



**C4** Climate  
Change  
Coordination  
Centre  
**Kazakhstan**

**SURVEY:**  
**Issues of Environmental Protection**  
**in the Republic of Kazakhstan.**  
**Environmental Situations.**  
**Problems and Solution.**



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# INTRODUCTION

The present work is prepared in compliance with Memorandum of Agreement between Climate Change Coordination Centre, Kazakhstan and Overseas Environmental Cooperation Center, Japan.

Issues of Organization of the Ministry of Environmental Protection, finance of environmental activity are considered, environmental legislation is reviewed, interaction of territorial bodies on environmental protection with other local authority bodies (akimats), environmental situation of Kazakhstan, priority problems in environmental protection sphere, environmental development strategy of Kazakhstan and international cooperation issues in the work.

The Republic of Kazakhstan is included in the of environmental protection process as on an international and national level.

Kazakhstan ratified 19 international Conventions and Protocols and takes part in multilateral regional agreements on Central Asia level and in bilateral intergovernmental agreements.

As shown from researches in Kazakhstan for environmental protection objectives Kazakhstan provides more and more recourses and finance. If in 2003 form 2 mlrd tenge and in 2005 5,5 mlrd tenge were provided from Republican.

However, experience shows that these recourses are not sufficient. Nowadays, when Kazakhstan is formed economically and structurally as sustainable state with stable market economy and environmental protection finance, it does not obtain finance on permanent principle and from 2006 will obtain funds in whole necessary extent.

Important environmental problems for Kazakhstan are water quality deterioration, air pollution in cities and industrial centers, oil and industrial pollution, accompanying gas utilization in fields, biodiversity preservation and including uncommon and endemic animals, deforestation, enhance of national preserves potential, transboundary pollution transport, quality and joint use of transboundary waterway, ozone layer protection issues, global climate change problems, reduction of greenhouse gas emissions. Also historical pollution problems, which became not only national, but also regional problems – Aral sea shrinkage, Baikonur, Semipalatinsk nuclear ground and other military grounds.

Environmental threats have important significant for Kazakhstan and the most right for us is progressive technology assumption and environmental policy, adopted in other countries. The importance tasks are reformation and being legislation improvement, foundation of environmental thought, and introduction of environmental education among citizens of Republic. Kazakhstan has a great potential for environmental projects development, it has desire and possibility to implement all of them including jointly with the Government of Japan and companies.

# **1. GOVERNMENTAL ORGANIZATION**

## **1.1. Organization of the Parliament**

### **Parliament of the Republic of Kazakhstan**

Constitution of the Republic of Kazakhstan of 1995 defines Parliament as higher state organ, which performs the legislative functions. People can express their political will not only directly but also through the Parliament.

The Parliament confirms republican budget and government report and Counting Committee on republican budget implementation control, makes alterations and additions in budget. The parliament can approve or decline the government program and express vote of censure to the government.

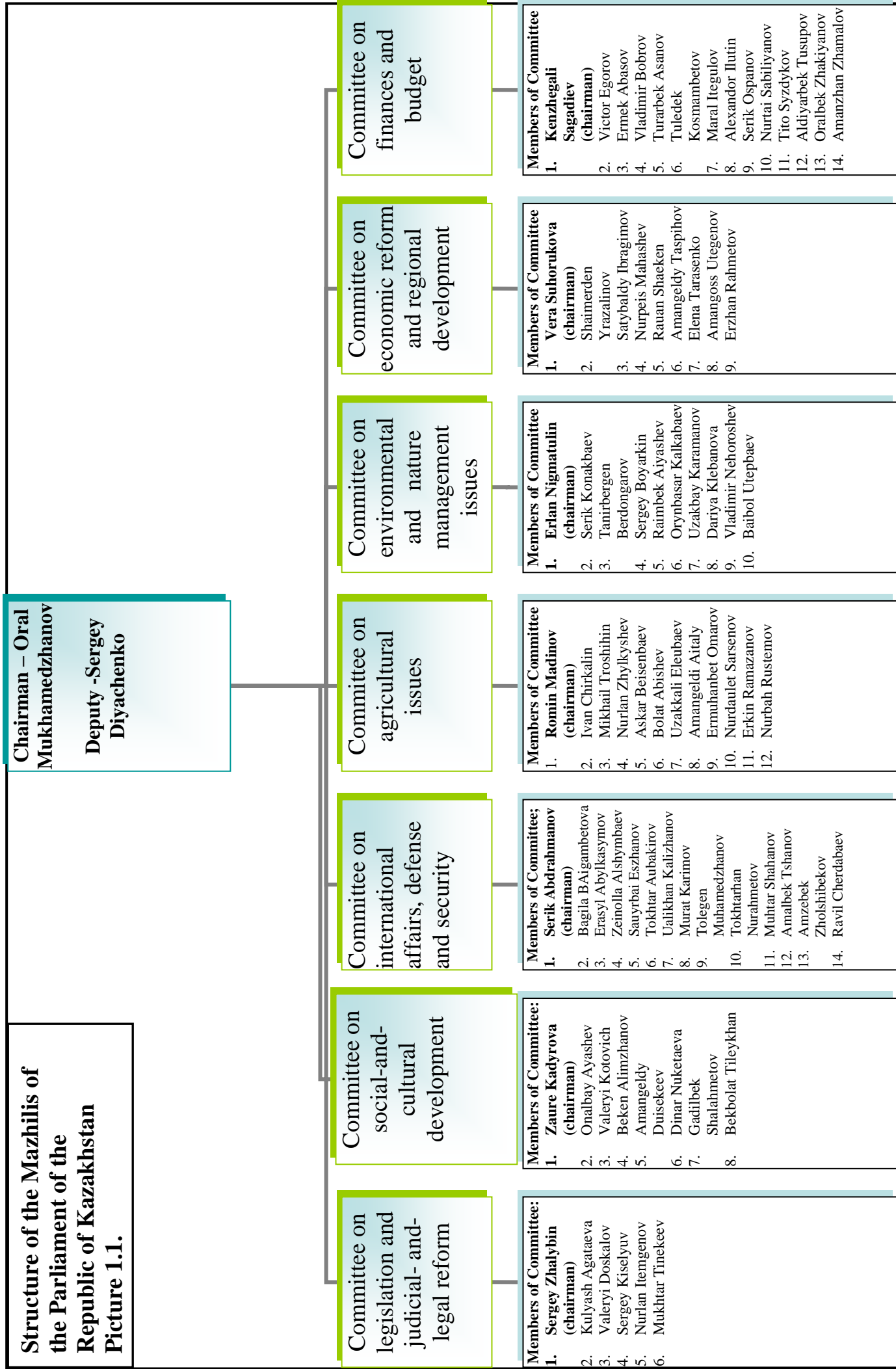
The Parliament of the Republic of Kazakhstan fulfills its job in sessional order. Session of the Parliament consists of joint and separate sittings of chamber, chamber office, permanent committees and joint commissions of the chambers.

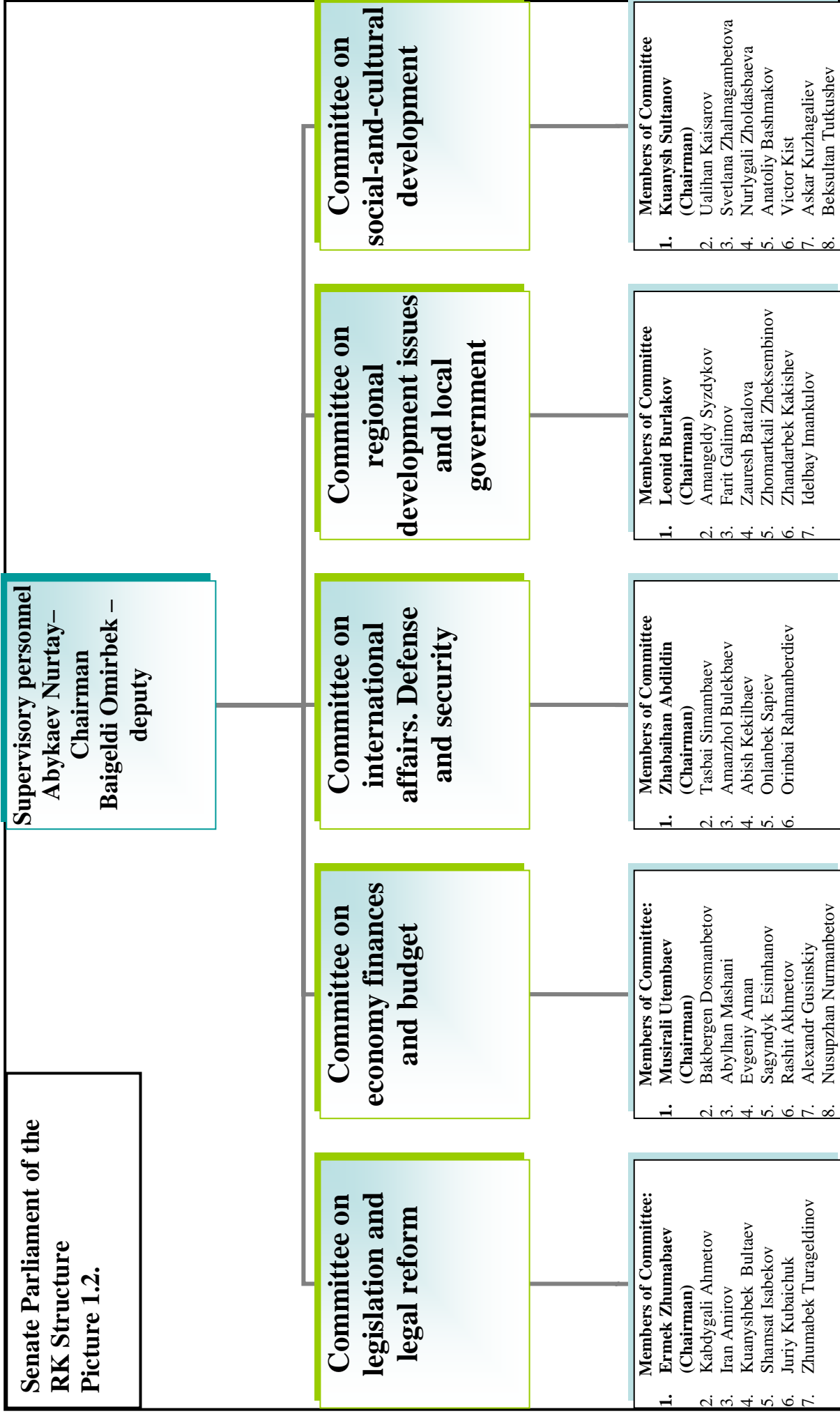
Periodical sessions are held one time a year, beginning from the first working day of September and till the last workday of June. Parliament session opens and closes on the joint sittings of Senate and Mazhilis. Parliament session is opened by the President of the Republic, and in case of his absence by the Mazhilis Chairman.

The parliament of the Republic of Kazakhstan consists of two chambers of Upper (Senate) and Lower (Mazhilis)

38 deputies are in the session in the Senate of the Parliament by 5 committees, which are showed in picture 1.1

76 deputies are in the session in the mazhilis of the Parliament by 7 committees, which are showed in picture 1.2.





## **1.2. Organization of the Government**

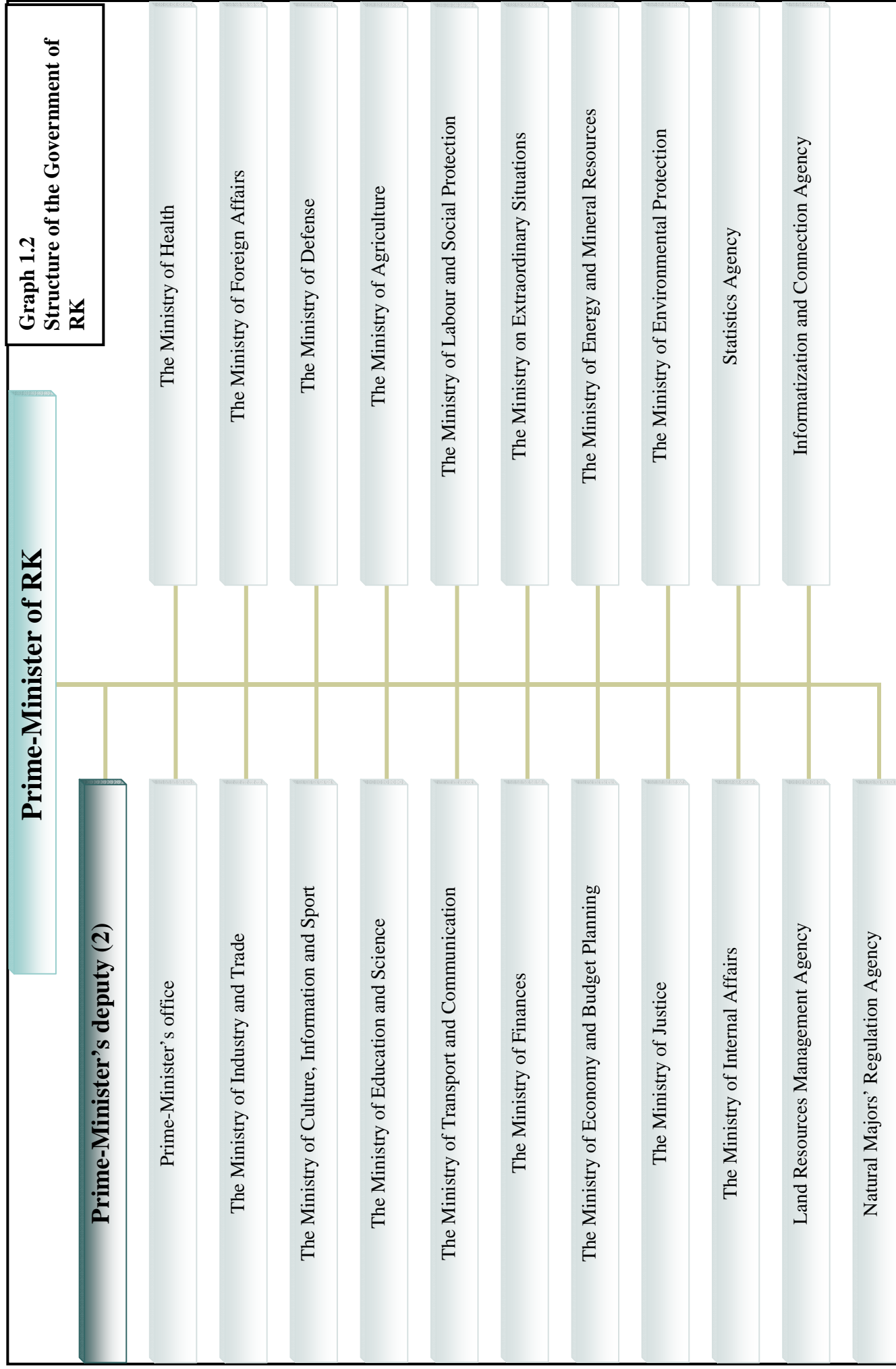
Government of the Republic of Kazakhstan realizes executive power of the Republic of Kazakhstan, heads system of executive powers and leads their activity.

Activity of the government is regulations by the Constitution of the Republic of Kazakhstan, the Constitutional law of the Republic of Kazakhstan "On the government of the Republic of Kazakhstan", other normative legal acts of the Republic of Kazakhstan and the present Order.

Government of the Republic of Kazakhstan is lead by the Prime-Minister, who has 2 deputies.

Informational-and-legal, documentation and other providing activities of the Prime-Minister of the Republic of Kazakhstan and government are fulfilled by the Prime-Minister Office of the Republic of Kazakhstan.

Structure of the government includes Ministry and Departments indicated in graph 1.2.:





## **2. THE MINISTRY OF ENVIRONMENTAL PROTECTION**

### **2.1. The Laws for establishment of the Ministry**

The Ministry of Environmental Protection of the Republic of Kazakhstan (MEP of RK) is the central authority power, which realizes inter-branch coordination on development and realization of state policy issues in environmental protection area and nature management as well.

Basic task of Ministry is improvement of environment quality and achievement of favorable level of environmentally society sustainable development.

Ministry carries out its activity in compliance with Constitution and laws of the Republic of Kazakhstan, deed of the President, government of the Republic of Kazakhstan, other normative and legal documents, also the present Regulation.

In 50-60 years separate conservancy services had existed, consisting of ministries and departments:

The Ministry of forestry – conservancy services

The Ministry of agriculture- conservancy services

The Ministry of health protection - conservancy services

The Ministry of water industry - conservancy services

State engineering supervision - conservancy services

In 1988 State Committee on environmental protection had been founded, which belonged to conservancy services of the following ministries and departments:

The Ministry of forestry - conservancy services

The Ministry of agriculture - conservancy services

The Ministry of fish industry - conservancy services

State factory-farm

The Ministry of geology

Kazhydromet

Lately of 10 years there were following changes:

State Committee had been founded on environmental protection then it was reformed to the Ministry of ecology and bioresource. Then the Ministry of ecology and natural resources had

been founded and lately the Ministry of natural resources and environmental protection and since 2002 Ministry of environmental protection has been functioning.

Now Ministry of environmental protection is functioning on the basis of N 1113 Resolution of the government of the Republic of Kazakhstan from October 28, 2004 «Issues of the Ministry of environmental protection of the Republic of Kazakhstan»

### **Text of the Resolution:**

«Issues of the Ministry of environmental protection of the Republic of Kazakhstan»

N 1113 the Resolution of the Government of the Republic of Kazakhstan from October 28, 2004

The Resolution acts collection of the government (RACG) of the Republic of Kazakhstan, 2004, N 40, Article 524

With a view of the Degree of the President of the Republic of Kazakhstan from September 29, 2004 N 1449 "On measures on further state management system perfection of the Republic of Kazakhstan" Government of the Republic of Kazakhstan is decreeing:

#### **1. To confirm attachments:**

- 1) The Regulations of the Ministry of environmental protection of the Republic of Kazakhstan;
- 2) List of organizations, being under the jurisdiction of the Ministry of environmental protection of the Republic of Kazakhstan;
- 3) List of public institutions – territorial bodies of the Ministry of environmental protection of the Republic of Kazakhstan.

#### **2. To found Committee on environmental control of the Ministry of environmental protection of the Republic of Kazakhstan.**

#### **3. To permit Minister of environmental protection to have three vice-ministers, including one first vice-minister.**

#### **4. To the Ministry of energy and mineral resources of the Republic of Kazakhstan in accordance with the established procedure of legislation to provide a transfer all necessary appropriate material and technical means to the Ministry of environmental protection of the Republic of Kazakhstan to the day of realizable the Decree signature.**

#### **5. To the Ministry of environmental protection of the Republic of Kazakhstan to take actions, following present resolution.**

#### **6. To declare stale followings:**

- 1) The Resolution of the Government of the Republic of Kazakhstan from November 6, 2002 N 1173 "Issues of the Ministry of environmental protection of the Republic of Kazakhstan "(RACG Republic of Kazakhstan, 2002, N 39, article 398).
- 2) Subparagraph of article 3) The Resolution of the Government of the Republic of Kazakhstan from December 5, 2003 N 1240 "On reorganization of state branch establishment "Kazakh scientific and research institute of environmental and climate

monitoring " Republican public enterprise "Kazhydromet" Ministry of environmental protection of the Republic of Kazakhstan " (RACGof the RK, 2003, N 46, article 509).

7. The present resolution entries into force from day of signature.

## **Prime-Minister of RK**

## **2.2. Organizational chart**

The Ministry of environmental protection had been founded by the President of RK Decree with number 1449 from September 29, 2004 «On measures on further state management perfect system of RK».

Position of the Ministry of environmental protection of RK had been confirmed from October 28, 2004 No. 1113 «The Ministry of environmental protection of RK issues»

There are about 150 specialists in Central personnel of the ministry in 5 subdivisions.

Structure of the Ministry of environmental protection includes the following:

1. **Department of strategic planning and analysis**
2. **Department of ecologic expertise and nature management regulation**
3. **Department of normative-and-legal providing and international co-operation**
4. **Department of financial-and-organizational jobs**
5. **Committee on environmental protection control of the Ministry of environmental protection of RK**

Also several republican state enterprises (RSE):

6. **RSE «Informational and analytical centre»**
7. **RSE «Kazaviamet»**
8. **RSE «Kazhydromet»**
9. **RSE "Kazakh scientific and research institute of ecology and climate"**
10. **Regional (municipal) territorial management of environmental protection**

Each organization department of the ministry has its regulations, confirmed by the Order of the Ministry of environmental protection.

Structure of MEP is showed in diagram 2.2. and 2.3.

**Structure had been confirmed by the Order of the MEP of RK from December « 10 », 2004 No. 323**

**Leadership:**

Minister

Samakova Aitkul Baigazievna

First Vice-Minister

Kesikbaev Sultangali Kabdenovich

Vice-Minister

Uandykov Erik Kusmanovich

Vice-Minister

Bekzhanov Zhambul Lesbekovich

Leader of personnel

Kolesov Peter Petrovich,

Advisor

Kulmanova Nailya Kadyrovna

Advisor

Zharkenov Maidan Iskendyyrovich

Assistant

Kasymbekov Ulan Zholaushyuly

Assistant on regime

Sakabaev Kuanish Kokeevich

**Ministry of Environmental Protection:**

**DEPARTMENT OF STRATEGIC PLANNING AND ANALYSIS**

Director of the department

Bekniyazov Bolat Kabykenovich

tel. (3172) 59-19-74, e-mail: b\_bekniyazov@nature.kz

Deputy of the department

Abdykarimova Saltanat Zhaksylykovna

tel. (3172) 59-19-61, e-mail: s\_abdikarimova@nature.kz

***Ecological assessment and planning division***

Strategic planning subdivision

Ecological and economy assessment subdivision

Summary and analytical subdivision

## ***Ecological monitoring and scientific and informational providing division***

Head of the division

Bazarbaev Sapar Kanatbaevich tel. (3172) 59-19-52,  
e-mail: s\_bazarbaev@nature.kz

Ecological monitoring subdivision

Scientific accompany and informational subdivision

## **DEPARTMENT OF ECOLOGICAL EXPERTISE AND REGULATION OF NATURE USE**

Director of the Department

Urmanova Indira Bektimirovna

tel. (3172) 59-19-63

Deputy of the director

Kospanov Abai Sambetovich

tel. (3172) 59-19-66, e-mail: a\_kospanov@nature.kz

### ***Ecological expertise Division***

Head of the division

Mongarova Evgeniya Mihailovna

tel. (3172) 59-19-32 , e-mail: monogarova@nature.kz

Manufacturing projects expertise subdivision

Strategic ecological assessment subdivision

Ecological and expert activity coordination subdivision

## ***Nature management regulation division***

Head of the division

Bekeev Adletbek Tolendievich

Ecological audit and licensing subdivision

## **DEPARTMENT OF NORMATIVE AND LEGAL PROVIDING AND INTERNATIONAL CO-OPERATION**

Director of the Department

Bragin Alexadr Gennadievich

tel./fax (3172) 59-19-39, e-mail: a\_bragin@nature.kz

Deputy of the director

Ibraeva Elvira Baltabekovna

tel. (3172) 59-19-59, e-mail: ibraeva@nature.kz

### ***Normative-and-legal providing division***

Legal providing subdivision

Normative-and-methodical subdivision

### ***International co-operation division***

Division head's deputy

Aitkenov Ernur Mysyrovich

International agreements realization subdivision  
International projects subdivision

## **DEPARTMENT OF ORGANIZATIONAL-AND-FINANCIAL ACTIVITY**

Director of the department  
Seitov Galymzhan Karakanovich  
tel. (3172) 59-19-54 e-mail: [g\\_seitov@nature.kz](mailto:g_seitov@nature.kz)  
Director's deputy

Sheriyazdanova Zhanar Yarhanovna  
tel. (3172) 59-19-76, e-mail: [shery@nature.kz](mailto:shery@nature.kz)

Budget planning and work with public enterprises subdivision  
Public custom and internal control subdivision  
Accounting subdivision

### ***Organizational-and-personnel division***

Personnel department and application of official language subdivision  
Documentation providing subdivision

## **COMMITTEE OF ENVIRONMENTAL CONTROL OF THE MINISTRY OF ENVIRONMENTAL PROTECTION OF RK**

Chairman  
Suleimenov Nessipolla Zeinulovich  
Chairman's deputy

Eleushov Bek-Bulat Saduahasovich

### ***Division of efficient inspection response***

Head of the division

Abishev Beibut Alimbaevich  
tel. (3172) 59-19-51

Ambient air protection control and radiation situation subdivision

Interior protection, surface and groundwater control subdivision

Biological and land resources protection, waste and consumption residue control subdivision

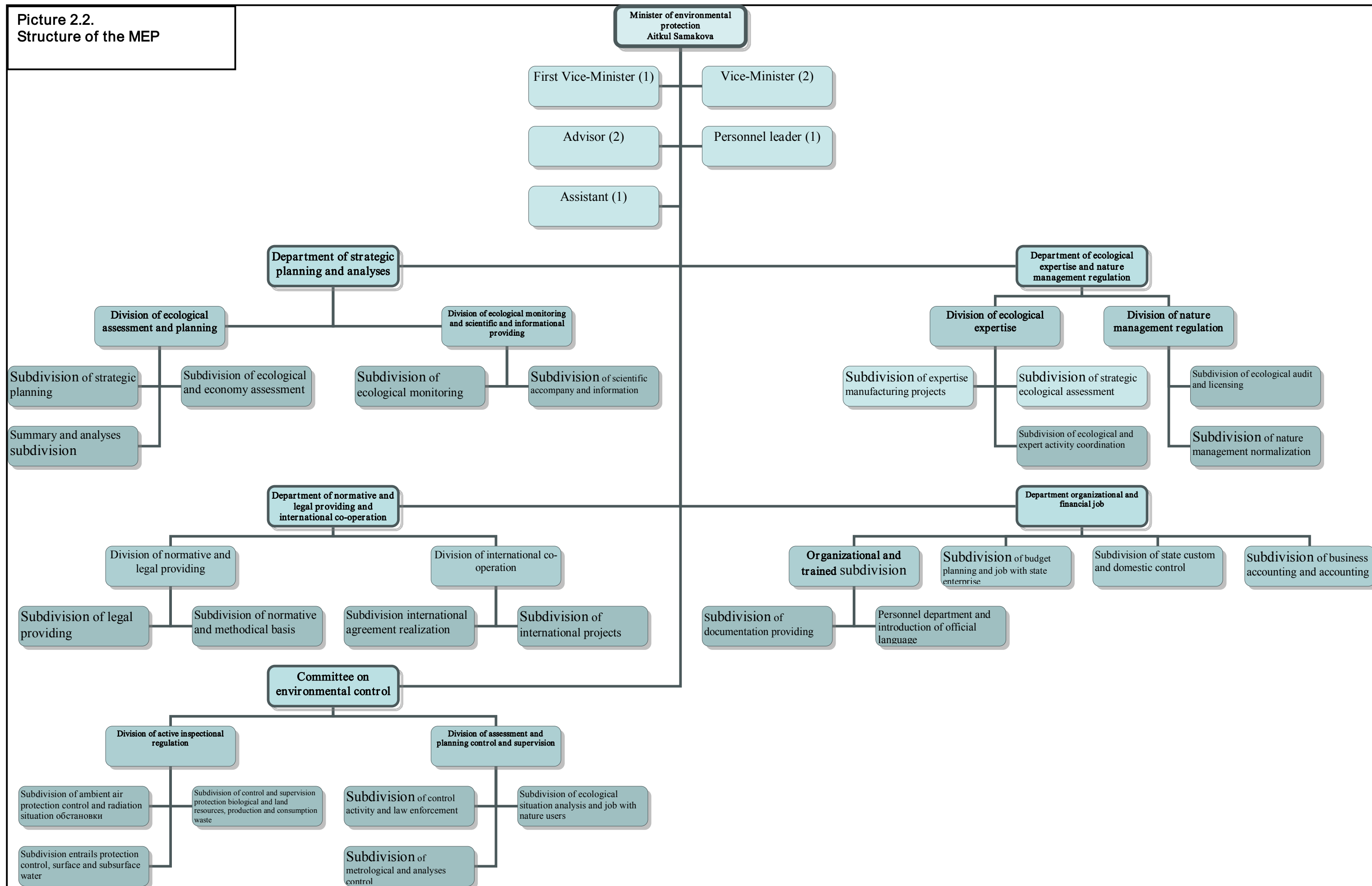
### ***Control-and-supervision assessment and planning activity division***

Head of the division

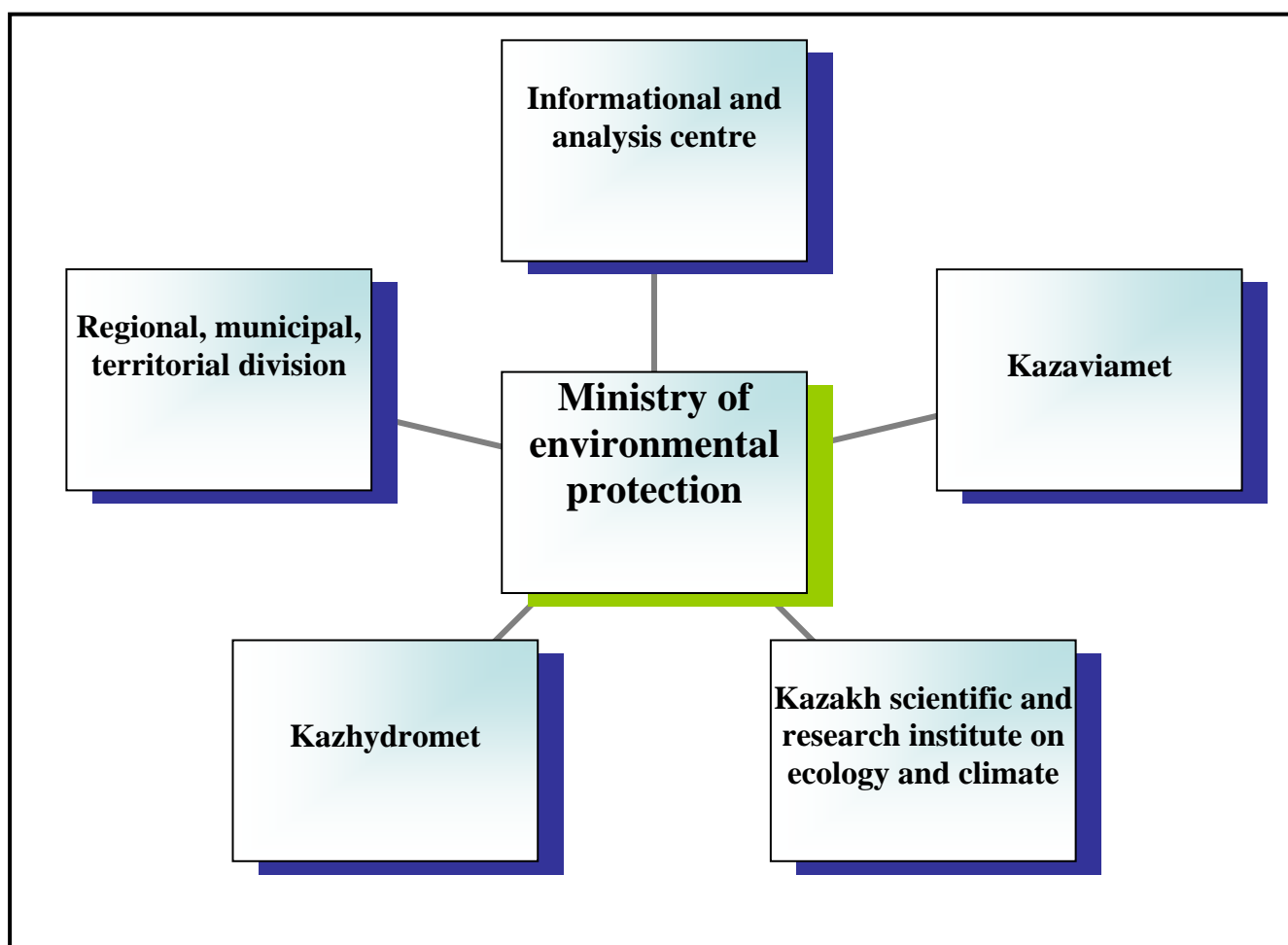
Zhamalova Vera Zhaksanovna

Planning control activity and law enforcement subdivision  
Environmental situation and work with nature users analysis subdivision  
Metrological-and-analytical control subdivision

**Picture 2.2.**  
**Structure of the MEP**



**Republican state enterprises and Territorial divisions of MEP under the MEP's supervision. Picture 2.3.**



## **2.3. Functions and duties of the departments of Ministry**

### **2.3.1. Basic tasks and functions of the Department of strategic planning and analysis**

**Basic tasks of the departments are the following:**

1. elaboration of priorities and state policy strategy development in environmental protection sphere and sustainable development;
2. state management perfect system in environmental protection sphere in compliance with principles of sustainable development;
3. strategic ecological planning, concordance and construction of ecological assessment of republican, branch and regional plans and programs in environmental protection sphere and its' coordination;
4. economical mechanisms perfect in environmental protection sphere and nature management, nature-conservatives measures implementation control and determination its' economical effectiveness;
5. foundation of Uniform system monitoring of environmental protection and nature resources and prediction of influence on environment;
6. realizing of environmental protection monitoring control and prediction of influence on it, methodical leadership on hydro meteorological and aviameteorological services



- activities on issues, including in Department's competence in compliance with the present Regulations;
7. providing of informational and analysis job issues in environmental protection sphere, including in Department's competence;
  8. creation and uniform information system control in environmental protection sphere;
  9. systematization and definition priority directions of scientific researchers of ecology, scientific achievements consolidation and front experience;
  10. basic directions system elaboration continuous environmental education, methodical assistance in preparation of specialists and scientific personnel ;
  11. work with community, state and nongovernmental organizations in environment improvement sphere, organization of holding of propaganda environmentally favorable development.

**In accordance with the basic tasks department carries out the following functions:**

1. forming and realization program documents development (conceptions, strategies, plans development and others) and plans on its' realization, other action plans of the Government of RK on environmental protection issues and its implementation control;
2. analysis and development of suggestion on definition priorities and primary directions of public policy in environment and sustainable development sphere;
3. realizing of instruction on Uniform informational monitoring and prediction influence on environment system;
4. participation in preparation of public and branch programs on issues, fixed by Department;
5. realizing of suggestions development for including in strategic and indicate plans, public, branch programs and action plans of Government, controls its implementation;
6. realizing assessment and co-ordinate projects of public, branch and regional programs and plans;
7. participation in preparation suggestions on perfection of legislation in environment sphere;
8. development of suggestions on economic mechanisms nature management perfection;
9. carrying out elaboration of social and economic development of ecological indicators;
10. carrying out analysis on outgoing for environmental pollution, realizing of basic rates concordance for environmental pollution;
11. organization and control work within the jurisdiction of Ministry republic and public enterprises «Kazhydromet» and «Kazaviamet», «Informational and analysis Centre on environment»;
12. monitoring and analysis hydro meteorological situation organization;
13. analysis of monitoring results of environment and carrying out assessment of environmental situation, tends and its changes;
14. elaboration of normative and methodical documentations, programs in environment sphere, nature resources, standard rules of organization manufacturing monitoring as well;
15. participation in elaboration of budget programs on Department's issues;
16. work coordination on creation of Uniform informational environment system;
17. carrying out analysis informational data and on its basis it prepares national report on environment and sustainable development;
18. elaboration of programs scientific researches in environmental sphere;
19. realizing of preparation summary and analytical inquires to the Government of the RK and other public bodies on environmental activity issues;
20. organization informational and propaganda activity among population, meetings of Ministry's leadership with community;
21. realizing interaction with public and other organizations in environmental sphere;

22. realizing of administrative budget programs, fixed by Department;
23. conducting of analysis and data systematization on scientific achievements, leading experience, and innovations in environmental sphere;
24. organization and coordination work of scientific and technical Council of Ministers;
25. participation in international co-operation, realizing preparation and realization of international agreements, conventions and agreements within the their competition ;
26. carrying out of suggestions and coordination organization activity of department Ministry on realization of basic directions public policy in environmental sphere and sustainable development.

### **2.3.2. Primary functions and duties of the department of Ecological Expertise and nature management Adjustments**

Department activity's aim is implementation of public ecological expertise, environmental design license and regulation, environmentally dangerous types of economical activity and environmental auditing activity and licensure on special nature management.

Present directions department's activity is allowed to take preventive actions on prevention of unfavorable environmental situations, carrying out maintenance requirements of legislation control in environmental sphere at assumption of legislation, normative and technical statements, normative and legal statements, programs, agreements, contracts, projects of planned economical activity at the stage of its realization decisions on previous.

Primary tasks of department are:

- 1) organization and conducting public environmental expertise in compliance with requirements of active legislation of RK;
- 2) organization, perfection, carrying out and coordination of environmental audit and licensed activity and in environmental sphere;
- 3) organization, coordination, regulation and carrying out permissive activity on nature management.

Department carries out the following functions:

- 1) providing organization and conducting public environmental expertise and carrying out coordination of ecological and expert activity;
- 2) interaction with ecological and expert bodies of other states and international organizations for the purpose of conducting consultations, organization of joint expertise, interchange experience, scientific and methodical elaboration, involving of foreign specialists and organizations to the work in environmental expertise and assessment influence on environment;
- 3) assertion personal staff of on conducting public environmental expertise preplanned, pre project and project documentation, involving for the part-time servants activity in it;
- 4) organization directive and methodical documentation development on conducting of assessment influence on environment and environmental expertise, including its conducting order;
- 5) coordination scientific researches on assessment influence problems on environment in environmental expertise sphere;
- 6) perfection and coordination of ecological and expert activity and carrying out methodical instruction on conducting of environmental expertise issues;
- 7) adjustment ecological normative and requirements to the economic and other activity;
- 8) granting a license in environmental sphere and adjustment decisions on granting a license on goods export and import and other types of activity;

- 9) participation in forming of legal license mechanism, preparation suggestions to taking legislative documents and normative documents on license issues in environmental sphere;
- 10) perfection mechanism of ecological auditing activity;
- 11) carrying out granting, stock-taking and annulment of licenses to nature management;
- 12) carrying out development of limits and quota on environmental pollution;
- 13) presentation interests of RK in international organizations, participation in preparation and project realization of international treaties and agreements within its competence;
- 14) participation within its competence in planning of arrangements on environment and nature resources, development program documents (conceptions, strategies, programs and plan for development);
- 15) participation in coordination of economic mechanism of nature management within its competence;
- 16) participation in concordance monitoring programs of environment within its competence;
- 17) participation in preparation and development of normative documents, ecological requirements, measurement data and standards in environmental and nature management sphere within its competence;
- 18) participation in realization budget programs within its competence;
- 19) carrying out Ministry leadership's commissions, including on consideration of letters and statements on issues, incoming in department's competence and the rest of citizens;
- 20) interaction with public associations in environmental sphere within its competence;
- 21) carrying out control and coordination appropriate ministries services, departments and organizations in providing part of implementation of requirements environmental regulations and rules on development preplanned, pre project and project documentation, at granting a license and license concordance;
- 22) receiving information and other materials necessary for conducting of public environmental expertise from ministries, public committees and other central and local executing agency and bodies;
- 23) carrying out methodical leadership activity of regional, municipal, territorial management of environment on issues, including in department's competence, assessment outcomes its activity and submit suggestions on its improvement to the ministry's leadership;
- 24) carrying out other functions, laid on it by the legislation.

### **2.3.3. Primary functions and duties of the department normative and legal providing and international co-operation**

**The main tasks of the department are the following:**

- 1) realization legal reform in environmental sphere;
- 2) legislation perfection on providing of environmental safety;
- 3) providing conformity approving normative and legal document and other legal documents functioning legislation of RK;
- 4) international co-operation development;
- 5) providing preparation, summary and realization of international agreements of RK;
- 6) providing systematization and application of scientific and research-and-well-founded measurement data and standards of environmental safety.

### **In compliance with basic tasks of the Department implements the following functions:**

- 1) realizing draft works, participation in development of normative and legal documents projects of the Government of RK, Ministries and international agreements;
- 2) conducting of legal expertise law, other normative and legal documents and international agreements (consents, conventions, other, memorandum and others), coming for concordance from other public bodies-formers;
- 3) organization and conducting intra-departmental legal expertise on requirements conformity of normative and legal document project legislation, international agreements and consents, developing by organization department of the Ministry as well;
- 4) within its competence normative and legal cooperation at realizing of public custom issue of environmental expertise decision, license and permissions for nature management;
- 5) organization work check-up on legal training in territorial bodies of Ministry, assistance in practical work in this area;
- 6) calculation and keeping custody systematization of standard and legal acts with current technology use;
- 7) development of environmental norms and standards, environmental requirements to economic and other activity, providing of control on its application;
- 8) analysis and planning of international cooperation, participation in conference and meetings;
- 9) analysis of necessary participation of Kazakhstan in international conventions and other agreements, participation in its harmonization, unification and realization;
- 10) basing of nature-conservative measures of international significance and organization project development and its realization;
- 11) planning, organization and control of development standard and legal acts, relating to environmental protection issues and rational nature management, international cooperation;
- 12) coordination activity organization department of Ministry on international cooperation by appropriate measurements and documents;
- 13) organization of international conferences, meetings, symposium and workshops for the purpose of Kazakhstan's participation in international cooperation in environmental protection area;
- 14) coordination of organization activity on regional cooperation for Central Asia, other international programs and projects;
- 15) analysis and use of international donor organizations involving practice for preparation and financing of projects.

### **2.3.4. Primary functions and duties of the Department on organizational-and-financial work**

#### **Basic tasks of Department are the following:**

- 1) rational planning for the purpose of effective use of budget means;
- 2) providing authentic and well-founded data of accounting;
- 3) purposeful use of budget means control and observance of requirements of budget legislation;
- 4) organization personnel work of Central machinery and territorial bodies of Ministry in compliance with the Law of RK «On public service»;
- 5) inculcation of paper work in the Kazakh language in compliance with the Law of RK «On languages in RK»;
- 6) paper work system perfection and its implementation control.

**In accordance with established legislation procedure department implements the following functions:**

- 1) budget call forming of Ministry for predictable and planned period;
- 2) in accordance with established procedure confirmation of budget programs, financial plans;
- 3) staff scheduling of central machinery and territorial bodies of ministry;
- 4) planning of financial plans on liability and outgoings application of its changes;
- 5) providing of Central machinery finance, territorial bodies and departmental republican public enterprises of ministry;
- 6) implementation of development standard acts, regulating use of republican budget means order, appropriated for Ministry;
- 7) carrying out of audit and implementation of republican budget control in Central machinery, territorial bodies and departmental republican public enterprises of Ministry;
- 8) carrying out accounting conducting and submit accounting to authorized bodies;
- 9) coordination of organization department's activity of Ministry on implementation public custom on realization of budget programs;
- 10) carrying out of process public goods custom, works and services for providing of ministry's activity;
- 11) coordination and organization of work on information system of environmental protection creation;
- 12) carrying out of consideration and development work order of Ministry, standard and legal acts, regulating publican means budget use order, appropriated for ministry, paper work and documents circulation as well, personnel work and secrecy maintenance;
- 13) organization of Ministry's functions implementation departmental bodies of public management by public enterprises;
- 14) providing of conduct paper work and schedule time control of commissions on official documents;
- 15) carrying out of conduct paper work in official language in Ministry system control;
- 16) organization of personnel work in ministry system;
- 17) organization of economic service of Central machinery of Ministry;
- 18) organization of senior specialist activity, submitting to Minister, on public secret protection according to Instructions on regime secrecy providing, confirmed by the Resolution of the Government of RK from March 14, 2000 № 300-16 page.
- 19) realization of preparation standard and legal acts projects in accordance with established legislation procedure;
- 20) carrying out of governmental and directive documents.

### **2.3.5. Primary functions and duties of Department on organizational and financial work**

Committee on environmental control of the Ministry of environmental protection of RK is specially authorized public organ, carrying out public control and control-and-supervision functions in environmental area and nature recourses. Main task of Committee is creation of ecologically safe environment.

Decisions of Committee, decided within its competence, are obligatory for implementation by all public bodies, enterprises and organizations, officials and citizens.

## The main functions of Committee

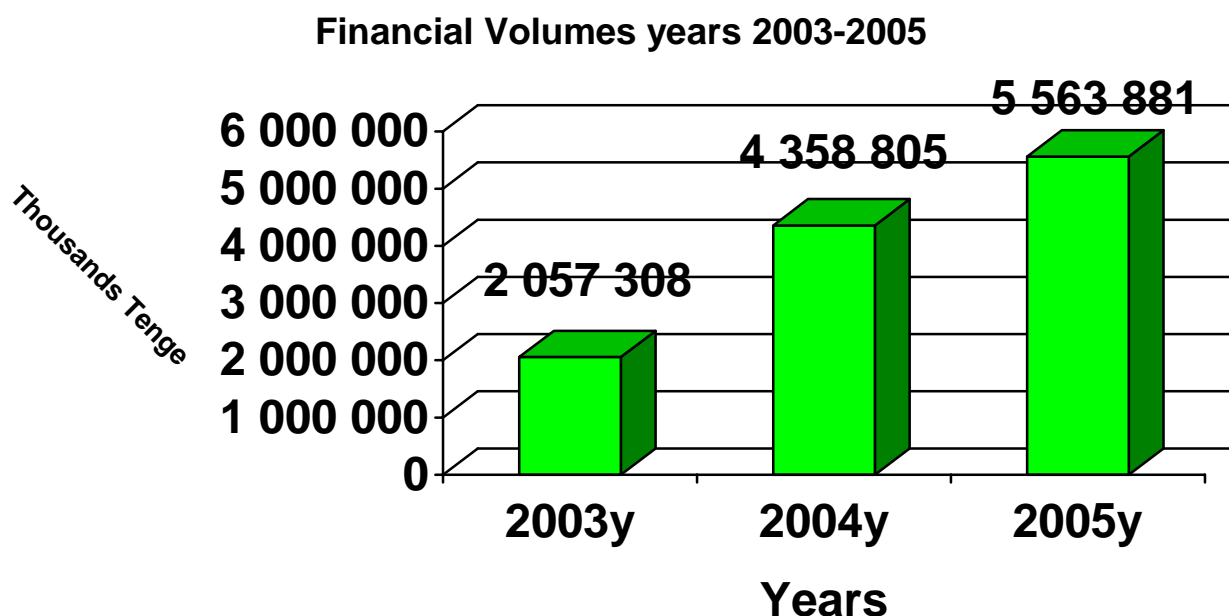
In accordance with established legislation procedure Committee implement functions in realization of public policy control sphere:

- 1) observance and implementation environmental protection legislation by public bodies, managing by subjects irrespective of property form; perfection system and effective methods of control and enforcement activity inculcation;
- 2) realization of public control in environmental protection and nature resources area:
  - i) observance of environmental requirements during conduct public cadastres and nature resources registration;
  - ii) carrying out environmental requirements on ambient air protection, emission norms from stationary and movable pollution sources, limits during action conduct on artificially atmosphere change;
  - iii) conduct established norms and rules on production, use, keeping, transport, utilization, sterilization and burial of plants protection means, chemical fertilizers and other chemical and biological substances, industrial, domestic and other waste as well;
  - iv) carrying out of production environmental programs by analytical services of enterprises and departments;
  - v) observance of environmental requirements in protection, reproduction and use area of animal and plant planet, keeping objects public natural-and-reserved fund;
  - vi) observance of environmental requirements to economic and other activity, influencing on land condition negatively;
  - vii) providing destroyed land reclamation, restoration its fertility and other useful land quality and timely involving it in economic revolution;
  - viii) taking down, keeping and use fruitful layer ground during conduct work, relating to land degradation ;
  - ix) providing environmental requirements during distribution and putting into operation of new and re constructible buildings, constructions and other installations;
  - x) putting into condition fit for further use of acres, releasing as excavation of recoverable reserves of minerals or other destroying process and works in compliance with end use;
  - xi) implementation of environmental requirements during use, keeping, transport, distribution production and consumption waste, transport toxic materials as well, including biological, dangerous waste and chemical means;
  - xii) conditions implementation, established by permissions on waste, harmful substances disposal and distribution production and consumption waste;
  - xiii) observance regime control area establishment, having waste stationary sources, harmful substances forming production and consumption waste;
  - xiv) observance limits (norms) and rules water consumption and drainage system, water use regime, order and conditions sewage disposal as well;
  - xv) observance environmental requirements on rational use and water protection from pollution, obstruction and exhaustion;
  - xvi) observance requirements established by legislation, rules and regulations on bosom protection, implementation contract conditions at all use of underground resources stages on environmental issues;
  - xvii) observance rules on liquidation and installation temporary closing-down of use bosom;
  - xviii) bosom use in compliance with environmental requirements and measurement data, guarding bosom from manifestation dangerous man-caused process during transportation, extraction, construction and exploitation buried structures, not concerned with extraction as well;
  - xix) observance project decisions on environmental protection issues during extraction and processing mineral;

- xx) prevention interior pollution during conduct operation on use of underground resources, especially during underground oil storing, gas, or other substances and materials, harmful substances burial and waste, waste discharge;
  - xxi) implementation project decisions on prevention installation pollution off environmental radioactive substances and conditions of action permissions;
  - xxii) observation technology orders of second working construction before emission radioactive nuclide disposal in environment;
  - xxiii) providing environmental requirements during warehousing and factory and domestic waste distribution with a view of prevention its accumulation in the place of columbine and groundwater deposition;
- 3) functions providing public policy realization:
- i) coordination Central and local authority bodies activity, implementing functions of public control on environmental issues;
  - ii) interaction with public associations on observance of legislation in environmental protection area;
  - iii) providing outcomes assessment of control-and-supervision and law enforcement activity;
  - iv) realization of analytical laboratory works in environmental protection area.

## 2.4. Budget in the past 3 years (2003, 2004, 2005 years)

Budget of ministry grows steadily, on diagram 2.4. Ministry's financing volume is shown.



**Basic articles of expenses were:**

### 2.4.1. Basic articles of expenses in 2003 were:

**General budget made up 2 067 308 thousand tenge (2 milliard 57 mln 308 thousand) in 2003**

1. "Increase qualification and personnel retraining" to 2003 year - 1, 353 thousand tenge (one mln three hundred and fifty three thousand tenge).

2. "Conduct of environmental monitoring and environmental protection" to 2003 year - 136.200 thousand tenge (one hundred and six mln two hundred tenge).
3. "Environmental research, standards development and norms in environmental protection area" to 2003 year - 40,000 thousand tenge (four mln tenge).
4. "Conduct of hydrometeorological monitoring" to 2003 year - 467, 145 thousand tenge (four hundred and sixty seven mln one hundred and forty five thousand tenge).
5. "Technical reequipment of hydrometeorological control service" to 2003 year - 43 000 thousand tenge (forty three mln tenge).
6. "Environmental situation monitoring territory of RK, exposed to rocket-and-cosmic activity influence" to 2003 year - 40, 000 thousand tenge (forty mln tenge).
7. "Rehabilitation project long-fallow land Shetskii area Karaganda region" to 2003 year - 12,320 thousand tenge (twelve mln three hundred and twenty thousand tenge).
8. "Forming of environmental post in special economic zone «Morport Aktau" to 2003 year – 40, 100 thousand tenge (forty mln thousand tenge).
9. "Material and technical providing of Ministry of environmental protection of RK" to 2003 year – 1, 210 thousand tenge (one mln two hundred and ten thousand tenge).
10. "Material and technical providing of environmental protection monitoring and people health centre of Kyzylorda city" to 2003 year - 4,300 thousand tenge (four mln three hundred thousand tenge).
11. "Station building of biological water treatment in Kyzylorda city" to 2003 year – 500, 000 thousand tenge (five hundred mln tenge).
12. "Purposeful transfer Pavlodar region to budget for continuous demercuration works in «Pavlodar chemical factory" to 2003 year - 242, 000 thousand tenge (two hundred and forty two mln tenge).
13. "Purposeful of investment transfer Eastern Kazakhstan region to budget for biological water treatment construction in Semipalatinsk city" to 2003 year – 500, 000 thousand tenge (five hundred mln tenge).
14. "Accompaniment information database "Public cadastres of nature resources" to 2003 year – 39, 680 thousand tenge (thirty nine mln six hundred and eighty mln tenge).

#### **2.4.2. Basic articles of expenses in 2004 were:**

##### **General budget made up 4 358 805 tenge in 2004**

1. "Providing activity of authority organ in environmental protection area" to 2004 year - Cost: 1042470 thousand tenge (one mlrd forty two mln four hundred and seventy thousand tenge).
2. "Conduct of public environmental expertise" to 2004 year - Cost: 10000 thousand tenge (ten mln tenge).



3. "Scientific research in environmental protection area" to 2004 year- Cost: 171175 thousand tenge (one hundred and seventy one mln one hundred and seventy five thousand tenge).
4. "Construction and reconstruction of environmental protection works" to 2004 year - Cost: 618000 thousand tenge (six hundred and eighteen mln tenge).
5. "Rehabilitation of environmental protection works" to 2004 year - Cost: 62196 thousand tenge (sixty two mln one hundred and ninety six thousand tenge).
6. "Conduct of hydrometeorological monitoring" to 2004 year - Cost: 1032627 thousand tenge (one mlrd thirty two mln six hundred and twenty seven thousand tenge).
7. "Forming and development of information system of environmental protection" to 2004 year – Cost: 41048 thousand tenge (forty one mln forty eight thousand tenge).
8. Holding environmental situation observations" to 2004 year - Cost: 522399 thousand tenge (five hundred and twenty two mln three hundred and ninety nine thousand tenge).
9. " Purposeful of investment transfer for regional budget, budget of Astana and Almaty city for environmental protection" to 2004 year - Cost: 858890 thousand tenge (eight hundred and fifty eight mln eight hundred and ninety thousand tenge).

#### **2.4.3. Basic articles of expenses in 2005**

##### **General budget: 5 563 881 tenge**

1. "Providing activity of authorized organ in environmental protection area" to 2005 year - Cost: 1606279 thousand tenge (one mlrd six hundred and six mln two hundred and seventy nine thousand tenge).
- 2 "Holding of public environmental expertise of strategic, transboundary and environmental dangerous constructions" to 2005 year - Cost: 10951 thousand tenge (ten mln nine hundred and fifty one thousand tenge).
3. "Scientific research in environmental protection area" to 2005 year - Cost: 250000 thousand tenge (two hundred and fifty thousand tenge).
- 4 "Construction and reconstruction works of environmental protection" to 2005 year - Cost: 676730 thousand tenge (six hundred and seventy six mln seven hundred and three thousand tenge).
- 5 "Rehabilitation of environmental protection works" to 2005 year - Cost: 164314 thousand tenge (one hundred and sixty four mln three hundred and fourteen thousand tenge).
- 6 "Holding of hydrometeorological monitoring" to 2005 year Cost: 1471271 thousand tenge (one mlrd four hundred and seventy one mln two hundred and seventy one thousand tenge).
- 7 "Forming and development of information system of environmental protection" to 2005 year - Cost: 41000 000 thousand tenge (forty one mln tenge).
- 8 "Holding of environmental situation control" to 2005 year - Cost: 489979 thousand tenge (four hundred and eighty nine mln nine hundred seventy nine thousand tenge).

9 "Purposeful transfer on development of regional budget, budget of Astana and Almaty city for construction and reconstruction works of environmental protection" to 2005 year - Cost: 853357 thousand tenge (eight hundred and fifty three mln three hundred and fifty seven thousand tenge).

### **3. LOCAL GOVERNMENTS**

#### **3.1. Functions of local governments and Responsibility in environmental protection issues**

In compliance with article 10 of the Law of RK «On environmental protection, the local executive bodies competence includes (Akimats):

realizing of the public control in environmental protection area and regulation nature management in its competence;

organization of development and realization of programs on environmental protection and nature management in appropriated territory, environmental expertise, construction and reconstruction works on environmental protection;

confirmation of amount of payment for environmental pollution, preparation of conclusions on construction and reconstruction enterprises and other work constructions prohibition, which have negative environmental expertise decisions, stopping economic and other activity in case environmental requirements and taking appropriate measurements;

decision making or making a suggestion to superior body on works protection of environment, which have special environmental, scientific and culture value, and on organization of especially guarded nature territory; realization of other authorities in compliance with law.

According to Resolution of Akims departments of nature recourses and nature management regulation have been formed in Akimats, which in its competence occupies environmental protection issues.

At present functions of the department of nature recourses and nature management regulation include preparation of conclusion of public environmental expertise, with the exception of 3 activities: (1) strategic works, (2) transboundary and (3) ecologically dangerous types of economic activity. Territorial subdivision on environmental protection occupies with 3 mentioned activities.

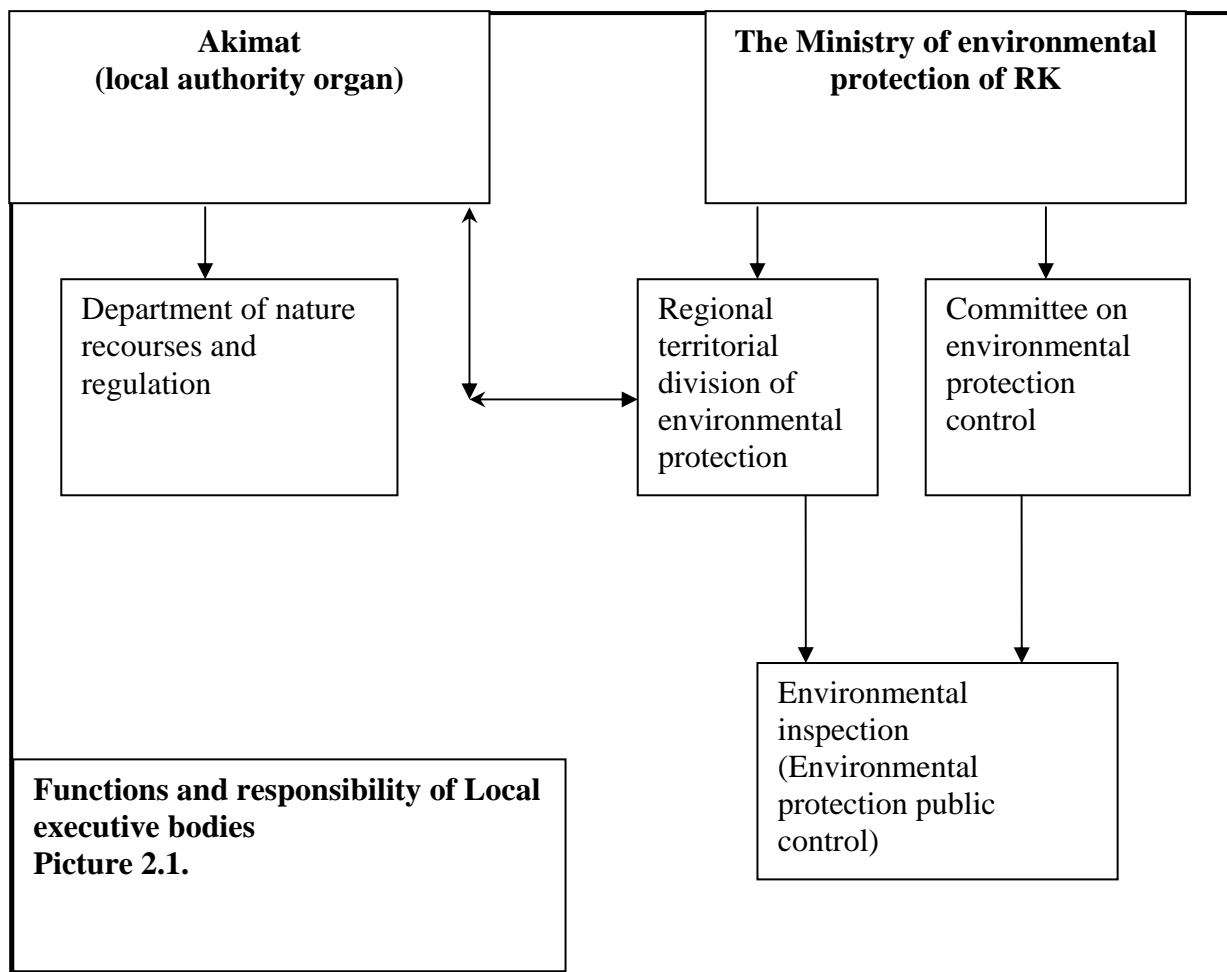
Functions of regional territorial division of environmental protection include public environmental protection control and Committee on environmental protection control, as central organ of MEP. Territorial administration of environmental protection consists of environmental inspection. Inspection implements public control and control-and-supervision functions in environmental protection and nature recourses area, interaction with other public bodies, carrying out control functions on environmental protection issues.

Main tasks of inspection are:

- 1) in its competence organization and realization public control in environmental protection and nature recourses area;

- 2) realizing observation and implementation of environmental protection legislation public control by public bodies, managing subjects, irrespective of property form;
- 3) perfection forms and methods of control and law enforcement activity

**Functions and responsibility of the Local executive bodies are shown in picture 2.1.**



### 3.2. Procedure for Inspection

Environmental inspection of region (capital, cities of the republican importance) (further - Inspection) is part of territorial administration of environmental protection and during implementation of functions are under the head of territorial administration of environmental protection and Committee on environmental control command in its competence.

Inspection's activity follows Constitution, legislative and other standard legal acts, orders, regulations of the Ministry of environmental protection and Committee on environmental control, present regulation as well.

Inspection implements public control and control-and-supervision functions of environmental protection and nature recourses, interaction with other public bodies, implementing control functions on environmental protection issues.

Decisions of officials of environmental inspection, taken within the limits of their authorities, obligatory for implementation by all juridical persons, officials and citizens irrespective of property form, can be appealed in subordination order.

Inspection is formed in compliance with structure and staff number of territorial organ, confirmed by ministry of environmental protection.

Basic tasks of inspection are:

Organization and realization of control in environmental protection and nature recourses in its competence;

Realization of observation and implementation of environmental legislation public control by public organ, managing by subjects, irrespective of property form;

Form and methods perfection of control and law enforcement activity.

## **4. ENVIRONMENTAL LAWS**

### **4.1. Analysis of Legislation of the Republic of Kazakhstan regulating issues on emissions of pollutants into the ambient air**

“Environmental Safety Concept of the Republic of Kazakhstan” was adopted by the Enactment of the President of the Republic of Kazakhstan on November 27, 2004. This document stipulates conceptual positions and long term plans of Kazakhstan for environmental safety issues. Climate change as the worldwide problem and as the potential threat for the environment is set up in this Concept.

As well the Concept supposes to hold thorough investigation of the Kyoto Protocol to the UN Convention on Climate Change (UNFCCC) with the follow up its ratification. Kazakhstan ratified the UNFCCC in 1995, issued the Initial National Communication in 1998 and signed the Kyoto Protocol in 1999. The status of Kazakhstan<sup>1</sup> related to these issues was identified on the seventh Conference of Parties in Marrakech. After ratification of the Kyoto Protocol the task in the Concept includes the development of a program of reducing GHG emissions in the Republic of Kazakhstan up to 2015 by detailed actions and projects. In other words, the program will contain a list of activities, documents to be adopted and actions addressed to implementation of commitments under the Kyoto Protocol.

At present regulative issues of emissions into atmosphere in the Republic of Kazakhstan are settled by the Law of the Republic of Kazakhstan “On Protection of the Ambient Air”.

It should be noted that the Law does not select greenhouse gases as the subject of regulation in the separate institution and does not take into account the features in regulation related to the provisions and mechanisms of the Kyoto Protocol.

This Law identifies fundamentals of the ambient air protection in the Republic of Kazakhstan.

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<sup>1</sup> In accordance with Article 4, paragraph 2 (g) Kazakhstan had notified the Depositary on the 23<sup>rd</sup> of March 2000 that it intends to be bound by Article 4, paragraph 2 (a) and (b) of the Convention. As a result of negotiations with countries of the 77 Group and China, in 2001, at the COP-7, in Morocco, a decision<sup>1</sup> on the status of the Republic of Kazakhstan has been taken in frames of the international negotiation process on global climate. The Conference further noted that the Depositary had informed the other signatories and Parties of that notification, and that, upon ratification of the Kyoto Protocol by Kazakhstan and its entry into force, Kazakhstan becomes a Party included in Annex I for the purposes of this Protocol in accordance with Article 1, paragraph 7 of the Protocol. The Conference of the Parties recognized that Kazakhstan will continue to be a Party not included in Annex I for purposes of the Convention due to <http://unfccc.int/resource/docs/2001/sbi/109.pdf>.

The Law sets the following basic terms of references of the Government:

- forming an economic incentive system and introducing a mechanism of emissions reduction contaminating the ambient air;
- establishing a levy procedure and approval of a payment rate for contamination of the ambient air;
- approving a procedure of licenses issue to emit hazardous substances (contaminants) into the ambient air and harmful physical impacts to the ambient air;
- determining a procedure of licenses issue to emit hazardous substances (contaminants) into the ambient air at operating of transport and other mobile vehicles;
- setting a procedure of organization and conducting the governmental control in the ambient air protection;
- determining a procedure of information supply and recording the governmental statistics in the field of the ambient air protection;

As well this Law sets the terms of references for the central executive body:

- organizing the state monitoring of the ambient air and providing its implementation;
- organizing an application of economic incentive mechanisms to reduce emissions of hazardous substances (contaminants) into the ambient air;
- establishing a procedure of development and approval of hygienic and ecological standards of the ambient air quality, the maximum permissible levels of physical impacts to the ambient air and other environmental standards aimed to protect the ambient air;
- establishing a procedure of the state record of sources emitting hazardous substances (contaminants) into the ambient air and harmful physical impacts to it;
- establishing a procedure of development and approval of specific standards of emissions as well as lists of objects (cadastres) in respect of which they are being developed;
- establishing a procedure to conduct an inventory of hazardous substances emissions into the ambient air, harmful physical impacts to the ambient air and their sources;
- determining a list of contaminants, a list of harmful physical impacts to the ambient air subject to the state registration and measurement, fixed on the basis of data under the outcomes of the inventory of hazardous substances emissions into the ambient air, harmful physical impacts to the ambient air and their sources.

In accordance with the abovementioned terms of references for the governmental bodies, by nowadays the following legal acts have been adopted:

Rules on agreement and approval of standards on maximum permissible emissions (MPE) and maximum permissible discharges (MPD) approved by the Order of the RK Ministry of Natural Recourses and Environmental Protection dated March 21, No. 83;

Methodology to determine fees for contamination of the environment approved by the Minister for Ecology and Bioresources of the Republic of Kazakhstan dated August 9, 1994;

Rules on organizing and conducting the state control in the field of the ambient air protection approved by the Decree of the RK Government dated August 14, 2003 No. 815;

Rules on organizing the production control in the field of environmental protection approved by the Order of the Minister of Natural Resources and Environmental Protection dated March 11, 2001 No. 50 (registered in the Ministry of Justice 20.04.2001 No. 1472);

The Decree of the Government of the Republic of Kazakhstan “On approval of lists of formats on the state and departmental statistical statements of the Republic of Kazakhstan” dated January 5, 2004 No. 2;

Rules on organizing and maintaining the Unified state monitoring system of the environment and natural resources approved by the Decree of the Government of the Republic of Kazakhstan dated 27, 2001 No. 885;

Rules on assessing impacts under designing of economic and other activity to the environment when developing pre-planned, pre-project and project documentation approved by the Order of the Minister for the environmental protection of the Republic of Kazakhstan 28, 2004 No. 68 (registered in the MJ on March 31, 2004 No. 2779);

List of ecologically dangerous types of economic activity and Rules on their obligatory state licensing approved by the Decree of the Government dated January 8, 2004 No. 19.

Administrative and criminal responsibilities of the legislation breach in the field of the environmental protection are envisaged in the RK Code on administrative infringements (articles 40-249) and the Criminal Code (articles 277, 282).

Then let's review the completeness of realization of terms of references by comparing them due to adopted and acting legal acts.

As stated above the Government is authorized to form the system of economic incentives and introduce a mechanism to reduce emissions. Here the Law is restricted by the common norm and does not fix specific rights of the Government on economic incentives to reduce emissions to the ambient air. So far a special act of the RK Government on economic incentives to reduce emissions to the ambient air is not adopted.

This norm establishes incentives in the frames of detailed rights of the Government envisaged in the laws. Consequently, it's necessary to examine other legislative acts establishing authorization of the Government for economic incentives. Thus, the Law of the Republic of Kazakhstan “On investments” envisages investment preferences such as investment tax preferences and exemption from customs duty.

Economic incentives are granted to the priority activities which are determined according to the list adopted by the Government and corresponding to fixed volume of investments.

Such list is identified by the Decree of the Government of the Republic of Kazakhstan dated May 8, 2003 No. 436 «On some issues of realization of the Law of the Republic of Kazakhstan “On investments”.

At the same time this Law does not contain norms of the direct incentive of emissions reduction into the ambient air;

As to establish a levy procedure and approval of a payment rate for contamination of the ambient air the Government of the RK adopted the Rules on levy on contamination of the environment dated December 1, 1998 No. 1213. Also this issue is regulated by articles 461, 462 of the Code of the Republic Kazakhstan “On taxes and other obligatory fees to the

budget” according to them the rates are established annually by local authorities on the basis of calculations made by the authorized body in the field of environmental protection;

As to approve a procedure of licenses issue to emit hazardous substances (contaminants) into the ambient air and harmful physical impacts to the ambient air the Government of the Republic of Kazakhstan adopted the List of ecologically dangerous types of economic activity and Rules of their obligatory state licensing dated January 8, 2004 which identified the activity connected with emissions into atmosphere of hazardous substances (contaminants) bringing harmful impact to the environment with the excess of specific standards for stationery sources of emissions, technological processes and equipment. Moreover, this Decree adopted qualification requirements for such activity, which includes the obligatory ecological insurance;

As to set a procedure of organization and conducting the governmental control in the ambient air protection the Government of RK adopted the Rules on organization and conducting the state control in the field of the ambient air protection dated August 14, 2003 No. 815. According to the fixed procedure the state control can be done by the central executive body of the Republic of Kazakhstan in the field of environmental protection, its territorial branches and local executive authorities;

As to determine a procedure of information supply and recording the governmental statistics in the field of the ambient air protection on January 5, 2004 No. 2 the Government adopted the formats of the state and departmental statistical statements. In accordance with this Decree the report on the ambient air protection should be submitted by enterprises having stationary sources of contamination of ambient air under the format established by the authorized body on statistics. Therefore, enterprises fill in information in the statistical report as it is required by the content of the format adopted by the state body on statistics. Also the Government adopted the Rules of organization and conducting of the Unified state system of monitoring of the environment and natural resources dated June 27, 2001 No. 885. The aim of this system is information supply for adoption of management and economic decisions and control over use of natural resources, public awareness on the status of the environment to the health of population. The main function of this System is collection and registration of all ecological information, maintenance of informational databank and cadastres of on the environment and natural resources. Specially authorized state agencies and their territorial branches fulfill organization and maintenance of subsystems’ operation and information supply of the Unified State System of Monitoring of the Environment and Natural Resources (USSM of E&NR). Obligations to submit annual reports of the industrial monitoring of the environment from the influence of emissions (discharges) of contaminants and disposed wastes, calculations of standard volumes of emissions are fixed by the Rules of permits issue for contamination of the environment adopted by the Decree of the Government of the Republic of Kazakhstan dated September 6, 2001 No. 1154. At the same time it should be noted that the Government has insufficiently determined the mechanism to submit information (frequency is limited by a year, information is submitted by entities which received a permit for special nature management and etc.). Coordination of the state agencies’ work to monitor the environment and natural resources, as indicated above in the Decree, is under responsibility of the Central executive body and its territorial branches. The Unified document as the Guidelines on the Unified state system of monitoring of the environment and natural resources is not adopted by the Central executive body.

Thus, the authority of the Government to set a procedure of submitting information and maintenance of the state statistics in the field of the ambient air protection is used incompletely in order to regulate effectively this issue and the standards of the law have not obtained the further realization.

Due to the obligations adopted under the article 4 of the UN Framework Convention on Climate Change the Republic of Kazakhstan develops, regularly updates, publishes and submits to the Conference of Parties the National cadastres of anthropogenic emissions from sources and sinks of all greenhouse gases using the methodology adopted by the Conference of Parties. The Republic of Kazakhstan has adopted a number of legal acts mentioned above that comprise the basis for full forming of legislation and in case of their further development will provide realization of the named provisions of the Convention. The procedure to adopt legal acts, the procedure to interact and coordinate the activity of specially authorized bodies to maintain the state registration and the state cadastres are determined by the Decree of the Government of the Republic of Kazakhstan dated March 12, 2004 No. 311 «On approval of the List of specially authorized bodies implementing functions of the environment protection, management of nature and the state control in this field and Rules on organization of these activities». According to this Decree the coordination of specially authorized bodies' activities can be implemented by developing legal acts that would be approved by joint orders for different fields of nature use (recommendation).

*According to authorization of the Central executive body:*

**As to organize the state monitoring of the ambient air and provide its implementation** the Order of the Minister for the environment protection of the Republic of Kazakhstan dated February 28, 2004 No. 68 was approved. Registered in the Ministry of Justice dated March 31, 2004 No. 2779 "On approval of the Instructions to assess impacts of intended economic and other activities to the environment when developing pre planned, pre projected and projected documentation". This document on intended economic activity considers elaboration of proposals how to organize monitoring and control over the ambient air for further submitting to authorized bodies.

As well the joint order of the Minister for Energy, Industry and Trade of the Republic of Kazakhstan dated July 9, 1999 No. 187 and of the Minister for Natural Resources and Environmental Protection dated July 9, 1999 No. 182 "On approval of the Rules to meet norms of ecological safety when designing and conducting oil operations in the water area and coastal zones of seas and inner reservoirs of the Republic of Kazakhstan" is adopted. This document sets commissions, functions and procedures on interaction of central and local executive bodies. In accordance with this Order and operator submits results of monitoring to the adequate state body.

Also indirect requirements for industrial monitoring, that is collection of information by an entity itself are mentioned in the Rules on organization of industrial control in the field of the environment approved by the Order of the Minister for the Natural Resources and Environment Protection of the Republic of Kazakhstan dated March 11, 2001 No. 50. However, it should be noted that the Rules don't contain standards for setting procedures for entities how to submit information regarding the results of monitoring to the state environmental bodies;

**As to organize the application of mechanisms on economic incentives to reduce emissions of hazardous substances (contaminants) into the ambient air** the analysis of legislation showed that none legal acts of the Republic of Kazakhstan envisage any economic incentives and correspondingly the legislative basis is lacking for adopting special legal acts specifying a mechanism and organization of economic incentives mechanisms to reduce emissions of hazardous substances into the ambient air;



**As to fix the procedure on development and approval of hygiene and ecological quality standards for the ambient air, maximum permissible levels of physical impacts to the ambient air and other ecological standards aimed to protection of the ambient air** it should be marked that the legal act regulating this issue is approved by the Order of the Minister for health of the Republic of Kazakhstan dated August 18, 2004 No. 629 «On approval of sanitary and epidemiological rules and standards on epidemiology and hygiene». In this case the authority is realized and it is envisaged in the article 7 of the Law of the Republic of Kazakhstan dated December 4, 2002 No. 361 «On sanitary and epidemiological prosperity of population». Also there exists the Decree of the Cabinet of Ministers of the Republic of Kazakhstan dated January 24, 1992 No. 70 «On procedure to develop quality standards for the environment in the Republic of Kazakhstan» adopted due to the lapsed Law of the Kazakh SSR «On protection of the environment nature in the Kazakh SSR».

Any legal acts of the central executive bodies in the field of environment protection concerning the procedure of developing and approving hygiene and ecological quality standards for the ambient air are not adopted.

**- As to establish the procedure on the state registration of sources of emissions of hazardous substances (contaminants) into ambient air and harmful physical impacts to it** the conducted analysis showed that the legal basis for adopting a document for this issue exists. The authority of the Central executive body in the field of the environment to approve a corresponding legal act is permitted by the article 7 of the Law of the Republic of Kazakhstan «On protection of the ambient air». However, the Central executive environmental body is not realizing this standard of the Law;

**- As to establish the procedure of developing and approving specific standards of emissions as well as the list of objects (cadastres) in respect of which they are being developed.**

The procedure for developing and approving specific standards of emissions is identified by the Order of the Minister for Natural Resources and Environmental Protection of the Republic of Kazakhstan dated March 21, 2002 N 83 «On approval of the Rules for agreeing and approving standards of maximum permissible emissions (MPE) and maximum permissible discharges (MPD)». According to this Order all organizations – nature users should follow this procedure for developing and approving standards of maximum permissible emissions and maximum permissible discharges. The Order does not contain distinct criteria regarding an activity of organizations to which this procedure extends by this Order;

- the authority of the central executive body in the field of the environment to **establish a procedure for conducting inventory of hazardous substances emissions into the ambient air, harmful physical impacts to the ambient air and their sources** is envisaged in the article 20 of the Law of the Republic of Kazakhstan «On protection of the ambient air». The central executive body has not adopted the legal act regulating these issues.

Thus, plenty of provisions of the Law of the Republic of Kazakhstan have not been realized on the subordinate legislation level.

### **Recommendations to improve the current legislation on the basis of analysis of legal acts of the Republic of Kazakhstan referring to issues on regulation of the Kyoto Protocol.**

In case the Republic of Kazakhstan ratifies the Kyoto Protocol and obtains a number of obligations aimed to provide their implementation there will appear the need to improve the current legislation as a whole.

Implementation of provisions under the article 2 of the Kyoto Protocol supposes:

According to item 1), envisaging increase the effectiveness of energy use in corresponding sectors of the economy – perfection of normative – technical acts (standards) for toughening

technical requirements towards corresponding equipments, fuel etc., legal acts in the field of antimonopoly legislation in particular compilation of expenses when agreeing and approving tariffs;

According to item 3), envisaging incentive of sustainable forms of agriculture – perfection of tax legislation, legislation on investments and other legislation connected with formation of economic incentives;

According to item 4) envisaging reduction or elimination of market disproportion, fiscal incentives, exemptions from taxes and subsidies, contradicting the aim of the Convention – improvement of tax and customs legislation.

According to the article 5) of the Kyoto Protocol it is necessary to establish a national system for assessing anthropogenic emissions from sources. And national methodologies for assessment of anthropogenic emissions should be developed based on the methodology of the Conference of Parties. In this regard, according to the envisaged authority by the Law of the Republic of Kazakhstan “On protection of the ambient air” the Central executive environmental body should adopt a corresponding document taking into account provisions of the methodology of the Conference of Parties.

The article 7 of the Kyoto Protocol envisages the necessity to maintain an annual cadastre of anthropogenic emissions and submit annually National communications to the Conference of Parties for registering cadastres and assigned amounts (AA). The authority of the central executive body concerning cadastres is defined in the Law “On protection of the ambient air”. It is required to develop a departmental document determining maintenance of the national cadastre including the procedure on compilation of information on programs in sectors of the economy indicated in the article 10 of the Kyoto Protocol.

Also it is necessary to mark that earlier a draft Rules on sequence of preparation, agreement and approval of projects for reducing greenhouse gases emissions reduction in the Republic of Kazakhstan has been developed. This document meets the requirements defined by the Kyoto Protocol, corresponding to derived documents adopted by bodies and contains procedures and requirements for projects necessary inside the country.

This Rule was approved by the Ministry of the Environment Protection. It is also agreed with Interagency Commission created by the Decree of the Government of the Republic of Kazakhstan dated April 17, 2000 No. 590, which is the advisory body under the Government of the Republic for the Kyoto Protocol issues. As a whole the Government has not elaborated its position as for the ratification of the Kyoto Protocol. In this regard the level and form of adoption of the Rules are not determined. Taking into account the above mentioned this document anticipates the procedure of the overall consideration in the state bodies and further review.

As for the ratification of the Kyoto Protocol and adopting corresponding subordinate legal acts providing realization of the Kyoto Protocol provisions I suppose that it is useful to renew the activity of the above mentioned Commission with participation of stakeholders from the state agencies.

## **The analysis of legislation in relation to the Kyoto Protocol**

As it was noted before, the Law of the Republic of Kazakhstan on Atmospheric Air Protection provides legal, economic and social basis for protection of atmospheric air, including as related to control and coordination of emissions into atmospheric air. The Law specifies competence of the Government, including with respect to creation of an economic incentives and implementation of market mechanisms; introduction of a GHG emissions reduction mechanism; establishment of procedure for setting rates of atmospheric air pollution payments, approval of procedure for issuance of licenses for controlled substances into the atmosphere; approval of procedure for organization and conduct of state control in the area of atmospheric air protection; establishment of procedures for reporting and state statistics in the area of atmospheric air protection (Article 6 of the Law).

Besides, Article 7 of the Kyoto Protocol to the UN Framework Convention on Climate Change (hereinafter – the Kyoto Protocol) provides for specific authorities of the central executive body in the area of environmental protection, including introduction of technology-based emission standards, licensing of emissions into atmospheric air, development of relevant legal acts, regulations and methodological documents regarding calculation of greenhouse gases emissions. This body is also responsible for monitoring of atmospheric air status (Article 21).

Additionally, it's worthy noting that many provisions of the Law still have no regulatory support.

Legal base of the Republic of Kazakhstan in this sphere includes only the above-mentioned Law; Instruction on Agreement and Approval of Standards of Maximum Permissible Emissions (MPE) and Maximum Permissible Discharges (MPD), approved by order #83-p of the Minister of Environmental Protection (dated March 21, 2002) and registered by the Ministry of Justice on May 3, 2002 (order #1843); Methodology for Calculation of Environmental Pollution Payments, approved by the Minister of Ecology and Biological Resources of the Republic of Kazakhstan on August 9, 1994.

Provisions on administrative and criminal responsibility for violation of the legislation in the area of atmospheric air protection are stated in the Code of Administrative Violations of the Republic of Kazakhstan (articles 240-249) and Criminal Code of the RK (articles 277, 282).

Thus, Kazakhstan's legislation does include provisions regulating emissions into atmospheric air. But many of these provisions are of reference character and they are not supported by adequate regulations. The existing Instruction on Approval of Emission Standards includes only general provisions, not giving information on specific character of the mechanism for emission standard setting, regulation and control.

If the Republic of Kazakhstan ratifies the Kyoto Protocol, our country will take a number of obligations that will entail the necessity to improve the existing legislation in the area of atmospheric air protection.

#### *On ways to regulate emissions*

Thus, according to Article 2 of the Kyoto Protocol, each Party shall also implement policies aimed at:

- 1) enhancement of energy efficiency in relevant sectors of national economy;
- 2) enhancement and protection of sinks and reservoirs of greenhouse gases;
- 3) promotion of sustainable forms of agriculture;
- 4) progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies that run counter to the objectives of the Convention;
- 5) measures to limit emissions of greenhouse gases in the transport sector and in the production, transport and distribution of energy, etc.

Additionally, according to Article 10 of the Kyoto Protocol, each Party shall formulate national or regional programs, concerning the energy, transport and industry sectors, as well as agriculture, forestry and waste management and aimed at reduction of anthropogenic emissions.

In our opinion, for Kazakhstan it means adoption of certain regulations, including those aimed at taking measures stimulating legal entities and physical persons for emission reductions; introduction of corresponding corrections to sectoral economical development programs of Kazakhstan (for industry, agriculture, energy, transport); compiling

inventory of existing international treaties and agreements and Kazakhstan legislations in the area of taxation with the objective to eliminate or reduce exemptions from taxes and subsidies, running counter with the goals of the Kyoto Protocol; establishing measures aimed to ensure favorable conditions for development of private sector through promotion of their use of environmentally sound technologies and access to them.

Additionally, certain procedures for approval of technological projects in the sectors, emitting greenhouse gases, must be adopted at the national level, following the recommendations developed by the Conference of the Parties.

*On functions of national bodies regulating emissions*

Article 5 of the Kyoto Protocol provides for creation of a national system for the estimation of anthropogenic emissions by sources. This estimation system is already stipulated for in the Law of the Republic of Kazakhstan on Atmospheric Air Protection, and relevant authorities are given to competent central, territorial and local executive bodies.

According to this Article, guidelines for such national systems shall be developed based on the methodologies developed by the Conference of the Parties.

Under Article 7 of the Kyoto Protocol, each Party shall keep its annual inventory of anthropogenic emissions and submit annual national communications to the Conference of the Parties in order to consider emission inventory and assigned amounts. At the same time, according to Article 10 of the Kyoto Protocol, annual communications shall include information on intersectoral programs, which contain measures to reduce greenhouse gases and introduce environmentally sound technologies.

Under Article 12, paragraph 5 of the Kyoto Protocol, emission reductions shall be certified. The Law on Atmospheric Air Protection provides for certification of emissions. However, according to the above-mentioned paragraph of Article 12, in case of voluntary participation by the Party, certification on the territory of the country can be carried out by operational entities to be designated by the Conference of the Parties.

The Kyoto Protocol provides for the opportunity to sell and buy certified emission reductions (Article 3 of the Protocol), that's why in case Kazakhstan ratifies it, the Law will require adequate additions and a competent body responsible for sale and purchase of certified emission reductions will be needed.

*On activity of the Conference of the Parties on the territory of Parties*

If the Kyoto Protocol is ratified, Kazakhstan is to take obligations, including those related to ensuring access of the Conference of the Parties to control and coordination of emissions on the whole territory of Kazakhstan, and to acknowledgment of the decisions that could be made by the Conference of the Parties by means of amendments, according to Article 18 of the Kyoto Protocol.

The Conference of the Parties elaborates methodologies for national estimation of emissions, rules and guidelines for verification, reporting and accountability for emission trading, as stated in Article 17 of the Kyoto Protocol.

Under Article 3, each Party shall provide to the Conference of the Parties (to its Subsidiary Body) data to enable an estimate to be made of its changes in carbon stocks.

In accordance with paragraphs 7 and 8 of Article 12, the Conference of the Parties can carry out independent audit and verification of project activities in the country, including with the objective of

ensuring that a share of the proceeds from project activities is used to cover administrative expenses as well as to assist developing country Parties.

#### *On liability of countries in case of non-compliance with the Protocol*

Under paragraph 5 of Article 4 of the Kyoto Protocol, in the event of failure by the Party to achieve its total combined level of emission reductions together with another Party, with which it reached an agreement to fulfill their commitments resulting from trade in certified units jointly, every Party of this agreement shall be responsible for its own level of emissions set out in the agreement.

Following Article 18 of the Kyoto Protocol, the Conference of the Parties shall elaborate procedures and mechanisms to determine and to address cases of non-compliance with the provisions of the Protocol and develop an indicative list of consequences. These decisions of the Conference of the Parties entail binding consequences and shall be adopted by means of an amendment to the Protocol.

In our opinion, the latter can be classified as a restriction in perspective, when the country in advance undertakes obligations to comply with the provisions related to liability for non-compliance with the Protocol's provisions, which will be adopted in the future.

#### *On financial obligations*

In accordance with Article 11, paragraphs 2 and 3, of the Kyoto Protocol, the developed countries, included in Annex I or II, shall provide financial resources for developing countries. Following section 1.1 of the material «KAZAKHSTAN: CO2 EMISSIONS FORECASTING AND REGULATION MECHANISMS FOR REDUCING GREENHOUSE GASES» (page 8); prepared by the Climate Change Coordination Center, and the Kyoto Protocol, Annex 1 of the Kyoto Protocol includes developed countries and countries with economy in transition (East-European countries, Russia and Ukraine).

The above-mentioned material also states that in accordance with Resolution 7 of the Conference of the Parties held in Morocco, if Kazakhstan ratifies the Protocol and the Protocol enters into force, Kazakhstan can be included in the list of Annex I countries.

However, status of the countries with economy in transition is not identified in the Kyoto Protocol, that's why it's not clear how the provisions of Article 11 of the Protocol will be applied to such countries, namely to Kazakhstan.

Besides, according to Article 10, paragraph c) of the Protocol, developed environmentally sound technologies, know-how and programs that are publicly owned or in the public domain, shall be transferred to developing countries.

#### *On the procedures of the Kyoto Protocol ratification*

In accordance with Article 24 of the Kyoto Protocol, it shall be open for signature and subject to ratification, acceptance or approval be States and regional economic integration organizations. Consequently, there are three ways to express consent by States and organizations: ratification, approval and acceptance. In this context signature is a procedural requirement. On behalf of Kazakhstan, Resident Representative of Kazakhstan in the UN Arystanbekova A. signed the Kyoto Protocol on March 12, 1999.

According to Article 25 of the Kyoto Protocol, it will enter into force on the ninetieth day after the date on which not less than 55 Parties to the Framework Convention on Climate Change have deposited their instruments of ratification, acceptance, approval or accession.

Now when Russia has ratified the Protocol, it's expected that the Protocol will enter into force in February 2005.

Following the Delhi Ministerial Declaration on Climate Change and Sustainable Development, adopted at the 8th Session of the Conference of the Parties on October 23 – November 11 2002, as for October 23, 2002, 96 countries had ratified, approved or acceded to the Kyoto Protocol.

For Kazakhstan, who signed the Protocol, accession is not acceptable as a form of consent, as accession is designed for countries that haven't initially participated in signing the relevant international agreement (according to the Vienna Convention on International Agreements dated 1969).

At the same time, taking into consideration the above-listed obligations to be undertaken by Kazakhstan, and based on the ways of consent proposed in the Kyoto Protocol, ratification is the most acceptable (according to Article 11, paragraphs 1, 4, 5, of the President's Decree On the Procedures of Concluding, Complying with and Denouncing International Treaties, dated December 12, 1995, having power of a law).

If the Kyoto Protocol has not entered into force by the moment Kazakhstan ratifies the Kyoto Protocol, Kazakhstan shall undertake obligations to comply with the Protocol in accordance with Article 4 of the Constitution of the Republic of Kazakhstan and Vienna Convention on International Agreements. In this case any sanctions or other limitations for non-compliance with the Kyoto Protocol can be used against our country only after the Protocol enters into force.

The Kyoto Protocol must be ratified in accordance with the procedure, set forth by the President's Decree "On the Procedures of Concluding, Complying with and Denouncing International Treaties", dated December 12, 1995, having power of a law.

It should be noted that ratification, acceptance and approval of the Kyoto Protocol is not permissible with the reservations provided for in Article 26 of the Protocol.

#### *On the procedures of withdrawal from the Kyoto Protocol*

Any Party may withdraw from the Kyoto Protocol only after it has entered into force. For the withdrawal a Party must give a written notification to the Depositary one year prior to the withdrawal or on such later date as may be specified in the notification of withdrawal (Article 27 of the Kyoto Protocol).

## **Recommendations**

*Ratification of the Kyoto Protocol assumes a number of legislative and sub-legislative acts to be adopted. Project realization mechanisms in the Kyoto Protocol require identification of the ownership to carbon credits. In other words it is necessary to identify right of property of subjects of a carbon market (range of the state property, an organization, an operator of the market etc.) that should be set by a legislative act – special law. Besides, the Kyoto Protocol requires information collection, implementation of additional control functions, monitoring of emissions and so on) which are possible to be implemented by strengthening authority of state bodies. In this case such authority and regulation of relations should be reflected in the Law of the Republic of Kazakhstan "On protection of the ambient air" and correspondingly in Regulations on state agencies.*

The Protocol envisages standards exempting equipment, goods, services imported within the projects being realized in accordance with the Protocol, from customs and taxes. In order

to provide realization of these standards it is necessary to bring to conformity with legal acts of authorized state agencies in the field of taxation and customs regulation.

As well it is required to develop and approve Rules on organization of the carbon market (the Government Ordinance), regulating interrelations of its subjects.

List of legal acts analyzed see below.

#### **List of legal acts for the issues of protection of the ambient air.**

1. The Order of the RK Ministry of Natural Resources and Environmental Protection dated March 21, No. 83 approves " Rules on agreement and approval of standards on maximum permissible emissions (MPE) and maximum permissible discharges (MPD);
2. The Decree of the RK Government dated August 14, 2003 No. 815 on "Rules on organizing and conducting the state control in the field of the ambient air protection";
3. The Order of the Minister for Natural Resources and Environmental Protection dated March 11, 2001 No. 50 on " Rules on organizing the production control in the field of environmental protection";
4. The Decree of the Government of the Republic of Kazakhstan dated January 5, 2004 No. 2 on "On approval of lists of formats on the state and departmental statistical statements of the Republic of Kazakhstan";
5. The Order of the Minister for the Environmental Protection of the Republic of Kazakhstan dated January 28, 2004 No. 68 on " Rules on assessing impacts under designing of economic and other activity to the environment when developing pre-planned, pre-project and project documentation";
6. The Decree of the Government dated January 8, 2004 No. 19 on "On approval of the List of ecologically dangerous types of economic activity and Rules on their obligatory state licensing";
7. The Law of the Republic of Kazakhstan dated January 8, 2003 # 373 "On investments";
8. The Decree of the Government of the Republic of Kazakhstan dated May 8, 2003 No. 436 on "On some issues of realization of the Law of the Republic of Kazakhstan "On investments";
9. The Decree of the Republic of Kazakhstan dated December 1, 1998 No. 1213 on " On approval of the Rules on levy on contamination of the environment";
10. The Decree of the Government of the Republic of Kazakhstan dated September 6, 2001 No. 1154 on "On approval of the Rules of permits issue for contaminating the environment";
11. The Decree of the Government of the Republic of Kazakhstan dated March 12, 2004 No. 311 «On approval of the List of specially authorized bodies implementing functions of the environment protection, management of nature and the state control in this field and Rules on organization of these activities»;
12. The joint order of the Minister for Energy, Industry and Trade of the Republic of Kazakhstan dated July 9, 1999 No. 187 and of the Minister for Natural Resources and Environmental Protection dated July 9, 1999 No. 182 "On approval of the Rules to meet norms of ecological safety when designing and conducting oil operations in the water area and coastal zones of seas and inner reservoirs of the Republic of Kazakhstan";
13. The Order of the Minister for Health of the Republic of Kazakhstan dated August 18, 2004 No. 629 «On approval of sanitary and epidemiological rules and standards on epidemiology and hygiene»;
14. The Decree of the Cabinet of Ministers of the Republic of Kazakhstan dated January 24, 1992 No. 70 «On procedure to develop quality standards for the environment in the Republic of Kazakhstan»;

15. The Law of the Republic of Kazakhstan dated March 11, 2002 # 302 "On protection of the ambient air".

## 4.2. Signed or ratified international conventions and protocols

No.	Title of convention and agreement	On the basis of document on which Convention is considered to be ratified and date of ratification
1	The World meteorological organization Convention.	The Resolution of Supreme soviet of RK from 18.12.1992. Resolution of Ministry from 13.04.1993 It was ratified 13.04.1993.
2	International Convention on oil pollution damage civil commitment.	The Resolution of Ministry of RK from 04.03.1994 It was ratified 05.06.1994.
3	The Convention on security of living organisms in sea.	The Resolution of Ministry of RK from 04.03.1994. It was ratified 07.06.1994
4	The Convention on biodiversity.	The Resolution of Ministry of RK No. 918, from 19.08.94. It was ratified 06.09.1994.
5	The Convention on protection of World culture and nature heritage.	Joining and ratification 29.07.1994.
6	The United Nations Framework Convention on Climate Change.	The Decree of President of RK. It was ratified 17.05.95.
7	The United Nations Convention to Combat Desertification.	The Resolution of Senate 28.06.97. The Law of RK, July 7, 1997 No. 149-13 RK. It was ratified 9.07.97.
8	The Vienna Convention on ozone layer protection.	The Law of RK, October 30, 1997.
9	The Montreal Protocol on Substances that Deplete the Ozone Layer.	The Law of RK, October 30, 1997.
10	London amendment to Montreal Protocol on Substances that Deplete the Ozone Layer.	The Law of RK, May 23, 2001.
11	Agreement to Energy Charter and Protocol to Energy Charter on power effectiveness and appropriate ecological aspects	The Decree of President from 18.10.1995.
12	The Convention on International trade of Endangered Species of Wild Fauna and Flora	The Law of President from April 6, 1999. It was ratified April 19, 2000.



13	The Convention on prohibition of military or other hostile use of means of influence on environment	The Resolution of Supreme soviet of RK from 20.02.1995 from 13.04.1993.
14	Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.	The Law of RK on ratification 3RK No. 92-II from 23.10.2000
15	Convention on Environmental Impact Assessment in a Transboundary Context;	The Law of RK on joining 3RK No. 86-II from 21.10.2000
16	Convention on the Transboundary Effects of Industrial Accidents	The Law of RK on joining 3RK No. 91-II from 23.10.2000
17	Convention on the Protection and Use of Transboundary Watercourses and International Lakes;	The Law of RK on joining 3RK No. 94-II from 23.10.2000
18	Convention on Long-Range Transboundary Air Pollution	The Law of RK on joining 3RK No. 89-II from 23.10.2000
19	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposall.	The Law of RK on joining 3RK No. 389 from 10.02.2003

### 4.3. Environmental standards

Environmental pollution charge (further - charge) imposing from bodies and personals for activity realizing in territory of RK in special nature management order (further –nature users).

Charge is imposed from nature users, carrying out the following types of influence on environment:

- Contaminants emission of stationary and movable sources in atmosphere;
- Contaminants emission in water body;
- Distribution of industrial and consumption waste.

Charge rates are fixed by local representative bodies, but not lower than environmental pollution charge.

Basic rates are under the annual indexation taking into account of annual rate of Inflation.

Bush correction factors for contaminants emission in atmosphere from stationary and movable sources, contaminants waste in water body are under the annual reconsideration.

### 4.4. Emission standards

Normative projects of maximum permitted emissions and maximum permitted discharges in environment are considered by environmental protection bodies of RK in compliance with

functioning legislation on environmental expertise (further – Normative projects MPE and MPD) for active enterprises, during its technological conditions changes as well.

Nature user carries providing of concordance and confirmation of project normative MPE and MPD, its reconsideration.

Necessity of reconsideration formed norms of maximum permitted emissions and waste can be appeared before termination of action:

- 1) Environmental and hydrological situation changes in region, water body;
- 2) Appearance of new or refinement operation factors of environmental pollution source;
- 3) Privatization structural and subdivisions, marked from enterprises in as independent objects.

Projects of standards submitting to consideration MPE and MPD must be contained statement (covering letter), explanatory note, assumption outcomes of maximum permitted emissions and maximum permitted discharges.

Terms of project norms of MPE and MPD consideration must not be exceed term, formed for holding state environmental expertise.

Discord of permissions, appearing during projects of standards MPE and MPD consideration is carried in compliance with active legislation of RK.

Permission on emission and contaminant discharges issued to organizations on the basic of adjusted, normative project MPE and MPD.

Normative projects of MPE and MPD are confirmed to terms formed normative documents of RK.

During determination quantity charges for emission and contaminant in atmosphere and water body counted in compliance with determination of charges for environmental pollution Method confirmed by the Ministry of ecology and bioresources of RK dated August 9,1994, registered in the Ministry of justice of RK, January 16,1996 N 142.

## **4.5. Law enforcement mechanism**

### **4.5.1. Procedure for EIA (Environmental Impact Assessment)**

Procedure for EIA is obligatory for realizing object lines on all planned structures. EIA is holding by organization which realizes construction or consulting firms, which have appropriate license for realizing EIA.

Instruction on realizing of influence planned economic and other activity on environment during development preplanned, pre project and project documentation assessment is in the attachment.

### **4.5.2. Environmental inspection system**

(see 3.2.)

## **5. ENVIRONMENTAL POLICY AND PROGRAMS**

### **5.1. Long-term policy**

Foundations of public policy in environmental protection area were laid in the Conception on environmental security approved the Decree by President of RK, April 30, 1996 where environmental priorities of transition, in particular environmental problems of privatization, issues on necessity of environmental legislation foundation, public control and expertise, economic mechanisms of nature management, environmental monitoring are considered.

As a result of tasks implementation of the Conception, rate of environmental pollution rates was reduced greatly in comparison with 90 years due to enhance of public control in environmental protection area and obligatory environmental expertise introduction. However, state status with environmentally vulnerable territory and environmental challenges are still existed.

In new Conception approved by the Decree of President of RK from December 3, 2003, decision ways are proposed. Some of them: providing forward development of scientific research on important challenges of environmental security and sustainable nature management, including basic ones; leading uniform system environmental situation monitoring; environmental division into districts and special mapping of territory of RK.

World experience shows that basis of successful decision of environmental problems and prevention environmental disasters are introduction of environmental principles of social-and-economic system of any state.

The Conception on environmental security was developed started from priorities the Strategy of "Kazakhstan - 2030" in compliance with strategic development plan of RK till 2010 and from account of basic agenda regulations for XXI century and principles of Rio de Janeiro declaration on environment and development of 1992, decisions of the World summit on sustainable development in Johannesburg as well (2002).

Providing optimal level of environmental security with achievement of normative indices of environmental situation proposes phased realization regulations of the present Conception.

First phase (2004 - 2007 years) – reduce of environmental pollution level and development of action plan for its stabilization.

Second phase (2008 - 2010 years) – stabilization of environmental quality indices of environment and perfection of environmental requirements to nature management.

Third phase (2011 – 2015 years) – improvement of environmental quality and achievement of favorable level environmentally sustainable development of society.

The objective of public policy in environmental security is providing of nature systems protectability, vital interests of society and individual rights from aggression, appearing as a result of anthropogenic and nature influences on environment.

### **5.2. Mid-term policy**

Information on realized activities in 2004 -2005 years and planned activities for 2006 is in Activities plan for 2004-2006 on the Conception realization of environmental security of RK for 2004-2015

### **5.3. Annual programs and budgets in 2002, 2003, 2004**

(See 2.4)

## **6. ENVIRONMENTAL SITUATIONS**

### **6.1. Nature including forest preservation, desertification prevention, biodiversity and natural disasters**

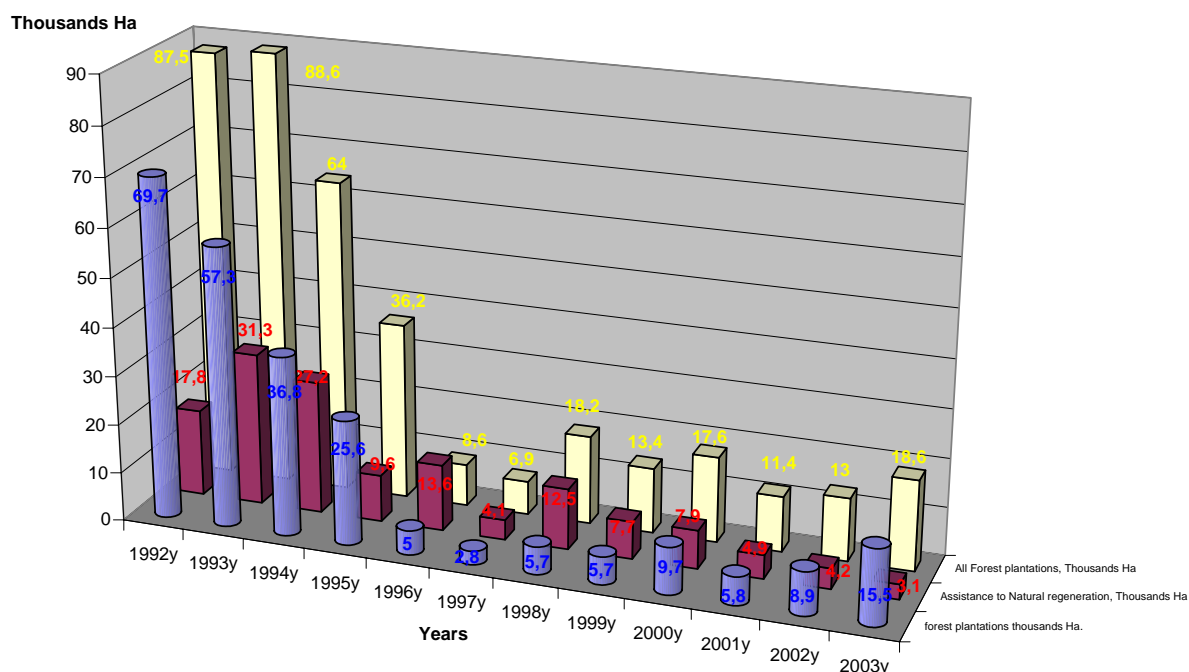
Flora variety in Kazakhstan varies on composition and quantity of types. There are more than 6000 types of high vascular plants, about 5000 - mushrooms, 485 - lichens, more than 2000 - algae in Kazakhstan. The most whole inventory types of mushrooms and high plants were exposed. Among the plants 14 % types are endemics. In the Red book of Kazakhstan 404 types of high and low plants had been included.

Forest of Kazakhstan taking into consideration saxaul forests and bushes are 4,6 % (11,5 mln. ha), without it – 2,3 % (5,75 mln. ha). Conifers forests takes about 1,8 mln. ha. Forest of Kazakhstan plays soil protection and water protection role.

Last 10 years almost to 0,16 mln. ha, or 20 %, area of band pineries were reduced in Western Kazakhstan. For regulation these problems the Resolution of RK had been adopted dated April 23, 2004 No. 460 «On prohibition chipping the main use in conifers and saxaul plantings in state forestry fund area and measures on its preservation».

If annual volume of forestry reconstruction works last years of last century over republic consists about 80 thousand ha, and in 1997 volume of forest reconstruction were reduced in 8 times and nowadays its situation is in the same situation (pic.1).

Pic. 1. Volumes of Reforestation in Kazakhstan



Nowadays by the Resolution of RK dated May 14, 2004 No. 542 Program «Forests of Kazakhstan» - 2004-2006 years had been confirmed. As a result of realization of this program forestry preservation is provided, improvement of forestry preservation from fire, its protection from pests and sicknesses, improvement of quality and composition and sanitary condition of forests.

By the Resolution of RK dated April 10, 2002 No. 408 list of rare types of animals – 40 types of mammals, 57 types of birds, 10 types of reptiles, 19 types of water animals had been confirmed. By the Resolution of RK dated June 19, 1998 No. 573 list of invertebrate types of animals had been confirmed for including them in the Red book. Total: 96 types.

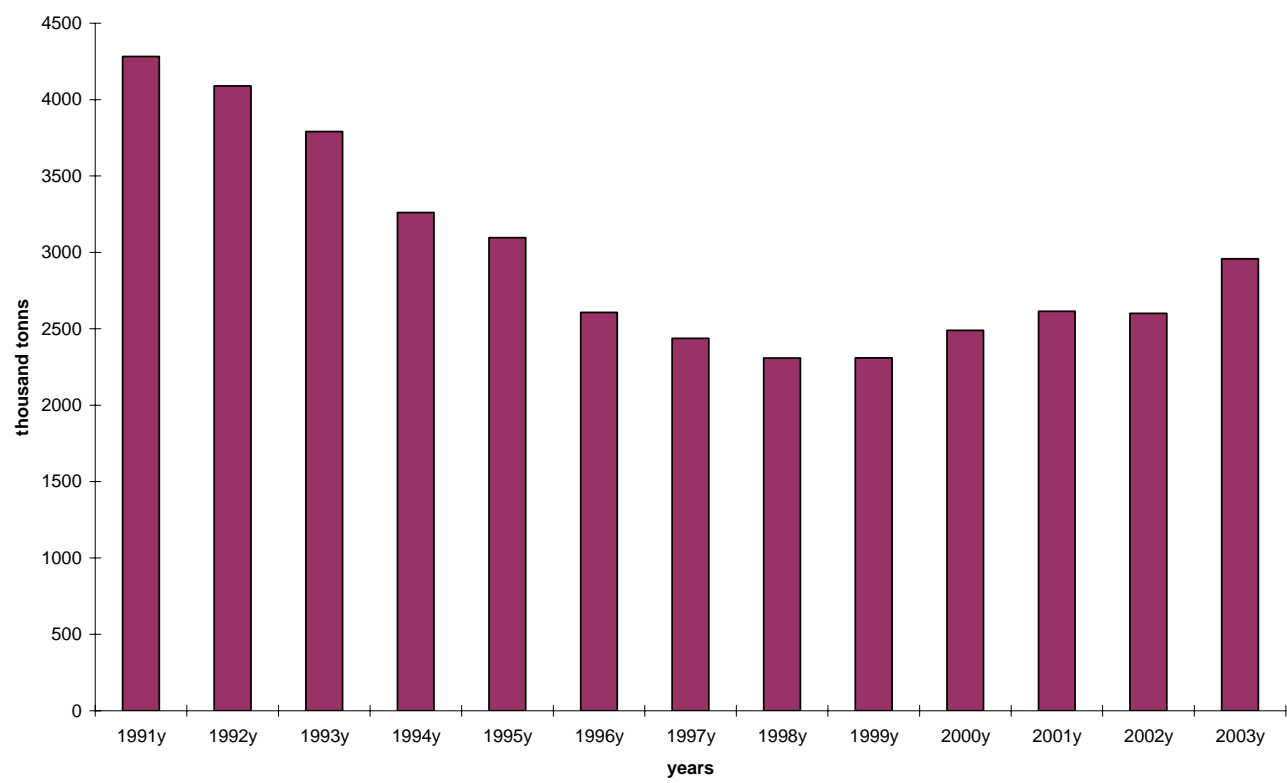
It is very important for Kazakhstan to develop the methods of active impact on characteristic of mudflows, and it is necessary to approve scientifically of prevention of lakes forming methods, water complexes.

As Almaty city is situated in seismic dangerous zone, it is very important to conduct researchers and assessment on dangerous geological processes in piedmont areas for activities development on prevention of earthquakes.

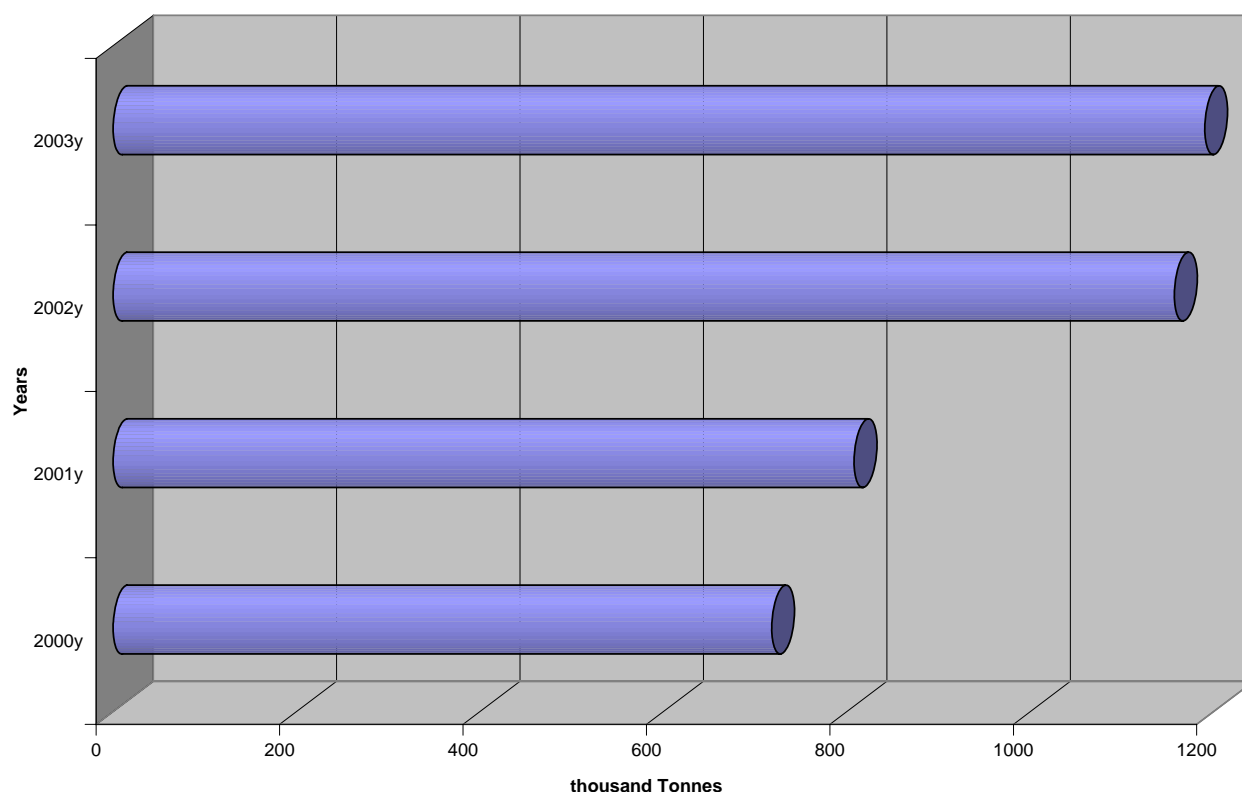
## 6.2. Ambient air

Pollution situations of ambient air observations are being conducted in 19 towns of Kazakhstan. The most level of pollution is fixed in Ridder, Shymkent, Ust-Kamenogorsk, Karaganda and Almaty cities. Sometimes maximum polluted substances concentrate exceed in 10-20 times (for example, in Balkhash, Ust-Kamenogorsk on dioxide sulfure).

Pic. 2. Emissions from the stationary sources.



Pic. 3. Dynamic of emissions from Auto transport.



Emission from removal sources in cities has tendency of exceeding of number of auto transport. Especially negatively impact of exploitable transport.

Activities on ambient air protection are directed on consideration of enterprises emission and payments contributions for environmental pollution by stationary and removal sources. However, there are no effective of harmful substances emission reduction, as cost of «environmental payments» of enterprises is included in product cost (heating, energy, services).

Mechanism of environmental payments use does not suggests cleaning technology implementation in industry and support of environmentally cleaning houses and circles.

About 5 million people of Kazakhstan live in polluted ambient air conditions and 2 mln. – in high level pollution conditions.

## 6.3 Water Resources

### Surface Water Quality

Water quality in almost all Kazakhstan's water objects remains unsatisfactory, in spite of decreases in production and volumes of wastewater discharge. The principal pollutants occur in wastewater from chemical industries, petroleum processing, and machine building industries and non-ferrous metallurgy. The main damage to the environment, and in particular to water reservoirs, is caused by polluted wastewater discharged without prior treatment.

One of the hydrological features of Kazakhstan is that it has flow transit and dispersal zones, as well as delta zones of major river basins (Syrdarya, Irtys, Ural and Irtysh rivers).

As the flow of practically all Kazakhstan's rivers is regulated, the regime of flow formation on river sections below water reservoirs is altered significantly. As a result of the impact of the rivers and the areas of catchments and intensive water consumption, there are changes to the hydrological regime and water quality in the transit and dispersal zones. This mutual impact is characterized by intensive water intake from the rivers for industrial and irrigation purposes and discharge back into the rivers of wastes containing salt, chemicals and other pollutants.

Described below are the characteristics of surface water quality in the main water objects of Kazakhstan, based on data provided by RSE Kazhydromet Environment Pollution Monitoring Center / 57,70,71/.

### ***Aral-Syrdarya Basin***

The level of nitrite pollution of the surface water of the basin remains high. In 2001 nitrites exceeded the maximum permissible concentration (MFC) by in 46% of tested samples, and the maximum level of pollution reached 27 MFCs.

The chemical composition of the Syrdarya River forms within the Republic of Uzbekistan. The water enters Kazakhstan (Kokbulak border post) with an average content of nitrite nitrogen of about 4 MFCs. Maximum concentration- 16 MFCs, the average content of copper reaches 4 MFCs, phenols -3 MFCs, sulfates - 6.5 MFCs. The maximum level of pollution is observed in spring when the content of pollutants reaches: copper and nitrites 3 MFCs, sulfates - 7 MFCs, phenols - 6 MFCs, petroleum products - 4 MFCs. The water of the Syrdarya Water Reservoir is polluted mainly with sulfates, nitrites, phenol and copper.

The main tributaries of the Syrdarya River are also significantly polluted. The Keles River is characterized by a value of WPI (Water Pollution Index) corresponding to quality class 3, i.e. 'moderate pollution'. The principal pollutants are sulfates, copper, phenols, the content of which varies from 2 to 11 MFCs, The Arys River is polluted moderately (sulfates, copper, phenols and nitrites). The level of pollution of the Badam River is characterized by a WPI value of quality class 3, with the average concentration of sulfates, copper, phenols, nitrites and petroleum products exceeding MFC by 2-5 times.

### ***Irtys Basin***

The level of heavy metal pollution of the surface water of the basin remains high. In 2001 levels of copper exceeded MFC in 99.6% of samples, zinc in 57% of samples, with the content of zinc and copper exceeding 10 MFCs. The water quality class is level 4, i.e. the water is 'highly polluted'.

Water Pollution Index in the area of the village of Buran is 1.02, quality class is 3 - "moderately polluted" water. Down river in the city of Ust-Kamenogorsk the level of pollution due to wastewater discharges from the East Kazakhstan industrial complex increases significantly. The gate "0.5 km below TMC" located below the junction of the Irtys River and the Ulba River is the most polluted. In addition to the polluted Ulba River, the quality of surface water in this area is affected by wastewater from the treatment facilities of the right bank of the Irtys.

The quality of the surface water of the Irtys between the villages of Glubokoye and Predgornoye is affected by two right tributaries: the Glubochanka River and the Krasnoyarka



River. These waters are polluted by discharges from the Belousovsk, Irtysh and Berezovsk mines and transit waters from the above-situated sources of pollution in Ust-Kamenogorsk. The average annual concentration of copper and zinc in these rivers amounts to 40-50 MFCs, with maximum concentrations often exceeding 100 MFCs.

In the end gate of the village of Borovskoye, the pollution index for the Irtysh River equals 1.14, corresponding to "moderate pollution".

### ***Ural-Caspian Basin***

The principal pollutants of the surface waters of the basin are boron and organic substances. The content of nitrites, phenols and copper is 80%, 49% and 22% respectively in the selected samples.

The water of the Ural River is polluted on the territory of the Russian Federation. Within Kazakhstan, wastewater discharges into the riverbed are not observed.

The Ilek River remains the most polluted water body in the basin. The content of boron and chromium in the river is caused by the tailing ponds of the former Alga chemical plant and AZKhS JSC, via ground water. In the gate of Alga "0.5 km below ground water discharge" the content of boron in the water varies from 35 to 129 MFCs. Within the city of Aktobe the content of boron equals 13.8 MFCs, phenols -1 MFCs, nitrite nitrogen - 1.2 MFCs, chromium - 6.9 MFCs. The quality class of water in the Ilek River changes from 4 - "polluted water" to 6 - "very polluted water".

### ***Balkhash-Alakol Basin***

The principal pollutants of the surface water of the basin of the Hi River are petroleum products, the content of which in 83% of tested samples exceeded MFC (on the average 2.5 MFCs). According to the pollution index the basin is characterized as moderately polluted.

The chemical composition of the Hi River in Kazakhstan is created by pollutants from the People's Republic of China and the polluted surface flow and washout from agricultural lands adjacent to the basin. Within the area of the Dubun berth the concentration of copper reached 21.4 MFCs (maximum value -181 MFCs), the content of phenols, zinc and petroleum products in the water was 1 -3 MFCs. In this area the water of the river is estimated as 'dirty'. Down river the concentration of copper is a little lower. In the gate below the Kapshagai Hydropower Station the quality of water hardly changes and corresponds to class 4 on the WPI, i.e. "polluted water".

The principal pollutants of Balkhash Lake are heavy metals: copper and zinc, and petroleum products, phenols and fluorides. The content of copper exceeded MFC in all samples selected in Maly Sary-Shagan Bay and Bertys Bay.

### ***Nura-Sarysu Basin***

The area of the basin is characterized by a low level of water supply. Due to regulation of the lower part of the flow, it forms based on wastewater discharge from industrial enterprises.

The major polluted tributary of the Nura is the Sherabainura River. The rivers of this basin are characterized by nitrite pollution. The number of samples in which the content

of nitrites exceeds MFC comprises 56%, nitrogen ammonia and copper - 50%, phenols and petroleum products - 67%, fluorides - 80%, zinc - 58%.

The quality of water in the basin is estimated to correspond to WPI class 4 - "polluted water"

### ***Ishim and Tobol-Torgai Basin***

In comparison with other basins, the level of pollution of the surface waters of the basins of the rivers Ishim and Tobol is significantly lower, and water quality class corresponds to "moderate pollution".

Data given in Table 5.3 shows that recently in the territory of Kazakhstan WPI of the surface waters within the areas impacted by cities and industrial centers has in general decreased. However, increased WPI for some rivers (Krasnoyarka River, Ishim River and others) is observed.

Based on monitoring of the surface waters of Kazakhstan conducted by the subdivisions of RSE Kazhydromet in the 1st quarter of 2003, the most polluted is the basin of the Irtysh River. The most polluted rivers of the East Kazakhstan Oblast are: Breksa, Tikhaya, Glubochanka and Krasnoyarka. The content of nitrogen ammonia exceeds MFC by 2.29 times, copper- 3.1-25.7 times; zinc -17.5-40.1 MFC, petroleum products - up to 2.4 times and manganese - up to 8.6 MFC.

**Table 5,3 Levels of Pollution of the Surface Water in Cities and Industrial Centers of Kazakhstan**

<b>Name of control station</b>	<b>WPI*</b>		
	<b>1997</b>	<b>2000</b>	<b>2001</b>
<i>Ural River, the city of Uralsk</i>	2.96	1.28	1.76
<i>Ilek River, the city of Aktobe</i>	7.38	4.19	4.00
<i>Ilek River, the city of Alga</i>	4.86	5.81	4.98
<i>Syrdarya River, the city of Kyzylorda</i>		1.70	1.26
<i>Badam River, the city of Shymkent</i>	2.68	2.20	2.98
<i>Shardary Water Reservoir</i>	2.93	1.94	1,40
<i>Talas River, the city of Taraz</i>	1.38	0.88	1.24
<i>Malaya Almatinka River, the city of Almaty</i>	2.90	1.68	.2.44
<i>Bolshaya Alraatinka River, the city of Almaty</i>	1.95	0.81	1.78
<i>Balkhash Lake, Tarangalyk Bay</i>	2.38	3.70	3.96 .
<i>Balkhash Lake, M. Sary-Shagan Bay</i>	2.56	4.83	4.52
<i>Samarkand Water Reservoir</i>	3.35	2.64	•2.65.
<i>Nura River, the city of Temirtau</i>	4.38	4.12	2.90
<i>Sherubamura River - Estuary</i>	3.94	10.45	3.53
<i>Kara-Kengir River, the city of Zhezkazgan</i>		5.95	6.42
<i>Kengir Water Reservoir</i>		4.50	3.39

<b>Name of control station</b>	<b>WPI*</b>		
	<b>1997</b>	<b>2000</b>	<b>2001</b>
<i>Irtys River, the city of Ust-Kamenogorsk</i>	1.43	1.57	1.54
<i>Irtys River, the city of Pavlodar</i>		1.51	1.02
<i>Irtys River, the city of Aksu</i>		1.17	1.14
<i>Bukhtarma River, the city of Zyryanovsk</i>	1.47	1.57	1.77
<i>Ulba River, Tishinsky Mine</i>	8.64	4.67	4.92
<i>Ulba River, the city of Ust-Kamenogorsk</i>	3.36	1.98	1.97
<i>Tikhaya River, the city of Leninogorsk</i>	9.46	5.80	5.00
<i>Breksa River, the city of Leninogorsk</i>	12.60	4.18	6.72
<i>Krasnoyarka River, the village of Predgornove</i>	3.33	7.60	7.13
<i>Ulba River, the city of Shemonaikha</i>	1.49	1.36	1.36
<i>Ishim River, the city of Astana</i>	1.32	1.22	1.51
<i>Ishim River, the city of Petropavlovsk</i>	1.46	0.60	0.36
<i>Tobol River, the city of Kostanai</i>	0.49	2.17	0.79

\*WPI - Water Pollution Index; Please see Technical Note

Source: State Water Cadastre of the Republic of Kazakhstan. Annual data on surface water quality. 1999- 2001. Almaty

## Ground Water Quality

Based on data of the ground water monitoring service, about 700 potential sources of pollution have been discovered within the Republic /60/. These are industrial enterprises, solid and liquid wastes storages, stock breeding complexes, tailing ponds of industrial and agricultural facilities, irrigated farm lands, treated industrial wastes, urban agglomerations, oil fields and oil refineries, etc. Based on audit data, only 477 enterprises of the Republic had 762 industrial wastes collectors. However, not all enterprises with such collectors were covered by the audit. Unfortunately, more recently there has been no opportunity to make a comprehensive description of the amount of discharge and waste and the qualitative and quantitative composition of pollutants. Nevertheless it has been established that 241 enterprises in the Republic are polluters of surface waters, and at 158 sites pollution has been detected by regular observation, and on 83 sites by single samples.

The principal sources of pollution in the Republic are industrial and agricultural facilities, and to a lesser extent, utilities.

The highest number of polluted sites and areas were revealed in Almaty Oblast (40), Karaganda Oblast (33), and East Kazakhstan Oblast (22). Of the areas with polluted ground water, the majority (over 200), are characterized by higher salinity, water hardness, plus concentration of sulfates and chlorides exceeding MFC. Some 75 sites are characterized by the presence of nitrogen compounds in the ground water, 59 with heavy metals, 41 with phenols and 28 with organic compounds.

According to the degree of hazard caused by pollutants, ground water pollution at 127 sites can be described as dangerous and at 63 sites as moderately dangerous. There are 48 sites with highly dangerous groundwater pollution levels, while these levels are described as 'extremely' dangerous at three sites.

Throughout the country there are 272 water intakes in zones of ground water pollution, 92 of which are part of the regular observation network. Ground water pollution at other water intake sites was established by random observation. In most cases ground water pollution at water intake sites is connected with economic activities, and at 44 intakes it is determined by natural factors. 143 water intakes are characterized by high salinity of ground water, hardness, content of chlorides and sulfates. In a number of intakes ground waters are polluted by heavy metals (Aktobe Oblast - 12 water intakes, East Kazakhstan - 15 water intakes, Kostanai Oblast - 17 water intakes). The maximum number of water intakes in zones of ground water pollution is in Karaganda Oblast - 77, East Kazakhstan Oblast - 28, North Kazakhstan Oblast - 25. At 180 water intakes where single observations revealed ground water pollution a regular observation network was required.

## Water Resources Monitoring and Control in Kazakhstan

State management of hydro-meteorological and environmental monitoring in the Republic of Kazakhstan is conducted by RSE Kazhydromet.

A network of hydrologic observation stations is designed to collect data on the condition of water bodies and water resources of the Republic of Kazakhstan. The placement of hydrologic observation stations is based on the principle of obtaining accurate parameters of the regime - level and annual flow. The number and density of observation stations are determined by natural-climatic conditions and needs of the economy.

Regular hydrological observations on the surface water facilities of the republic of Kazakhstan are conducted at 3 hydro-meteorological stations, 180 level stations, 23 lake stations and 3 marine stations. Rivers longer than 100 km are sufficiently covered by observation. Recently there has been a decline in the number of stations on rivers of lengths from 10 to 100 km. Operating hydro-meteorological stations are located mainly at the elevations up to 2,000 m, with some located higher.

Water quality observations are made based on hydro-chemical and hydro-biological parameters in 53 water bodies, 101 surface water control stations and 142 gates.

Water sample analyses are conducted in the network laboratories of the Environment Pollution Monitoring Center of Kazhydromet in accordance with approved methods.

The significant reduction in observation stations on water bodies requires the optimization of the surface water resources monitoring network. The priority task is restoration and organization of the network of hydrological observations on cross-border water bodies.

Groundwater monitoring in the Republic of Kazakhstan is conducted by the Committee for Geology and Subsoil Protection of the Ministry of Energy and Mineral Resources. The main concern is ground and low-pressure ground waters in the zone of active water exchange and waters of feasible aquifers.

On the territory of Kazakhstan there are 6,838 observation stations of State Ground Water Monitoring, including 3,152 observation stations related to the regional network, 3,621 related to the local network and 65 wells relating to the proprietary network. The existing observation stations, their location and equipment can not fully monitor and account for the current hydro-

ecological situation in Kazakhstan and the extent of manmade impacts. The observation network is unevenly dispersed and in many cases is concentrated in more developed areas, while the major oil and gas provinces and regions of ecological disaster remain unstudied.

One key specific feature of Kazakhstan's groundwater regime is the decreasing average multi-year value of pre-spring and spring maximum water levels. In most ground water reservoirs, after stabilization of the water level, resulted from decreased water intake, there has been a decrease in water levels caused by low water years. Changes in the salinity and chemical composition of ground waters are not reported.

## 6.4. Land Degradation

The territory of the Republic of Kazakhstan occupies 2724, 9 thousand kilometers<sup>2</sup>. The main using land resources of RK is systematized as land of agriculture importance, consisting 31,9 % of all available land. Regular and estuary irrigation are realized only on 15 % of all land of agriculture importance.

**Table 5.4 – Distribution of Available Land by Land Category, Thousands Ha**

(Source: Kazakh agency on management of Lands Sources)

Titles of land category	Year			Changes (+, -)	
	1991	2002	2003	2003 to 1991	2003 to 2002
Land of agricultural importance	218375,8	86218,8	83336,6	-135039,2	-2882,2
Land of settlement	3747,2	20505,2	20472,4	+16724,8	-33,2
including:					
cities and countries	2053,5	1963,1	1941,7	-111,8	-21,4
Country settlements	1693,7	18542,1	18530,7	+16836,6	-11,8
Land of industry, transport, connection, defense and other nonagricultural importance	18796,8	2334,9	2359,5	-16437,3	+24,6
Land especially guarded nature territory, земли sanitary, recreational and historical-and-cultural importance	775,1	1378,1	2659,9	+1884,8	+1281,8
Land forestry fund (without Natural Preserve)	10179,2	22432,4	22363,3	+12184,1	-69,1
Land water fund	819,9	3603,9	3612,1	+2792,2	+8,2
Land reserve	18952,3	124696,5	126368,0	+107415,7	+1671,5
<i>Total of land</i>	271646,3	261169,8	261171,8	-10474,9	+1,6
including land, using in other state territory	149,8	0,9	0,9	-148,9	
Land, using by other states	993,7	11321,3	11319,7	+10326,0	-1,6
Territory of Republic	272490,2	272490,2	272490,2		

One of the complicated problems of the present is land and plant degradation problem, and desertification. More than 60 % of Kazakhstan's area is exposed to desertification. From 215,9 mln ha of agriculture grounds and rocky ground consists 42,3 mln ha (20,0 %), greasy land –

58,9 mln ha (27,3 %), removed land – 4,99 mln. ha (2,3 %), deflate – 25,6 mln ha (11,9 %). Existence of plenty of soil easy mechanical composition, high carbonate, plough-land use with breach of the soil protection technology, feeble pasture leading to development of erosion processes. From the whole area irrigation of plough-land became devastated land because of degum - low extent – 4,5, moderate extent – 5,2 and high extent – 1,5 mln. ha. For irrigate land degum land consists 0,7 mln. ha.

From 182,6 mln. ha pasture-ground degradation reached 24,1 mln. ha. The whole desertification area of pasture-ground in desert zone came to 60 %, for mountains and knolls about - 30-40 %. Pasture-ground degradation process has a tendency to increasing.

## 6.5 Waste Management

From 22 mlrd. of tones industry wastes, existing in Kazakhstan, 5,2 mlrd. tones are toxic substances, that contain poison substances for living organisms. Annual volume of toxic industry wastes in Kazakhstan from 2000 increased to 38 %. If in 2000 it 102,5 mln. tones, in 2002 – 137,1 mln. tones, in 2003 volume increased to 141,9 mln. tones (table 1.3.12). Most of waste volumes mineral resources industry – 55% (from the common quantity of wastes) and process industry – 39 %, and 38 % of it are metallurgical industry wastes.

Last years, in spite of volume reduction of mineral and organic fertilizers are more than 10 times, land pollution by toxic and carcinogenic substances problem is being increased. The main sources of land pollution are enterprises wastes of mining industry (78052,7 thousand tones), metallurgical industry (54043,2 thousand tones) and energy industry (8997,0 thousand tones). Development of mining industry in Kazakhstan defines land conditions change: radioactive nuclide, heavy metals and etc. As a result of work of rock production there are 4 mlrd. tones of terraces, enriched ore - more than 1,1 mlrd. tones, activity of metallurgical enterprises – 105 mln tones.

**Table 5.5 – Toxic emissions production volume (mln. ton)**

Year	Toxic emissions appearance	Toxic emissions use in enterprises	Toxic emissions sterilization
1997	69,4	3,2	0,6
2000	102,5	16,6	3,9
2001	130,0	23,7	1,6
2002	137,1	34,8	0,1
2003	141,9	29,1	3,7

## 6.6 Energy saving and Utilization of Renewable energies

December 25, 1997 in the Republic of Kazakhstan the Law on Energy saving had been adopted.

### **The main principles of the state policy in the energy saving sector**

The main principles of the state policy in the energy saving sector are:

- priority of rising the effectiveness of using fuel and energy resources over the increase of their production of heat and electrical energy;
- priority of ensuring of safety and human health, social and everyday conditions of people's life, environmental protection at production, processing, transportation and use fuel and energy resources and (or) energy;
- state regulation implementation in the energy saving sector;
- necessity of economical support of energy saving, renewable sources of energy use stimulation;
- obligatory reliable registration of the produced and expendable fuel and energy resources;
- combination of interests of producers, suppliers and users of fuel and energy resources;
- system approach in energy saving;
- information, educational and research activity implementation in the energy saving sector.

### **The main directions of energy saving**

The main directions of energy saving are:

- stabilization of the production and use of energy, needed for intense national economy development;
- optimization of energy production and its use regimes, its registration and control organization;
- organization of inspection of energy effectiveness of companies and institutions;
- expertise of energy saving at production, working and reconstruction of objects, technologies and equipment ;
- renewable energy sources development;
- utilization of second energy resources and wastes;
- projects implementation on introducing energy effective technique and production, up-to-date technologies;
- introducing scientific researches and new ways of management in this sphere;
- reduction of losses of fuel and energy resources at their production, transformation, transportation, storing and use;
- ensuring the accuracy, reliability and unity of measurements at registration of supplied and used energy resources;
- introducing new and improvement of the current norms and rules of the construction that provides the energy sources saving.

## **6.7. Greenhouse Gas Emission Reduction**

Kazakhstan, which had ratified the United Nations Framework Convention on Climate Change (1995) and signed the Kyoto protocol to this convention, joins the global movement on global warming preventing, which is conditioned by the permanent increase of greenhouse gases from carbon fuel combustion.

Annually in the Republic of Kazakhstan greenhouse gases emissions sources inventory is carried out and emissions of gases with direct and indirect greenhouse effect had been calculated, and forecasts of emission of the main greenhouse gas – carbon dioxide (CO<sub>2</sub>) had been made. Carbon dioxide (CO<sub>2</sub>) takes the first place in Central Asia countries on

specific indicator of greenhouse gases emissions on gross natural product (GNP) unit (3, 38 kg/USA dollar).

Energy makes the most input into carbon dioxide (CO<sub>2</sub>) emissions, and from energy carriers – coal. According to the prognosis data, the part of the coal will increase in most intense rates and to 2010 will amount to 63 %, and to 2020 – 66 % in volume of gross emissions that appear from fuel combustion. Global climate change influences on economy and environmental condition of Kazakhstan needs the constant research and development of adequate measures on its reduction.

Nowadays on state basis it had been decided to 100% utilize the associated gas by oil-producing companies. Now gas is combusted in furnaces, polluting the environment with the products of combustion. At that a lot of greenhouse gases, sulfur and nitric oxides are emitted to the atmosphere.

Also in the Republic of Kazakhstan several projects that aimed at greenhouse gases emissions are being realized. Also the projects on heating systems reconstruction and modernization in many cities are being realized, which would also lead to the heat saving and reduction of heat losses.

## 7. ENVIRONMENTAL MONITORING

### 7.1. Environmental Monitoring System

For the goals of Environmental monitoring the **Common State System of Environmental Monitoring (CSSEM)** had been adopted in Kazakhstan. The system had been approved by the governmental decree N885 dated 27 June, 2001

CSSEM is an information system with many goals, including monitoring of environment and natural resources condition, and analysis of the factual environment and natural resources state data for ecological safety, preserving, reproduction and rational use of the natural resources of the Republic of Kazakhstan.

#### **Aims, goals, functions of the Common state system of environment monitoring**

The aim of CSSEM is informational providing of administrative and economic decisions making and control over the natural resources use, population informing on environment state and influence of environmental factors on people's health.

The main goals of CSSEM are:

- 1) permanent monitoring of environment and natural resources state, and anthropogenic influence resources on them;
- 2) analysis, assessment of factual state of environment, natural resources on the whole territory of the republic and the territory of separate regions, and prognosis of its changes and influence on population's health;
- 3) preserving and accumulation of information on environment and natural resources state.

The main functions of CSSEM are:

- 1) carrying out the observations by instrumental, analytical and other methods on all parameters of environment with the periodicity, which is sufficient for their changes assessment;



- 2) collecting and registration of all ecological information, information data banks and environmental cadastres administration;
- 3) determination of the connection between characteristics of environment influence, change of pollution level and its consequences;
- 4) organization the information exchange on environment, natural resources state on regional, republic and international levels;
- 5) providing with one methodical and metrological monitoring base on environment and natural resources, which is made by central executive bodies, their territory parts, companies, institutions independently of ownership forms;
- 6) basing of carrying out the research and experimental-design works in the environment and natural resources monitoring sphere;
- 7) providing the state executive bodies, natural, juridical persons and population with information, gained in frameworks of CSSEM.

## **7.2. Results of Environmental Monitoring - 2003 and 2004**

The observations on environment state of the Republic of Kazakhstan, carried out in 2004, allow making the following conclusions:

1. In 2004 9 cities had been considered to the polluted cities on the data of observations (Atmosphere pollution index -  $API_5 \geq 5$ ), including those with high and very high level of air pollution ( $API_5$  more 7) - 7 cities. The highest level of air pollution is observed ( $API_5 \geq 15$ ) in Almaty and Shymkent.

In 16 cities of the republic middle for the year values of concentration of polluting substances at least by one admixture had exceeded the maximum permissible concentrations (MPC), and in 6 cities (Almaty, Karaganda, Ridder, Temirtau, Ust-Kamenogorsk, Shymkent) the MPC of concentrations of three and more substances were higher. The average annual concentrations of suspended matters (dust) in the range of 1,1-2,2 of MPC had been marked in 9 cities, nitrogen dioxide - 1,2- 2,0 of MPC – in 8 cities, sulphur dioxide - 1,1-1,9 of MPC - in 4 cities, formaldehyde - 1,8-5,6 of MPC - in 6 cities, freon - 1,7-3,0 of MPC in 4 cities.

The maximum one-time concentrations of polluting substances at least by one admixture had exceeded the MPC in all cities, where the observations are being carried out, at that cities the exceeding of MPC had been marked for 3 and more substances. One-time concentrations of suspended matters higher than MPC had been marked in 13 cities, nitrogen dioxide – in 19 cities, carbon oxide – in 12 cities, phenol – in 8 cities, formaldehyde - in 4 cities.

During the year 26 cases of high pollution of atmospheric air had been registered: in Balkhash city the maximum concentrations of suspended matters in atmospheric air had exceeded the possible norm in 14-16 times, sulfur dioxide - in 10-16 times, nitrogen dioxide – in 10-12 times; in Shymkent city the maximum concentrations of nitrogen dioxide had exceeded the possible norm in 10-12 times.

In comparison with 2003 the condition of atmospheric air pollution in Aktobe, Astana, Atyrau, Jekazgan, Kostanai, Pavlodar, Petropavlovsk, Semipalatinsk, Temirtau, Uralsk and Ekibastuz hadn't fundamentally changed. In Aktau, Ridder, Ust-Kamenogorsk and Glubokoye village the reduction of air pollution level had been remarked, in Almaty, Balkhash, Karaganda, Taraz and Shymkent – increase. In comparison with 2002 the level of air pollution in cities Aktobe, Aktau, Atyrau, Kostanai, Pavlodar, Uralsk and Ekibastuz hadn't significantly changed, in Zhezkazgan, Ridder, Temirtau, Ust-kamenogorsk and Glubokoye village – had decreased, in cities Almaty, Astana, Balkhash, Karaganda, Petropavlovsk, Taraz and Shymkent had increased.

2. The value of general mineralization in atmospheric precipitation had been within 9, 40 (Essyk) to 296, 33 mg/l (Atyrau). In precipitation the sulphates (30-35%), hydrogen carbonates (20-25%), chlorides (15-20%), calcium ions (20-25%) and sodium ions (5-10%) prevailed. The highest level of pollution of atmospheric precipitation is being observed in Atyrau oblast, where mineralization amounts to 296, 33 mg/l. The least level of pollution is marked in Almaty oblast – 9,40 mg/l. Precipitation acidity that fall in Kazakhstan has the character of alkaline medium and amounts to 5,93 (Ust-Kamenogorsk) – 7,50 (Atyrau).

The highest level of pollution of blanket of snow is being observed in Western-Kazakhstan and Kostanai oblasts, where mineralization accordingly amounts to 58, 59 and 47, 6 mg/l. The least mineralization level of blanket of snow had been fixed on MS Petropavlovsk of Northern-Kazakhstan oblast, where the sum of ions was 10, 16 mg/l. Almost on all of the territory of the Republic of Kazakhstan the contents of sulfates (up to 29%), chloride ions (up to 18%), hydrogen carbonates (up to 17%) and calcium ions (up to 13%) prevails in blanket of snow.

Hydrogen ion exponent of the blanket of snow is in the range of 5, 27 (Aktobe) – 6, 87 (Shymkent). The acidity of tests of the blanket of snow has the neutral and weakly alkaline character.

All the determined admixtures, including the heavy metals salts in the blanket of snow, don't exceed the maximum permissible concentrations (MPC).

3. The data of monitoring of the surface waters pollution in 2004 are being treated on the basins of rivers Irtysh, Ural, Ilek, Tobol, Ishym, Nura, Ili, Talas, Shu, Syrdarya.

In all, from the quality of the observed water bodies to "clean" considered only 10 rivers, 4 lakes and 2 reservoirs, to "dirty" and "very dirty" 2 rivers, and to «extremely dirty» - 4 rivers. The most dignified class of "gently polluted" water bodies – 26 rivers, 6 reservoirs and 3 lakes. 2 rivers had been considered to the class of «polluted» water bodies.

In the list of the main polluting substances, which exceed the MPC level, are 12 ingredients, from which the most widely distributed are the nitrites, the compounds of copper and zinc, sulfates, oil products and phenols.

In comparison with 2003 the following changes of surface water are being observed:

On the Eastern-Kazakhstan rivers the water quality hadn't changed in rivers Irtysh, Bukhtarma, Ulba, Uba and Emel. The deterioration of the water quality had been noted for the rivers Breksa, Tikhaya, Glubochanka, and Krasnoyarka.

In the Western Kazakhstan the water quality in the rivers Ural and Chagan hadn't been changed, for the rivers Derkul and Ilek the one class quality improvement had been noted, and for the river Ubagan – one class quality decrease.

On the territory of the Northern and Central Kazakhstan the water quality had been one class improved for the river Sherubai-Nura and reservoir Kengirskoye (Karaganda oblast), and also for the lake Balkhash; had been one class decreased for the rivers Ak-Bulak and Sary-Bulak (Astana), and practically hadn't changed through the other water bodies.

In the Southern Kazakhstan the water state change had been noted on the river Bolshaya Almatinka (the one class improvement), for the other observed water bodies the water quality had remained on the former level.

For the same period the deterioration of water quality in the rivers influenced by settlements are being observed: Irtysh (Semipalatinsk), Ulba (Tishinskiy mine), Breksa (Ridder), Tikhaya (Ridder), Glubochanka (Belousovka and Glubokoye villages), Krasnoyarka (Predgornoye village) and Ak-Bulak (Astana). On the other water bodies observed that are influenced by the cities and industrial centres, the water quality hadn't changed or somewhat improved: rivers Ilel (Alga and Aktobe cities) and Bolshaya Almatinka (Almaty).

4. The tests selection in frameworks of monitoring of soil pollution by the heavy metals had been carried out in 10 cities of the Republic of Kazakhstan. The tests selection had been carried out in five city points in spring and autumn. The choice of points was conditioned on the more full city coverage, taking into account the loaded highways, industrial objects, and also schools and recreation zones.

The exceedings of MPC on cadmium, lead, copper and chrome had been noted on the limits of the control areas of large industrial companies and in the regions of big highways. In Zhezkazgan the contents of cadmium, lead, chrome in soil tests was in the range of 0,9-3,7 MPC, copper 1,1-36,7 MPC; in Karaganda - cadmium - 0,7-13,8 MPC, copper and chrome 0,8-2,8 MPC, lead 0,9-5,6 MPC; in Ust-Kamenogorsk – cadmium 0,4-27,0 MPC, copper 0,6-33,3 MPC, lead and chrome 0,8-10,3 MPC; in Balkhash cadmium 5,0-56,6 MPC, copper 3,8-42,4 MPC, lead 2,0-10,7 MPC, chrome 1,6-3,4 MPC; in Temirtau - cadmium 1,7-18,2 MPC, copper and lead 1,7-7,0 MPC, chrome 0,6-1,5 MPC; in Pavlodar - cadmium and chrome 0,4-2,8 MPC, copper 1,2-7,2 MPC, lead 1,2-7,2 MPC; in Ridder - cadmium 1,2-29,0 MPC, copper 1,7-44,2 MPC, lead 1,3-44,2 MPC, chrome 0,9-2,4 MPC; in Almaty - copper 2,7-6,7 MPC, lead 1,1-4,1 MPC, cadmium and zinc 0,5-1,7 MPC; in Aktobe – copper 1,6-12,3 MPC, lead 1,8-4,4 MPC, cadmium and zinc 1,0-1,7 MPC; in Shymkent – lead 3,1-28,3 MPC, copper 1,8 – 6,1 MPC, cadmium 1,1-11,0 MPC, and zinc 1,0-1,6 MPC.

5. Observations of the level of gamma radiation on site (the power of gamma radiation dose) on the territory of the Republic of Kazakhstan had been made every day in 67 meteorological offices. The average annual indications of the power of gamma radiation dose on the RK oblasts is in the range of 0,11-0,16 mk3v/h. On average through the Republic of Kazakhstan the radiation gamma background in 2004 amounted to 0,13 mk3 v/h and is in the permissible limits.

6. Control over the radiation pollution of surface atmosphere during 9 months of the year of 2004 had been carried out in 14 oblasts of Kazakhstan in 39 meteorological offices by air tests selection by horizontal plane-tables. Average daily density of radiation fallings in the surface atmosphere on the territory of the RK had varied in the range of 0, 7-1, 4 Bk/m<sup>2</sup>. The average density of fallings for 9 months 2004 amounted to 1, 1 Bk/m<sup>2</sup>

## **8. CHALLENGES OF THE GOVERNMENT**

### **General principles of environmental protection**

#### **Fresh water protection**

Water reservoir pollution is as a result of foul surface and subsurface water and air. Dangerous thermal pollutant is returned water to water basins, served for industrial hardware cooling. In metropolises common sphere and municipal economy is water retaining. For perspective it is necessary to turn to the separate drinking and economic water delivery system. It makes for reducing expenditures for its cleaning. Nature water has property of natural purification and self-healing. Fresh water preservation – conditions building for natural

purification and self-healing of polluted water, it means that effluent discharge must not exceed natural possibilities of reservoir.

Ways of its settlement:

- within the limits of water protection zone riverside protection are placed, where ground tilling, forest felling, place live farming, conducting other activity are prohibited (place of recreation, water supply objects, fish industry, diversion and hydraulic structure is permitted)
- conducting maintenance and regime of use and riverside protection state control
- projection place, building, reconstruction and place in operation of economic and other objects, including cleaner stores, waste disposal, city and other dumps, not supplied with equipments, sewage disposal plants, preventing pollution, obstruction, making depletion water objects,
- maintenance of surface and subsurface water in condition, meeting environmental requirements, it is provided by normative settings of maximum permitted harmful influence on water objects
- new industry technology development, planning use of minimum water quantity use, that is closed technology processes introduction, which under fresh water come backs production cycle again
- search new methods of polluted and poisoned water cleaning
- strong regime of economical spending drinking water, including timely water pipe repair

### **Air protection**

Measurement on prevention and reduction of polluting substances emissions in ambient air is aimed to protect for people and environment from harmful impact, to reduce prejudice, damaging to stocks of materials and capital equipment. For it:

- quality standards of ambient air is being set – maximum permitted momentary and long duration content of polluting substances in atmosphere, which have not unfavorable impact on man health, animal and plant planet and other environmental components
- during projecting, city and settlement construction and reconstruction executive power bodies and local government must take into consideration existing ambient air pollution level and its change forecast
- during construction, putting into operation, reconstruction and technical re equipment of enterprises, during technological innovation implementation as well , measurements on collecting, sterilization of harmful substances, polluting emissions reduction in atmosphere must be stipulated
- place, construction, reconstruction and technical re equipment of enterprises and other objects are permitted only after realization of national environmental expertise and during receipting affirmative conclusion from state supervision structure
- use of gas-treating and dust retaining plants in enterprises, excepting gas emissions in atmosphere
- resource-saving technology and wasteless industry development, which contributes to drag secondary resources and co products and brings realization nature use principles – rational use of all nature resources complex
- organization transport movement for environmental situation improvement, taking into consideration the city structure
- making of computer-basis system management for city transport, which can reduce harmful substances emissions
- turn to transport use with environmental safety motor
- improvement of transport petrol quality and alternative types of fuel
- making and enlargement of control areas
- ambient air protection control

## **Emissions utilization**

Dumps of hard industry and domestic waste occupy substantial areas in towns. Their volume is being redoubled every 10 years. Waste stores and dumps make environmental problems; every year sizeable land territory is estranged for range (no taking into consideration plenty of unauthorized dumps). They pollute atmosphere, surface and subsurface water, ground and plant.

1. Sustainable development program on emissions utilization suggests making of normative and technological basis for uniform public policy in waste management sphere; reduction and localization of negative emissions impacts on environment, making effective technology of processing and disinfection waste; organization of dumps condition control and its monitoring and its impact on environment.

Nowadays none of the technique in operation collecting and hard domestic waste disposal is not satisfactory not on hygiene and sanitary, technical and economic showings. For settlement of sustainable development program on HDW utilization, including manifold substances of organic and mineral origin, necessary:

- everywhere put in order garbage collection with its preliminary sorting;
- garbage removal to processing station or plants, where waste is sorted;
- crumble-up, compact, press, extract from them useful substances; remains are delivered to the dumps;
- waste use as secondary raw materials (plastic waste, mackle-paper, non-ferrous metals, glass package, transport covers, fluorescent lamp, building waste etc.);
- use of manure gas plant for HDW utilization;
- study of HDW utilization methods of Germany, USA and other countries. HDW vacuum system for collection and transport was worked up in Russia,

2. Possibility for minimization industry waste on the basis of law-waste and resource-saving technology.

3. Utilization and destruction of toxic waste, being pollution source for top-soil and underground water bearing stratum.

## **Making of natural saving**

In connection with enhancement man's impact on environment necessity of special, careful separate nature zone, vanishing animals and plants habitats protection, being on the brink of disappearance, preservation of existed natural complexes, water sources, unique nature monuments for stable functioning of Land biosphere are being grown energetically.

Next to the towns the concentration of persons on leave in forest is especially large. It suggests high anthropogenic load, consequently for unique landscape saving, it is necessary for some territory with special regime on security, separately or completely from economic circulation and for saving of ecological balance.

## 9. BILATERAL AND MULTILATERAL COOPERATION

List of international agreements of the Republic of Kazakhstan in environmental protection sphere			
No.	Date	Place of making of agreement	Titles of agreements
1.	February 8, 1992	Moscow	Agreement between the Governments of member countries of ISC (Independent States Community) on interaction in ecology and environmental protection sphere
2.	February 8, 1992	Moscow	Agreement between the Governments of member country of ISC on interaction in hydrometeorological sphere
3.	26 March, 1993	Kyzylorda	Agreement between the Republic Of Kazakhstan, the Republic of Kyrgyzstan, the Republic of Tajikistan, Turkmenistan and Uzbekistan on joint actions for settlement problems of Aral sea and Aral shore, environmental enhancement and providing of social-and-economic development of Aral sea.
4.	September 9, 1994	Moscow	Agreement between the Governments of member countries of ISC on goods delivery for providing of national hydrometeorological services of member countries of ISC
5.	March 27, 1995	Washington	Agreement between the Government of the Republic of Kazakhstan and the United States of America on cooperation in the framework of the Program "Global researches and observations for environment "GLOBE",
6.	March 27, 1995	Washington	Agreement between the Government of the Republic of Kazakhstan and the United States of America on cooperation in environmental protection and nature resources sphere
7.	September 20, 1995	Nukus	Nukus declaration of Central Asia states and international organizations on problems of sustainable development of Aral sea basin
8.	December 27, 1995	Jerusalem	Agreement between the Government of the Republic of Kazakhstan and the Republic of Israel on cooperation in environmental protection sphere
9.	April 5, 1996	Tashkent	Agreement between the Government of the Republic of Kazakhstan, the Republic of Kyrgyzstan and the Republic of Uzbekistan on joint works on rehabilitation of area for waste storage and dump rocks, having transboundary influence
10.	April 12, 1996	Moscow	Agreement on transboundary transport of dangerous and other wastes control, confirmed by the Resolution of the Government of RK, dated on 28 April, 1997, N 670

<b>List of international agreements of the Republic of Kazakhstan in environmental protection sphere</b>			
<b>No.</b>	<b>Date</b>	<b>Place of making of agreement</b>	<b>Titles of agreements</b>
11.	September 17, 1996	Tbilisi	Memorandum between the Government of the Republic of Kazakhstan and the Government of Georgia on cooperation in environmental protection sphere, entered into force from the moment of signature
12.	March 4, 1997	Ankara	Agreement between the Republic of Kazakhstan and the Government of the Turkish Republic on cooperation in environmental protection sphere. It was confirmed by the Resolution of the Government of RK, dated on 11 June, 1997, N 947. It entered into force June 23, 1997.
13.	April 8, 1997	Almaty	Agreement between the Government of the Republic of Kazakhstan and the Government of the Republic of Kyrgyzstan on cooperation in environmental protection sphere, entered into force from the date of signature.
14.	June 2, 1997	Almaty	Agreement between the Government of the Republic of Kazakhstan and the Government of the Republic of Uzbekistan on cooperation in environmental protection and rational nature use sphere, entered into force from the date of signature
15.	June 10, 1997	Almaty	Agreement between the Government of the Republic of Kazakhstan and the Government of the Republic of Azerbaijan on cooperation in environmental protection sphere, entered into force June 10, 1997
16.	October 4, 1997	Almaty	Agreement between the Government of the Republic of Kazakhstan and the Russian Federation on ecology and nature use in territory of "Baikonur" complex on the conditions of its rent by the Russian Federation , entered into force from the date of signature.
17.	October 9, 1997	Bishkek	Protocol on alteration in Agreement on interaction in hydrometeorological sphere, dated on 8 February, 1992
18.	September 11, 1998	Moscow	Agreement on informational cooperation in ecology and environmental protection sphere, confirmed by the Government of RK, dated 05.08.99, N 1104
19.	March 12, 1998	Almaty	Agreement between the Republic of Kazakhstan and the Government of Mongolia on cooperation in environmental protection sphere. It entered into force on March 12, 1998

<b>List of international agreements of the Republic of Kazakhstan in environmental protection sphere</b>			
<b>No.</b>	<b>Date</b>	<b>Place of making of agreement</b>	<b>Titles of agreements</b>
20.	March 17, 1998	Bishkek	Agreement between the Governments of the Republic of Kazakhstan, the Republic of Kyrgyzstan and Uzbekistan on cooperation in environmental protection and rational nature use sphere
21.	September 11, 1998	Moscow	Agreement on informational cooperation in ecology and environmental protection sphere
22.	September 11, 1998	Moscow	Agreement on fundamental principles of interaction in rational use and transboundary water bodies protection of member states of ISC
23.	September 22, 1998	Tbilisi	Agreement between the Government of the Republic of Kazakhstan and the Executive power of Georgia on cooperation in environmentally clean automated special transport and infrastructure, confirmed by the Resolution of the Government of RK, dated 15.02.99, N 123
24.	June 17, 1999	Bishkek	Agreement between the Governments of the Republic of Kazakhstan, the Republic of Kyrgyzstan, the Republic of Tajikistan and Uzbekistan on cooperation in hydrometeorological sphere
25.	January 13, 1999	Saratov	On cooperation in environmental monitoring sphere.
26.	May 12, 2000	Almaty	Contract in exchange of notes form between the Republic of Kazakhstan, European communities Committee, UNDP on alteration in Agreement on regional environmental center for Central Asia
27.	November 30, 2000	Minsk	Agreement on cooperation of member states of ISC in preparation of specialists on radio-ecology, radio-safety, radio-biology and interdisciplinary sciences. It was confirmed in compliance with the Resolution of the Government of RK, dated 23.04.02, N 464
28.	September 12, 2001	Astana	Agreement between the Governments of the Republic of Kazakhstan and China on cooperation in transboundary rivers use and protection sphere
29.	March 16, 2001	Moscow	Agreement on intergovernmental hydrometeorological net of ISC, confirmed by the Resolution of the Government of RK, dated 23.08.02 N 944
30.	March 16, 2001	Moscow	On cooperation in active influence on meteorological and other geophysical processes sphere



<b>List of international agreements of the Republic of Kazakhstan in environmental protection sphere</b>			
<b>No.</b>	<b>Date</b>	<b>Place of making of agreement</b>	<b>Titles of agreements</b>
31.	April 4, 2001	Vilnius	Agreement between the Ministry of nature resources and environmental protection of RK and the Ministry of environmental protection of Lithuania in environmental protection sphere
32.	October 22, 2001	Astana	AGREEMENT ON LENDING (Project "Syrdarya river channel regulation and northern part of Aral sea preservation (phase 1)") between the Republic of Kazakhstan and International Reconstruction and development Bank
33.	June, 2002	Astana	Memorandum of understanding between the Ministry of energy and mineral resources of RK, the Ministry of nature resources and environmental protection of RK, Akimat of Eastern Kazakhstan region and Japanese organization on new types of energy and industry technology development (NEDO) on Model project of effective energy use development on the gas turbine generational system basis
34.	June 26, 2003	Almaty	Agreement between the Governments of RK and the Swiss Confederation on entry of the Government of RK into the Swiss election district of Global Environmental Fund Council. Project was confirmed by the Resolution of the Government of RK, dated on 26 June, 2003 N 607
35.	September 9, 2003	Astana	Letter consent to the deputy of Prime-minister of RK on grant of the Government of Japan for the Republic of Kazakhstan: Rehabilitation of environment project of Ust-Kamenogorsk Grant N TF 051352, ratified by the Law of RK, dated on 8 January, 2004 N 517
36.	September 12, 2003	Aktau	Aktau Caspian declaration
37.	September 26, 2003	Astana	Grant agreement of Trusting Fund (Project on droughty land management) between the Republic of Kazakhstan and International Reconstruction and development Bank, acting as the Authority agency of Global environmental fund. Agreement was ratified by the Law of RK, dated on 8 January, 2004 N 518
38.	December 17, 2003	Washington	Agreement on lending (Nura river cleaning project) between the Republic of Kazakhstan and International Reconstruction and Development Bank.