Belarus water resources and development of the State effective management system of use and protection of water resources;
- modification of hydrologic and hydrogeologic zoning of the Republic territory on the basis of a basin principle;
- development of water balances of Belarus minor and medium-size rivers;

- impact assessment of natural and anthropogenic factors on water resources and thehydrological regime of water bodies;
- generation of an up-to-date map of Belarus runoff, including Russian, Ukrainian, Lithuanian and Latvianborder territories.

<u>In the period of 2021-2030</u> the following lies ahead:

- elaboration of consolidated techniques for collection, processing and analysis of water economy state and development with regard to all economic activities; the General Development Plan for Water Industry of the Republic of Belarus with its specification at both Provincial and Regional levels, including a comprehensive set of measures for the protection of water systems and bodies and conversion of stream courses (channels) as part of engineering and economic activity, etc.;
- improvement of the institutional base in the area of water recourse use and protection;
- legal coverage and arrangement of basin management for water recourses in the Republic territory;
- conclusion of International Treaties / Agreements on sustainable use and protection of waters of transboundary river basins (the Western Dvina, the Dnieper, the Pripyat);
- improvement of treatment systems for polluted and sewage waters, certification of treatment facilities;
- establishment of an ecological status for pure fresh water lake-reserves;
- setting-up of specialized water-service companies to attract investments in the water industry and provide the population with clean pure water;
- improvement of a territorial organization system for underground water use and monitoring; liquidation of main water pollution sources;
- development and implementation of the unified constructive economic and technical policy for water consumption, water supply, technical re-equipment and servicing of water management systems;
- preparation and implementation of an ecological safety programmeon the drinking water supply of the urban and rural population, transfer of drinking water supply to underground sources.

Main objectives of sustainable ***mineral raw material base*** development: advance in the country provision level with national mineral raw material resources; minimization of adverse effects resulting from the mineral extraction on the environment; maximum efficient use of mineral raw materials.

To achieve the stated objectives, the following is required:

- boost the investment attractiveness of geological prospecting projects;
- achieve in the long-term perspective the optimum ratio of both state and business contributions to geologic exploration activities and the development of useful mineral deposits;
- carry out a large-scale comprehensive geological survey of next generation;
- increase scopes of deep-hole and superdeep drilling, involve in the bioprospecting area not only upper level horizons of the Earth’s crust, but the whole lithosphere;

- employ state-of-the-art technologies of precision geological and geophysical explorations, digital measuring systems, as well as automation equipment, information and communication technologies;
- accelerate and expand volumes of geological prospecting works in promising directions (search, exploration and additional exploration of fuel and power resource deposits, including dispersed hydrocarbon (shale) gas, other liquid and gaseousfuel natural resources in low conditioned collectors, ore mineral resources, new and traditional construction material types, mineral salts);
- enhance research and development, innovation and human resource support with regard to geological study of subsurface resources and rehabilitation of mineral resources;
- provide technical re-equipping of geological prospecting works;
- develop export of geological prospecting services;
- restoration of the natural environment state in the areas disturbed as a result of mineral resource and processing industry activities;
- promote excess of national and foreign private funds to geological prospecting works and natural resource extraction (especially in deposits with complex mining and geological conditions and small reserves), significantly increase off-budget investments for geological study of subsurface resources and deposit development;
- develop and introduce new advanced technologies for extraction and processing of mineral raw materials that provide ultimate extraction of valuable components and reduce volumes of industrial waste generation;
- expand marketing research, carry out economic estimation of mineral reserves' status and the effectiveness of their development.

A challenging issuedirectly associated with the mineral raw material resources utilization improvement and innovative development of geological prospecting and mining activities is an acute shortage of qualified geological, mining engineering and technological personnel.

To tackle the issue, the following is required:

- personnel capacity optimization on the basis of technical re-equipment of scientific production and scientific institutions, exercising geological search, geological prospecting, research and development and engineering activities;
- extension of international scientific and technical cooperation in the field of geological structure and subsoil resources development;
- expansion in the number and quality improvement of geologic profile specialist training at specialised secondary and higher educational establishments, organization of a target specialist preparation abroad.

6.3. Preservation & Sustainable Use of Biological and Landscape Diversity

Biological and landscape diversity is of fundamental importance for the sustainable country development due to basic goods, ecosystem functions and services it provides, including an

integral part of such branches as agriculture, forestry, fishery, tourism, etc. that significantly affectlivelihood of the country population.

***Objectives*with regard to conservation and sustainable use of biological and landscape diversity are as follows:**

- prevent the depletion in numbers (reduction of areas) and biodiversity of wildlife species, ecosystems, natural landscapes and biotopes, restoration of rare and endangered wildlife species, their populations, genetic diversity and maintain the numbers, ensuring their sustainable existence;
- use of biological and landscape diversity in such a manner and at such a pace that will not in the long-term result in their depletion and retain the ability to satisfy economic, aesthetic and other needs of present and coming generations;
- maintain reproductive biosphere capabilities, ensure regional and global ecological balance in possible climatic change conditions.

To achieve the stated objectives with regard to biological and landscape diversity, the following should be implemented:
for the period up to 2020

- improve the Republic of Belarus legislation that regulates biological and landscape diversity issues (Laws of the Republic of Belarus "On Environmental Protection", On Animal World", "On Plant World", "On Specially Protected Natural Areas", etc.) in a part of legal regulation of the issues with regard to the ecosystem service market establishment, access to genetic resources and the fair and equitable sharing of benefits arising from their utilization, etc.;
- actualize the Strategy for Conservation and Sustainable Use of Biological Diversity for years 2011-2020 and the Strategy for the Forest Management Adaptation to Climatic Change up to 2050; elaborate new strategic and policy documents with regard to conservation and sustainable use of biological and landscape diversity, including the Strategy for Wetlands Conservation and Sustainable Use of Peat Deposits for the Period up to 2030, the National Strategy for the Prevention of Land Degradationfor the period up to 2020;
- establish conditions for the ecosystem services market formation;
- minimize negative impacts of invasive alien wildlife species on the state of indigenous species populations and ecosystems, improve mechanisms to prevent invasion of new alien wildlife species and reduce the environmental damage caused by them;
- finalize the establishment of the NationalEcological NetworkScheme;
- develop a system of specially protected natural areas according to the Schemefor rational allocation(spacing) of specially protected natural areas of local importance and with the area of these territories not less than 8,3% of the country territory;
- restore not less than 15% of the degraded or transformed ecosystems, including the restoration of disturbed ecosystems of inundated meadows and wetlands by means of efficient use of bushes and reeds;
- create a genetic resources database and provide conditions for regulated access to these resources;

- preserve populations of rare and endangered species of wildlife, taking under protection their main biotopes (open fen soils – 30000 hectares (ha), inundated meadow lands – 40000, high and transition bogs – 160000 hectares);
- pay due regard to the natural areas regimesubject to special and additional protection in development and implementation of concepts, forecasts, programs, action plans, sectorial development schemes, the realization of which is associated with use of natural resources and (or) may have impact on the environment, projects and schemes for land management (land utilization), urban development projects, sectorial schemes of the production location and growth, objects of transport and engineering infrastructure, land amelioration projects, development plans for mining activity, projects for mining allotment boundary marking,projects of water conservation areas and riparian water objects, the Republican Integrated Scheme for fishing area allocation, forest management projects, projects on hunting management and recreational area planning.

The major benchmark is the ratio increase in the size of specially protected natural areas up to 8,3% in 2020 (7,8%in 2014).

For the period following 2020 (in the long-term perspective):

- ensuring the formation and functioning of the ecosystem services market;
- functioning of the National Ecological Network;
- system optimization of specially protected natural areas and keeping the size of these territories up to the level of 8,3% of the country territory;
- development of a mechanism for transfer under protection of land and (or) water objects' users of rare and typical natural landscapes and biotopes, natural habitats of rare and endangered wildlife species;
- ensuring safety in genetic engineering activity;
- development of a record-keeping system for biological and landscape diversity, using modern GIS-technologies (Geological Information System technologies);
- management of a mechanism for access to genetic resources and the fair and equitable sharing of benefits arising from their utilization;
- implementation of a set of measures to minimize negative impacts as a result of climate change on biological and landscape diversity;
- prevention of further decrease in the number of globally endangered wildlife species;
- restoration of viable populations of separate wildlife species included into the Red Book of the Republic of Belarus or previously inhabiting the territory of Belarus but then disappeared;
- inclusion of issues with regard to the conservation and sustainable use of biological and landscape diversity into land-use planning documents, including economic and other activity planning.

6.4. Effective Waste Management

The National policy***objectives***in the area of waste managementare aimed at the maximum reduction in waste generation volumes in all sectors of economy, prevention of their adverse effects on the environment and human health, the maximum waste drawing into economic circulation as recoverable resources.

The following challenges should be addressed in 2016 – 2020:

- reduce waste generation volumes;
- ensure the maximum waste drawing into civil circulation for productsmanufacture and energy generation;
- prevent waste adverse effects and their objects' placement, their neutralization and utilization on the environment and civic health.

In accomplishment of these objectives we should place greater focus on the following directions:

- mainstreaming of institutional transformations in the area of waste management, which stipulate the decreasinginvolvement of aState in economic activity on waste management, improvement of collaborative mechanisms for government authorities in coordination of activities with regard to waste management, cost-effective use of resources, secondary material resource treatment;
- ecological acculturation, raising the ecological educational level and public awareness with regard to cost-effective (economical) consumption of goods and responsible waste products and packaging handling;
- development of all-encompassing, up-to-date, accurate, consistent with the EAEU database that contains information on waste generation volumes (by types) and their management, the infrastructure state in this area, existing technological solutions towaste management / neutralization and other data;
- development and introduction of technological, organizational and administrative innovations to reduce volumes of production and consumption waste generation and the waste toxicity level, an increase ofrecoverable resources utilization capacity in industrial processes.

To reduce waste generation volumes the following is stipulated:

- elaboration of waste generation standards per unit produced in accordance with best available techniques criteria;
- organization and financial support of research and development activity to identify priority waste groups, the generation (reutilization) of which ensures the maximum contribution to the resource-saving policy and import substitution (import phase-out);
- integration of waste reduction aspects into operating nature protection mechanisms (ecological certification of products (services), integrated environmental permits, extended producer responsibility);
- phased (within a few years) bringing of the heavy-tonnage waste storage rate to values set for other wastes of the same hazard category (class);
- organizational technical and financial support in the industrial bank establishment and operation.

With a view of maximum waste drawing into economic circulation for the product and energy generation, the followingis outlined:

- use of graduated payment system by citizens with regard to the services for the municipal solid waste handling, taking into account not only the services rendered (waste transport, waste segregation, waste neutralization and burial, etc.) but also its actual volume;
- transition to the selection on a competitive basis of operators to render services in municipal solid waste collection, transport and utilization (disposal), separate categories of recoverable material resources and (or) product wastes;
- introduction of the instrument "tangible product certificate" that contains data on the amount of recoverable material resources used in its production;
- development of technologies for the reduction and extraction of rare and precious metals from electrical and electronic equipment and devices, means of transport, mining and chemical production waste and other wastes;
- expansion of processing depth for all waste categories to receive recoverable material resources suitable for use as secondary raw materials and energy use;
- organization of a dialogue (by holding round tables and seminars) among manufactures and waste processers, carrying out of measures for the State support in implementation of industrial symbiosis projects;
- phased imposing of ban on the waste burialnot having gone through segregation, mechanical and chemical processing, as well as separate waste categories (packaging waste, bio-degradable waste, etc.);
- introduction of complex facilities that use the organic fraction of municipal solid waste (OFMSW), agricultural objects' waste, biomass for the biogas / biofuel generation to satisfy thermal and electrical energy needs of small towns and settlements;
- landfill gas extraction at communal waste burial facilities based on ecological expediency.

To prevent adverse effects of wastes and their allocation objects on the environment, the following is required:

- toughening of regulation with regard to mercury-containing waste management in accordance with the Republic of Belarus obligations under the Minamata Convention on Mercury;
- phasing-out of facilities that containpolychlorinated biphenyls;
- strengthening of control with regard to medical (wastes of Infectious Diseases Divisions and Surgical Units) and hazardous medical (cytostatic drugs) waste management;
- creation of regional grounds targeted at rendering services to the population of several regions and including infrastructure for the biodegradable waste composting, industrial mixed waste segregation from municipal solid waste composition;
- optimization of a network for municipal solid waste disposal (burial) facilities by taking out of service of municipal solid waste mini-grounds and grounds that do not meet the requirements for normative technical acts, determining design and operation regulations;
- strengthening control over the exploitation of industrial and municipal solid waste storage and disposal (burial) facilities, implementation of technical decisions on their negative environmental effects mitigation;

- phased liquidation of unusable pesticides burials;
- environmentally safe neutralization of pesticides, polychlorinated biphenyls, including materials and facilities, containing them, as well as other hazardous wastes.

In the long-term, the National policy in the area of waste management should be focused on the following issues:

- formation of responsible and resource-saving product consumption byeconomic agents (households, state institutions, legal entities) characterized by rejection to use expendable products, sustainable use of durable products, return of products and their by-products by organizations that specialize in their maintenance (repair) and (or) recycling, buying (selling);
- improvement of a technological manufacturing process and ecological design of the produced products to increase useful product lifespan (its lifecycle), reduction of costs for secondary components and materials separation, an increase in gravity of their repeated usage volumes;
- ensuring of safe and qualitative industrial waste management and product consumption based on cooperation of producers and processers, trade organizations and procurement organizations in framework of implementation of the extended producer and importer responsibility principle.

In 2021-2030implementation of the following measures is envisaged:

- financing of experimental, development, project, scientific research works on the elaboration of non-waste (nano- and bio-) technologies for receiving of new safe materials and their processing techniques (3D printing technologies);
- stimulation of production and consumption of non-expendable and long-life products by holding information campaigns, introduction of deposit compensatory schemes, implementation of additional measures for financial economic incentives;
- State support for the introduction of new business models(product and service systems), collaborative and shared use of material benefits by providing of counselling assistance, simplification of administrative procedures, implementation of pilot projects, project awareness-raising.