

**TRANSITION TO INTEGRATED ENVIRONMENTAL
PERMITTING IN THE KYRGYZ REPUBLIC:
Case Study**



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ACRONYMS

BAT	Best Available Techniques
BREF	BAT Reference Document
DENM	(former) Department of Environment and Nature Management
EC	European Commission
EIA	Environmental Impact Assessment
EECCA	Eastern Europe, Caucasus and Central Asia
ELV	Emission Limit Value
EMS	Environmental Management System
EPD	Environmental Permitting Division
EQS	Environmental Quality Standards
EU	European Union
GBR	General Binding Rule
IPPC	Integrated Pollution Prevention and Control
MEES	(former) Ministry of Environment and Emergency Situations
MH	Ministry of Health
OECD	Organisation for Economic Cooperation and Development
SAEP	State Agency for Environmental Protection and Forestry
TEA	Territorial Environmental Administration

1. INTRODUCTION

The aim of this case study is to analyse the conditions and make recommendations for a step-by-step introduction of an integrated environmental permitting system for specific manufacturing sectors in the Kyrgyz Republic. The case study is conceptually based on the *“Integrated Environmental Permitting Guidelines for EECCA Countries”* developed by the EAP Task Force Secretariat (OECD, 2005). In particular, the case study follows the methodology described in Chapter VI of the Guidelines, “Strategic Approach to the Gradual Transition to Integrated Permitting for Large Industry”. The approaches to introducing integrated environmental permitting in Kyrgyzstan that are proposed in this document are based on national experiences with introducing the EU Integrated Pollution Prevention and Control (IPPC) Directive (96/61/EC) in EU Member States, as well as an assessment of the current system of environmental permitting in Kyrgyzstan. While Kyrgyzstan has no obligation to comply with the IPPC Directive, the adoption of a locally suitable integrated permitting system would bring significant environmental benefits and cost savings for both government and large industry.

The new Kyrgyz government is currently considering a reform of the environmental permitting system, in part due to the recommendations of the Peer Review of Environmental Enforcement in the Kyrgyz Republic conducted by the EAP Task Force Secretariat in 2004¹. The first steps toward the implementation of integrated permitting in Kyrgyzstan were taken in connection with the Finnish technical assistance project “Environmental Monitoring and Management Capacity Building” (2004-2006). Three pilot installations were selected in the Chu Oblast – a heat and power plant, a brewery, and a ceramic building materials factory – where industrial operators were familiarised with the concept of integrated permitting and prepared draft integrated permit applications.

The present study focuses on four important aspects of designing the new permitting system:

- the scope of regulated industry,
- legal changes necessary to introduce integrated permitting,
- institutional issues, and
- the time schedule for setting up the new system.

Section 2 briefly describes the current permitting system in Kyrgyzstan and identifies its main weaknesses. Section 3 makes preliminary recommendations on the scope of application of the integrated permitting system based on the analysis of Kyrgyzstan’s industrial sector information and using the approach of the IPPC Directive. Section 4 outlines the principal changes that would need to be made to the country’s environmental legislation in order to introduce integrated permitting for large industry, with more detailed proposals contained in Annex 2. Section 5 discusses a possible allocation of institutional competencies that would need to be established in Kyrgyzstan to implement the new permitting regime. Section 6 proposes a timeline for launching the preparatory stage of the integrated permitting system and a transitory phase-in schedule for different industrial sectors.

¹ *Environmental Enforcement in the Kyrgyz Republic: Promoting Environmental Improvements and Enhancing Good Governance*. Peer Review Recommendations. EAP Task Force, OECD, 2005.

2. EXISTING ENVIRONMENTAL PERMITTING SYSTEM IN KYRGYZSTAN

The current environmental permitting system in Kyrgyzstan is based on a medium-specific approach, with separate regulations related to air and water protection and waste management. *All* sources of air and water pollution are required to have permits which stipulate maximum allowable values of specific parameters of emissions to air and discharges to water, as well as monitoring requirements. There are also separate permits for water abstraction, for non-toxic solid waste disposal, as well as licenses for management of hazardous substances and wastes. The system has remained almost unchanged since its introduction in the 1970s despite being re-authorised in several recent laws.

Environmental permits in Kyrgyzstan are issued in accordance with the Law “On Environmental Protection” No. 53 (1999), the Air Protection Law (2003), the Water Code (2005), the Law on Waste (2001) and the Government Decree No. 103 (2004) on the types of permits issued by government authorities². Licenses for hazardous waste management are based on the Law “On licensing” No. 12 (1997). In addition, the Law “On Industrial Safety” (No. 93 of 2001) stipulates permits for operation of hazardous industrial installations which cover primarily emergency preparedness issues.

In the current permitting system, operators of large industrial installations need a minimum of six environment-related permits or licenses from different national-level authorities (see Table 1). Before the restructuring of the executive authorities in October 2005³, most environmental authorisations were issued by the Ministry of Environment and Emergency Situations (MEES): by the Department of Environment and Nature Management for 32 large industrial enterprises and by the Ministry’s territorial environmental administrations (TEAs – there is one in each of the 7 oblasts plus in the cities of Bishkek and Osh) for the rest of the country’s over 4,000 regulated installations. These functions have now been transferred to the newly created State Agency for Environmental Protection and Forestry (SAEP). However, water abstraction and water discharge permits are delivered by two different ministries. Permits are reviewed every year (sometimes every two years for wastewater discharges), placing a huge administrative burden on both the operators and the regulators. Compliance with permit conditions is verified during inspections conducted maximum once a year by the territorial Control and Inspection Services which are subordinated to the SAEP.

² Under pressure from industry, the requirement to have a permit for air emissions was temporarily excluded from the legislation in 2001. These permits were reinstated by Law No. 145 of 09.08.2005.

³ In accordance with Presidential Decree No. 462 of 15.10.2005, the State Agency for Environmental Protection and Forestry was created on the basis of the Department of Environment and Nature Management of the Ministry of Environment and Emergency Situations, the State Forestry Service, and the National Centre for Development of Mountain Regions.

Table 1. Institutional Responsibilities for Environment-Related Permitting in Kyrgyzstan

Type of Permit or License	Competent Authority
1. Permit for air emissions	SAEP
2. Permit for wastewater discharges	SAEP, in consultation with the Ministry of Health
3. Permit for solid waste disposal	SAEP
4. Permit for special water use (water abstraction)	Ministry of Agriculture, Water Management and Processing Industry, in consultation with SAEP, the Ministry of Health and the Agency for Geology and Mineral Resources
5. Permit for operation of hazardous industrial installations	Gosgortekhnadzor (Industrial Safety Inspectorate)
6. License for reuse, treatment, storage and disposal of toxic substances (including hazardous waste management)	SAEP
7. Permit for storage and transportation of toxic and explosive substances	Ministry of Internal Affairs, in consultation with SAEP
8. License for transportation of hazardous waste	SAEP
9. Permit for operation of energy installations	State Inspectorate for Energy and Gas

The existing permitting system is characterised by several regulatory and institutional weaknesses.

Regulatory weaknesses:

- Fragmented and confusing regulatory framework: requirements for installations are laid down in various pieces of primary and secondary legislation, which are rarely interlinked. In extreme cases, compliance with one requirement can be incompatible with other requirements, as it is technically impossible to fulfil both at the same time. Sometimes the same requirements are interpreted differently by different authorities.
- Environmental permitting requirements and procedures are not proportionate to the polluting impact of installations: there is no differentiation between small and large sources.
- The environmental permitting process does not consider the overall environmental impact of an installation and emphasises medium-specific, end-of-pipe technological solutions rather than pollution prevention.
- Environmental permits are usually limited to medium-specific emission limit values (ELVs), often based on actual emissions or discharges, and do not include conditions for energy efficiency, use of raw materials and water, emergency preparedness, decommissioning, reporting and accident notification, etc.
- ELVs are often set in terms of total mass released annually, which is calculated based on the design capacity. Given that most enterprises have worked in 1990s at 30-40% of capacity, they did nothing to improve process and decrease pollution, remaining well within the prescribed emission/discharge limits. There is also no economic or technical assessment of the feasibility of ELVs set in permits.
- There is virtually no public involvement in the permitting process.

Institutional weaknesses:

- The coordination between the competent authorities is weak, which means that the operator or, more often, contracted consultants on his behalf have to go around all relevant agencies and fulfil their particular requirements before obtaining the necessary authorisations.

- Under the newly adopted structure of the SAEP, the Department of State Environmental Control is in charge of both permitting and enforcement (creating a potential conflict of interest), while these functions are split between divisions with responsibilities for air and water, waste management, and nature protection (hampering an integrated approach to setting permit conditions).
- A high administrative burden on the limited staff of the permitting authorities (just 1-2 permitting officials in the territorial offices) is caused by a large number of installations, large and small, renewing their permits very frequently. The heavy work load is aggravated by the regulators' limited knowledge of the regulated community and the low salaries of the staff.
- The regular environmental and statistical reporting is fragmented: air emission and waste data are reported to the State Statistical Committee while the water abstraction and wastewater discharge information is sent to the Ministry of Agriculture, Water Management and Processing Industry. This information is hardly used in decision making.
- There is insufficient political support for environmental regulatory reforms stemming from the low priority of environmental management on the government's agenda in comparison with economic and social issues.

The reform of the environmental permitting system was one of the key recommendations of the Peer Review of Environmental Enforcement in the Kyrgyz Republic. In particular, the Peer Review suggested to:

1. Differentiate permitting approaches and procedures used for large industry and small and medium-sized enterprises (SMEs), with a maximum simplification of permitting for SMEs;
2. Differentiate institutional responsibilities for permitting, putting major industry under the jurisdiction of the central environmental authority, and SMEs under the jurisdiction of the territorial offices;
3. Introduce an integrated permitting system for large industry, open for public participation;
4. Increase the validity of permits to 5-10 years while allowing for the possibility to review permit conditions whenever significant changes occur in processes, production volumes, or regulatory requirements; and
5. Introduce the concept of "best available techniques avoiding excessive costs" to serve, together with environmental quality objectives, as a criterion for setting ELVs in permits.

These recommendations, which were accepted by the national environmental authority, necessitate careful planning of the transition to integrated permitting, an approach to which is described in the following sections.

The introduction of integrated permitting for large industry will generate, among others, the following benefits:

- More effective environmental regulation offering incentives for pollution prevention, energy efficiency, resource-saving solutions, waste minimisation, and avoidance of cross-media transfer of pollution;
- Reduced administrative burden on the regulatory authorities;

- A permitting process transparent to all stakeholders leading to clear and realistic permit requirements;
- Improved resource efficiency of industrial production leading to increased competitiveness of the country's key industrial sectors; and
- A better investment climate for both foreign and domestic investment as a result of increased fairness of regulation.

3. SCOPE OF APPLICATION OF INTEGRATED PERMITTING

The integrated environmental permitting requirements should generally apply to large pollution sources, while SMEs, which cannot afford a substantial managerial and technical effort required by integrated permitting, should be regulated through a much simpler process. This section aims to define industrial sectors (and appropriate capacity thresholds for certain industrial activities) to be covered by the integrated permitting system, using the scope of the EU IPPC Directive as a starting point. The approach for setting the scope of regulated industrial activities comprised the following steps:

- Identifying criteria for selecting the sectors to be regulated under integrated permitting;
- Preparing an inventory of the installations that would fall under integrated permitting, using available sources of information in Kyrgyzstan; and
- Defining the preliminary scope and suggesting activities for its finalisation.

A further step is to prioritise the sectors that would be covered by integrated permitting in order to come up with an indicative implementation timeframe. This aspect is described in Section 6.

3.1. Criteria for Industrial Sector Selection

Industrial sectors/activities whose environmental performance can be improved through integrated regulation can be characterised by the following criteria:

- large production capacity;
- high risk of pollution of the environment and/or harm to human health and significant adverse impact on more than one environmental medium;
- risk of accidents which can have a significant negative environmental impact (in the EU, these are regulated by the Seveso II Directive on the Control of Major-Accident Hazards involving dangerous substances); and
- generation of large amounts of hazardous waste.

The application of these criteria requires defining production capacity, significant impact, accident risk level, and large amount of hazardous waste. Whereas production capacity may be generally defined as “installed” or maximum nominal capacity, defining “significant impacts” or accident risk level requires access to specific information from industrial installations. All such information is difficult to obtain from the Kyrgyz industry. Thus, for practical reasons, this case study uses the list of categories of industrial activities in Annex I of the IPPC Directive as a starting point (see Table 2).

3.2. Sources of Information for an Inventory of Installations

An inventory of industrial installations in Kyrgyzstan was developed by the team of the Finnish-funded project “Environmental Monitoring and Management Capacity Building”. This inventory identified the installations that fall under the preliminary categories of the scope of integrated permitting,

but also included other categories that do not fall under the scope of the IPPC Directive but are in line with the other criteria mentioned above.

The inventory was developed using the following sources of information:

- the enterprise register of the National Statistics Committee;
- TEAs of the seven oblasts and the cities of Bishkek and Osh;
- environmental inspectors at the *rayon* level (there are a total of 48 rayons in the country), subordinated to the respective oblast environmental administrations;
- the former DENM/MEES;
- oblast and municipal authorities; and
- municipal sanitary-epidemiological centres of the Ministry of Health.

The information collected by the rayon environmental inspectors (based on the instructions from the project team) from the above-listed sources for the oblasts of Chui, Osh, Naryn, Jalalabad, Talas, Batken, and Issyk-Kul and the cities of Osh and Bishkek was the following:

- official name of the company;
- name of the plant;
- location of the plant (city, rayon, oblast);
- sector name (based on the official statistical classification);
- sector code;
- activity name;
- activity code;
- annual production of the plant (design capacity); and
- number of employees at the plant.

Based on these different sources of information, 4,180 enterprises are registered at the National Statistics Committee, some of them having several installations⁴. The vast majority of these are small or medium-sized enterprises, including petrol stations and restaurants. The majority of the large industrial installations are located in the Chui Oblast (including Bishkek) and the Osh Oblast (including the city of Osh).

Economic sectors in Kyrgyzstan are classified according to NACE (Classification of Economic Activities in the European Community), so the relevant sector and activity codes had to be correlated with the IPPC Directive's sector classification, as shown in Annex 1.

⁴ The term 'installation' here refers to a technical unit within one site managed by one operator.

3.3. Suggestions for the Scope of Integrated Permitting in the Kyrgyz Republic

The Kyrgyz national or territorial environmental authorities currently regulate installations in most sectors listed in the IPPC Directive. Without taking into account the size of installations, the inventory prepared shows that there are 530 facilities in Kyrgyzstan that fall under the original IPPC Directive's categories. The 32 installations which are currently regulated at the national level by the SAEP mostly include those (though by far not all) that would normally be covered by integrated permitting in the EU, but also some (like production of tobacco goods) that usually lie outside its scope.

It is suggested that Kyrgyzstan define the scope of the integrated permitting system in a similar way as in the EU, with additional activities such as coal and ore mining and wastewater treatment that are considered to be significant polluters. Although mining is not yet covered by the EU IPPC Directive (it is expected to be added in the near future), it is already included in the integrated permitting systems of some EU Member States (e.g., the UK and Hungary).

In the EU, wastewater treatment plants are considered as an end-of-pipe technique, not a production installation, and are not regulated through integrated permitting. Their environmental impact is primarily on water, making medium-based permitting feasible. However, it can be argued that wastewater treatment plants are major water polluters (especially if they are not operated properly) and that several important aspects of their operations, such as sludge treatment and accident prevention should be regulated in an integrated way. Therefore, it is proposed that in Kyrgyzstan large wastewater treatment plants (*vodokanal's*) be covered by the integrated permitting regime. However, in cases where the same operator runs an industrial installation and an industrial wastewater treatment facility directly connected to it, that facility must be treated as a part of the whole installation, and conditions should be set for wastewater treatment in an integrated permit covering the entire installation.

The next step is the introduction of threshold values to identify big polluters to be subject to the integrated permitting regime. The thresholds defined in Annex I of the IPPC Directive are widely used across EU countries. In some of them the values are set even lower (e.g., for farms/intensive breeding in the Netherlands and in Finland). For this case study's preliminary recommendations on the scope it was appropriate to take the EU thresholds as a basis for setting limits of application of integrated permitting requirements. Adjustments and simplifications may be made in the future, based on the experience gained in EU countries, Kyrgyzstan and other EECCA countries (such as Ukraine).

For the sectors added to the original scope of the IPPC Directive, the capacity thresholds are proposed at 100,000 tonnes per year for coal mining and 1,000 m³/day for wastewater treatment. Since in Kyrgyzstan now the only waste management installations are landfills that contain both municipal and non-toxic industrial solid waste, it is proposed in the present situation to use a threshold of 25,000 tonnes of total landfill capacity for the entire waste management sector.

Based on the data collected, there are no installations in Kyrgyzstan in the following categories:

- Coke ovens (category 1.3 of Annex I of the IPPC Directive);
- Metal ore roasting or sintering installations (2.1);
- Melting of mineral substances, including mineral fibres production (3.4);
- Production of basic plant health products and biocides (4.4);
- Production of explosives (4.6); and
- Carbon (hard-burnt coal) or electro-graphite production (6.8).

Following the identification of the total number of installations in each category, the thresholds included in the IPPC Directive were considered. In the following categories, all or the vast majority of the installations are smaller than the thresholds indicated in Annex I of the IPPC Directive, which has led to these sectors' exclusion from the proposed scope for the integrated permitting in Kyrgyzstan:

- Slaughterhouses (6.4.a): all 5 installations have carcass production capacity below 50 t/day.
- Disposal/recycling of animal waste (6.5): there is only one small facility in the country.
- Intensive rearing of poultry or pigs (6.6): only two animal farms in Kyrgyzstan were above the IPPC Directive's thresholds, making it unfeasible to regulate this sector through integrated permitting.
- Surface treatment of substances, objects or products using organic solvents (6.7): there are 11 installations in this category in Kyrgyzstan but none of them meets the solvent consumption threshold of 200 t/year.

Table 2 presents a resulting proposal for the scope of the integrated permitting system in Kyrgyzstan, showing the preliminary allocation of industrial installations by category. With the application of relevant production capacity thresholds, ***a total of 203 installations would be covered by integrated permitting***⁵.

⁵ This figure should be considered approximate because of the uncertainty about the data on some categories of installations.

Table 2. Proposed Scope for the Integrated Permitting System in Kyrgyzstan⁶

IPPC code-Sectors		Operation	Threshold (where applicable)	NACE code	Number of Kyrgyz facilities	
					without threshold	with threshold
1. Energy	1.1	Combustion installations	Rated thermal input 50 MW or more	E 40	54	47
	1.2	Refineries		DF 23	6	6
	1.4	Installations for gasification and liquefaction		E 40	8	8
2. Production and processing of metals	2.2	Production of pig iron or steel (primary and secondary fusion), including continuous casting	Capacity exceeding 2.5 t/hour	DJ 27	8	2
	2.3 (a)	Ferrous metallurgy: hot-rolling mills	Capacity exceeding 20 t/hour of crude steel	DJ 27	8	2
	2.3 (b)	Ferrous metallurgy: operating hammers in a forge	Energy over 50 kJ/hammer, calorific power used over 20 MW	DJ 27		
	2.3 (c)	Ferrous metallurgy: application of protective fused metal coats	Input exceeding 2 t/hr of crude steel	DJ 27 DJ 28		
	2.4	Ferrous metal foundries	Production capacity exceeding 20 t/day	DJ 27	5	1
	2.5 (a)	Production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes		CB 13 DJ 27 DJ 28	19	15
	2.5 (b)	Smelting, including alloyage of non-ferrous metals and recovered products	Melting capacity exceeding 4 t/day for lead, cadmium or 20 t/day for all other metals	CB 13 DJ 27		
	2.6	Surface treatment of metals and plastic materials using electrolytic or chemical processes	Volume of treatment vats exceeding 30 m ³	DJ 28	27	5
3. Processing of minerals	3.1	Cement and lime production	Cement production capacity over 500 t/day	DI 26	9	1
	3.2	Production of asbestos and asbestos-based products		DI 26	2	2
	3.3	Glass manufacturing	Melting capacity over 20 t/day	DI 26	6	2
	3.5	Manufacturing of ceramic products by firing	Production capacity exceeding 75 t/day	DI 26	26	3
4. Production of chemicals	4.1	Production of organic chemicals		DG 24	19	19
	4.2	Production of inorganic chemicals		DG 24	4	4
	4.3	Production of phosphorus, nitrogen and potassium-based fertilizers		DG 24	2	2
	4.5	Production of pharmaceuticals using chemical or biological processes		DG 24	6	6
5.	Waste management	Total landfill capacity over 25,000 tonnes	O 90	37	12	
6. Other	6.1	Pulp & paper and board production	Production capacity over 20 t/day	DE 21	4	3

⁶ Shaded are the specifications or categories that differ from the ones defined in Annex I of the IPPC Directive.

	6.2	Pre-treatment or dyeing of fibres or textiles	Treatment capacity over 10 t/day	DB 17	36	9
	6.3	Tanning of hides and skins	Treatment capacity over 12 t/day of finished products	DC 19	11	2
	6.4 (b, c)	Treatment and processing for food production	Average annual production capacity over 75 t/day for meat products, 300 t/day for vegetable products, and 200 t/day for dairy products	DA 15	233	26
7		Coal and lignite mining	100,000 t/year	CA 10	28	5
8		Wastewater treatment	1,000 m ³ /day	O 90 E 41	35	21
Total		All categories			593	203

The number of installations presented in Table 2 should be regarded as a first detailed estimate. To define the final scope of the integrated permitting system, it will be necessary for the SAEP to:

- Discuss and agree on the definition of installation (as different from enterprise, plant, or emission source).
- Discuss and clarify the proposed specification of categories and thresholds with stakeholder government authorities, industry representatives from relevant sectors and non-government experts to adjust the activity definitions and threshold values in order to prevent ambiguous interpretations.
- Complement the inventory of facilities based on all available data and verify the capacities case by case.

4. ESTABLISHING A LEGAL BASIS FOR INTEGRATED PERMITTING

As mentioned in Section 2, the environmental permitting system in Kyrgyzstan is governed by the Law “On Environmental Protection”, the laws regulating specific environmental media (air, water, waste), the Law “On licensing”, and a number of government decrees. Kyrgyzstan’s regulatory framework requires considerable reform in order to introduce integrated pollution prevention and control and integrated permitting. The reform should include both adjustment of the current environmental medium-specific legislation and adoption of a new law which would cover key elements of integrated permitting.

Apart from the necessary changes to the existing, mostly medium-specific, legislation (for which detailed recommendations are provided in Annex 2), the improved legislative framework for permitting must cover other environmental aspects that are considered in integrated permits. Those aspects are either dealt with by authorities other than the SAEP or are not regulated at all. Energy efficiency issues are within the competence of the State Inspectorate for Energy and Gas. Prevention of accidents and emergencies is under the Gosgortekhnadzor. Construction standards for new installations are largely determined by the State Agency for Architecture and Construction. The issues of noise impact of industrial facilities are regulated by the Ministry of Health. The country does not yet have rules or technical guidelines for decommissioning of installations, including decontamination procedures for closed industrial sites.

Various legal arrangements could be used to introduce integrated permitting, in particular, all necessary amendments could be introduced to the framework Law on Environmental Protection and the medium-specific legislation. However, the experience of the new EU Member States has shown that adoption of a *special Law on Integrated Pollution Prevention and Control* (IPPC) would be more appropriate.

A special IPPC Law would make it possible to stipulate key provisions of the new system in a concise manner, create necessary conditions for interagency coordination, and ensure development of new elements of the regulatory framework (use of the BAT concept in setting integrated permit conditions, development of a single list of pollutants for all environmental media, etc.). The adoption of an IPPC law would also accelerate solving a number of common environmental management issues, in particular, the formulation of uniform terms used in the environmental regulation of economic activities. Bringing the current legislation of the Kyrgyz Republic in line with the integrated permitting system should be done concurrently with the adoption of an IPPC law.

5. INSTITUTIONAL FRAMEWORK FOR INTEGRATED PERMITTING

This section provides recommendations on the design of an institutional structure in Kyrgyzstan that would be put in place to administer the integrated permitting system. Such institutional structure should enable the appropriate functions and competencies within the new system and allocate human, technical, and financial resources to support it.

There are five main functions/competencies related to the integrated permitting system:

- National-level development and implementation of the integrated permitting system;
- Issuance of integrated permits;
- Inspection of compliance with permits;
- Handling appeals against permitting decisions; and
- Expert and informational support for integrated permitting.

The following subsections discuss options for allocating these functions to relevant authorities considering the division of competencies, resource allocation, suitable organisational structure, and linkages with other stakeholders.

5.1. National-Level Functions

The State Agency for Environmental Protection and Forestry (or its possible successor environment authority) should play a leading role in preparing the introduction of the integrated permitting system in the Kyrgyz Republic. It should work closely with the Ministry of Agriculture, Water Management and Processing Industry, Ministry of Health, Ministry of Internal Affairs, Ministry of Industry, Trade and Tourism, State Inspectorate for Energy and Gas, Gosgortekhnadzor, other government agencies, industry associations, and other stakeholders. It would be advisable to create an *interagency working group* that would oversee the following principal activities over the period of transition to integrated permitting:

- Development of an **implementation strategy** with concrete actions which will have to be accepted not only by SAEP management, but also by other stakeholders, and receive approval by the Government. Such a strategy can be prepared within the SAEP, if resources are available, or by consultants and should be critically examined by the interagency working group.
- Preparation of relevant **draft legislation** for the implementation of the integrated permitting system and its submission to the Government.
- Development of integrated permitting **procedures, forms, and guidance documents** for the permitting authorities and industry.

In order to perform these tasks, *a permanent Environmental Permitting Division (EPD) should be established within the SAEP*, initially with a minimum of 5 staff persons. The SAEP needs to enable and promote cooperation between the EPD and other divisions. Progressively, the EPD should be strengthened

to be able to issue integrated permits for large industrial installations, provide continuous guidance to the territorial environmental administrations (TEAs) on permitting of SMEs, and carry out periodic regulatory reviews of the permitting system.

5.2. Permitting Function

The Environmental Permitting Division of the SAEP is proposed to be made responsible for issuing, reviewing and revising permits for new and existing installations that are covered by the integrated permitting regime and review of reporting from the regulated installations.

Currently in Kyrgyzstan, the SAEP's Department of State Environmental Control issues separate permits for air emissions, wastewater discharges, and solid waste disposal, as well as licenses for hazardous waste management for a list of 32 largest industrial installations. The extensive permitting experience and good knowledge of the large industry at the national level justifies making SAEP the integrated permitting authority, while the TEAs would be responsible for permitting of SMEs that do not need integrated permits. The SAEP will require substantial capacity building in technique-based permitting, including determination of BAT, combined approach to setting ELVs, efficient use of energy, water, and other resources, accident prevention, etc.

The SAEP will have to ensure coordination with other government agencies that presently have competence over some environmental aspects that will be incorporated into integrated permits:

- The Ministry of Health with respect to air and water pollution, as well as noise regulation;
- Local authorities in designing and controlling the implementation of improvement programmes prescribed in integrated permits;
- The ministry dealing with water resources management with respect to water abstraction;
- The Gosgortekhnadzor in setting permit conditions for accident prevention and response;
- The State Inspectorate for Energy and Gas with respect to energy use and efficiency, etc.

In order to carry out the integrated permitting functions, the EPD would need to be gradually expanded to **about 10 staff**, with personnel qualifications including both environmental and management skills. This means that, on average, there would be *around 20 installations which require integrated permits per officer*⁷. The permitting staff numbers at the territorial level should also grow from only one permitting official per TEA at present to at least two to handle permitting for SMEs.

⁷ In the Czech Republic, for comparison, one environmental permitting officer at a regional authority is responsible, on average, for 40 IPPC installations. According to recommendations made by German experts in a technical assistance project on IPPC implementation in the Czech Republic, there should be three permitting officers and one support staff for 100 installations. (Phare Twinning Project CZ2000/IB/EN-01, *Final Overall Implementation Plan on IPPC for the Czech Republic*, The Czech Ministry of Environment, Prague, 2002).

5.3. Inspection Function

As an indispensable part of the integrated permitting system, the inspection function covers not only actual *integrated* inspection of relevant installations, but also continuous information exchange with the permitting authorities in setting and verifying compliance with permit conditions for monitoring, recordkeeping, and reporting; approving and monitoring the implementation of an improvement programme; and managing emergency situations.

The assurance of compliance with environment-related permits is currently the responsibility of the SAEP's Department of State Environmental Control at the central level (its 17 staff also have permitting functions) and the Control and Inspection Service at the territorial level (with two inspectors per territorial unit). The Peer Review of Environmental Enforcement in the Kyrgyz Republic recommended strict separation of the permitting and inspection functions at both the national and territorial levels, which can be done by forming an autonomous Environmental Inspectorate.

It will be necessary to change the inspection procedures to ensure cross-media inspections that would consider all relevant operational and management techniques at an installation and not just compliance with ELVs, as is currently the case. Furthermore, inspectors would have to be well informed on applicable BATs and comment on integrated permit applications and respective permit conditions (to make the latter more realistic and enforceable). In addition, deeper reviews of reports from regulated installations would be necessary in order to prioritise the inspection work and focus on 'bad' performers. Further guidance on improving the performance of environmental inspectorates can be found in "*Assuring Environmental Compliance: A Toolkit for Building Better Environmental Inspectorates in Eastern Europe, Caucasus, and Central Asia*" (OECD, 2004).

5.4. Appeal Function

Presently in Kyrgyzstan, environmental permits are rarely appealed because the procedure is lengthy, and operators accept permit conditions knowing that their enforcement would likely be lax and a deal can be negotiated with environmental authorities in case of non-compliance.

Under the integrated permitting system, any person or body, including the applicant for a permit, stakeholder authorities, NGOs, and representatives of the public, can make an appeal against a refusal to grant a permit or against certain conditions in the permit that has been granted. The appeal procedure should be laid out in implementing regulations to the law on integrated permitting.

If the operator or any other party is dissatisfied with the permitting decision of the EPD, it may first submit an administrative appeal to the Director of SAEP, and, if dissatisfied with the outcome, file a suit against the SAEP in an *arbitration court*, subject to a pertinent legal procedure. It is reasonable to expect a fair number of appeals at least at the initial stage of implementation of the integrated permitting system.

5.5. Expert and Information Support Function

The SAEP will need expert and information support in the following major functions of the integrated permitting system:

- Development and maintenance of **technical guidance** on sectoral and horizontal BAT (and a related national **BAT database**). This would most likely involve translating the EU BREFs and other relevant international guidance documents and adjusting them based on the Kyrgyz practice.

- Providing **information support** to environmental inspectors, industry, and the general public on BAT and other aspects of integrated permitting. Such information support may involve establishing a special website on integrated permitting and creation of an interagency electronic network.
- Providing **training** on procedural and technical aspects of BAT for both government officials and industrial managers.

Based on international experience, it is advisable to have a core group of about 30 experts to provide these services. About 80% of the group would focus on BAT for individual sectors and cross-sectoral guidance on issues like self-monitoring, energy efficiency, cost-benefit analysis, and site assessment. The remaining experts should be engaged in IT development, communication, management, and training. English language skills would be an important requirement for most of the experts.

Currently, there is no ready institution in Kyrgyzstan that could take upon itself such support function. Although there long have been plans to establish a cleaner production centre, those have not been followed through. Using external consultants is an expensive option and does not contribute to building long-term institutional capacity.

Therefore, it is recommended to create a *National Integrated Pollution Prevention and Control Centre* which would deal with both integrated permitting and industrial cleaner production and environmental management issues. The centre's staff should be knowledgeable in the concept and technical options of integrated environmental management in industry, should have the computer equipment and language skills necessary to develop BAT guidance documents. An IPPC Centre would be able to provide continuity of service to both government and industry.

The SAEP should be responsible for financing specific expert and information support activities related to integrated permitting. Other operations of the IPPC Centre could be funded by proceeds from commercial activities and services (e.g., environmental audits) offered by the centre.

In order to avoid a potential conflict of interest in the IPPC Centre's work for the regulator and the regulated community at the same time, it is better to have a fully government-funded institution (like the Integrated Pollution Prevention Agency in the Czech Republic) that supports the environmental authority but does not provide consulting services to industry. This, however, may be difficult to implement in Kyrgyzstan in the short term, given the existing financial and human resource constraints.

6. TIMING OF IMPLEMENTATION

The introduction of integrated environmental permitting in Kyrgyzstan can take place only with sufficient political support of the Kyrgyz government. Such support is necessary in the preparatory phase of the transition to initiate necessary institutional changes and communication with industry, as well as to strengthen cooperation between relevant government stakeholders. The preparatory phase has to be long enough to secure the necessary funding for administering the system and to negotiate with industry and sectoral ministries responsible for industry, energy sector, and agriculture an acceptable timeframe for the implementation of integrated permit requirements.

This Section contains suggestions for tasks and their timing during the preparatory phase as well as the approach for a gradual introduction of integrated permitting requirements for industry.

6.1. Preparatory Stage Timing

Table 3 summarises the steps Kyrgyzstan will need to take to prepare the institutional, legal and technical basis for the transition to integrated permitting. Special attention needs to be given to long-term activities, such as preparation of technical guidance and carrying out pilot permitting projects, since they are closely linked to the introduction of integrated permitting requirements for individual industrial sectors. The transition is expected to take between 10 and 15 years.

The process of reforming the environmental permitting system is just starting in the Kyrgyz Republic. While several recent donor-supported activities (including the Peer Review of Environmental Enforcement and the Finnish technical assistance project) have raised awareness among environmental officials of the advantages of integrated permitting, the Kyrgyz government has not yet expressed a formal commitment to introduce integrated environmental permitting for large industry. Such political decision is essential to mobilise not only all relevant staff at the SAEP (at both the national and regional levels) but also other concerned government authorities for the active preparation and implementation of the new system. Since the introduction of integrated permitting requires many changes across various authorities, it is important for their staff to understand potential benefits of the new system as they prepare for the transition.

Table 3. Indicative Steps and Timetable for Introducing Integrated Permitting in Kyrgyzstan

Year	Task	Responsible bodies	Cooperation with Other Stakeholders
1	Make a political decision to introduce integrated environmental permitting based on a policy paper	Government of KR	
	Establish an interagency working group (IWG) on environmental permitting reform	SAEP, MH, sectoral ministries/agencies	
	Determine scope of the integrated permitting system (industrial sectors and thresholds)	SAEP	Other stakeholders (including industry) to comment on the scope
	Analyse the legal, institutional and information requirements of the new system, conduct a needs assessment (human, technical, financial resources)	SAEP	Stakeholder consultations within the IWG
	Develop an overall strategy for the transition and implementation plan	SAEP	Stakeholder consultations within the IWG
	Discuss and determine approach for developing a national BAT guidance or adapting existing guidance documents	SAEP	IWG, representatives of industrials associations, research institutes
	Start drafting necessary primary legislation	SAEP	Stakeholder consultations on the draft
2	Implement institutional arrangements	SAEP/EPD	
	Prioritise sectors for gradual introduction of integrated permitting and finalise transition plan for industry	IWG, SAEP	Other relevant agencies, industry representatives to comment on the priorities; industry starts planning
	Start developing/adjusting BAT guidance for prioritised industry sectors	EPD, IPPC Centre	Cooperation with industry representatives, relevant institutes
	Draft law on integrated permitting, amendments to existing legislation published for consultation	SAEP	Stakeholder consultations on draft legislation
	Start drafting secondary legislation	SAEP	Stakeholder consultations on draft legislation
	Pilot permitting projects	EPD	Relevant authorities, industry, NGOs
	Training commences	EPD	IPPC Centre
3	Law on IPPC promulgated	SAEP/Parliament	
	Draft implementing regulations published, then adopted	SAEP/Government	Stakeholder consultations on draft legislation
	Continue work on BAT technical guidance, first BAT technical guidance finalised	EPD, IPPC Centre	SAEP, IWG, industry, relevant institutes
	Preparation of procedural guidance documents	EPD	Stakeholder consultations on draft
	Training and pilot projects continue	EPD	IPPC Centre, relevant authorities, industry, NGOs
	Preparation of national permit database	EPD	
4	Continue preparation of other BAT guidance	IPPC Centre	SAEP, IWG, industry, relevant institutes
	Procedural guidance documents published	SAEP	
	Permit registers and national permit database established	EPD	
	Training and pilot projects continue	EPD	IPPC Centre, relevant authorities,

Year	Task	Responsible bodies	Cooperation with Other Stakeholders
			industry, NGOs
5	Requirements for new installations to obtain permit prior operation come into force	EPD	Industry
6 - 15	Finalisation of BAT guidance	IPPC Centre	SAEP, IWG, industry, relevant institutes
	Gradual introduction of integrated permits for existing installations	EPD	Industry

6.2. Industry Phase-in Schedule

Sector Prioritisation

In order to accommodate the capacity constraints related to the transition to the integrated permitting regime (the need to develop sectoral technical guidelines, lack of practical experience in the permitting authorities, large administrative burden of moving to the new system), industrial sectors have to be prioritised to face the new requirements at different times. Table 4 presents the criteria used for such prioritisation.

Table 4. Criteria for Prioritisation of Industrial Sectors

Criteria	Score			Weighting
	1	2	3	
Environmental impact	L	M	H	4
Potential for improvement of environmental performance	L	M	H	2
Anticipated compliance costs	H	M	L	3
Financial performance	L	M	H	2
Number of installations to be regulated	H	M	L	1

L = Low, M= Medium, H= high

A detailed assessment of all concerned sectors according to the prioritisation criteria could not be performed due to the lack of data. The scores were estimated based on the opinions of Kyrgyz experts and government representatives and on the experience from EU countries. The summary of the prioritisation results and the proposed timeframes for the introduction of integrated permitting are presented in Table 5 (see Annex 3 for all individual scores).

Table 5. Prioritisation of sectors for a transitory phase-in schedule

Sectors	IPPC codes (cf. Table 2)	Total environmental impact	Number of installations	Overall score	Proposed time of application for integrated permits
Textile dyeing and leather tanning	6.2-6.3	2.0	11	5.00	year 5
Pulp and paper industry	6.1	1.8	3	4.84	year 5
Waste management	5	2.2	12	4.76	year 6
Coal and lignite mining	7	2.4	5	4.72	year 6
Chemical industry	4.1-4.5	2.4	31	4.52	year 8
Fuel and energy industry	1.1, 1.2, 1.4	2.0	61	4.40	year 8
Wastewater treatment	8	2.0	21	4.40	year 10
Production and processing of metals	2.2-2.6	2.2	25	4.36	year 10
Food production	6.4	1.6	26	4.28	year 12

Sectors	IPPC codes (cf. Table 2)	Total environmental impact	Number of installations	Overall score	Proposed time of application for integrated permits
Processing of minerals	3.1-3.3, 3.5	1.4	8	4.12	year 12

The resultant time sequence of sectors to become subject to integrated permitting requirements shows that the sectors with lower compliance costs and fewer installations (pulp and paper, textile and leather tanning industries) would be the first candidates. The sectors with high environmental impact but with relatively few facilities (waste management and coal mining) follow, while sectors with large number of installations (chemical and energy industries) are in the middle of the table. The latter's transition to integrated permitting will require more time as they will face substantial investment costs. Metallurgical and wastewater management installations, which are financially weaker, may need even more time to adapt to the new requirements. The EPD's institutional capacity should be then be sufficient to regulate these key sectors through integrated permits. The minerals processing and food industry are at the end of the priority list, reflecting their lower environmental significance.

It is important to understand that the proposed scoring procedure is only one approach to sector prioritisation. To a large extent, the scoring depends on the subjective evaluation of selected criteria, unless extensive data can be collected. Therefore, it is advisable to verify the prioritisation results against more objective information and have a larger stakeholder consensus on them. Ultimately, however, the sectoral prioritisation for the introduction of integrated permitting is a political decision that cannot be entirely objective.

New installations and those undergoing a change in operations must obtain integrated permits by the deadlines set for different sectors on the basis of the prioritisation. For this to be feasible, all the preparatory steps listed in Table 3, covering the legal, technical and institutional aspects of the permitting system, will have to be completed at least half a year prior to the deadline for each specific sector. In particular, the BAT guidance for the sector must be approved before that sector enters the new system. Existing installations will have to comply with the requirements within a few years thereafter but **no later than 15 years** after a political decision is made to implement integrated permitting.

Pilot Permitting

The experience of new EU Member States has shown that pilot projects are the most practical method of capacity building not only for industry but also for permitting and other stakeholder authorities involved in the permitting procedure, as well as NGOs.

The maximum benefit from pilot projects in Kyrgyzstan can be obtained if they are carried out in all sectors to be regulated under the integrated permitting regime. This may not be practically possible, as there are currently 26 subcategories of activities proposed to be covered by integrated permitting (as listed in Table 2). As can be seen in Table 3, pilot projects are suggested to be carried out in the years 2-4 of the preparation to the transition. About 5-6 pilot projects per year over three years covering the main categories of regulated installations would help to get practical experience while testing the integrated permitting procedure, application and permit forms, and BAT guidance.

The pilot projects schedule would be good to link to the work plan for the preparation of sectoral technical guidance (which itself would be a function of the sector prioritisation), ensuring that a finished or at least draft version of a guidance document can be put to a practical test. As part of the Finnish funded project "Environmental Monitoring and Management Capacity Building" three enterprises have been selected to prepare pilot integrated permit applications: in the energy sector (heat and power plant, IPPC sector 1.1), minerals processing (brick factory, IPPC sector 3.5) and food industry (brewery, IPPC sector 6.4.b).

7. CONCLUSIONS

The present case study shows that designing an integrated permitting system for the Kyrgyz Republic should be based on determining the scope of regulated activities/sectors. The preliminary inventory of industrial installations has revealed that about 203 Kyrgyz facilities would fall under the integrated permitting regime. This number accounts for about 5% of all plants currently regulated by the Kyrgyz environmental authorities. Compared to the scope of application of the IPPC Directive, the suggested scope of integrated permitting for Kyrgyzstan is broadened by including the mining industry and wastewater treatment due to their high polluting potential (see Section 3.3).

The institutional structure necessary for administering an integrated permitting system will require the creation and staffing of an Environmental Permitting Division at the SAEP and establishing a technical expert support body (e.g., a national IPPC centre).

Implementing integrated permitting in Kyrgyzstan will require strengthened stakeholder cooperation on two main levels. First, during the preparatory stage, inter-ministerial cooperation will be necessary to agree on the degree of integration of the currently separate environment-related permits/approvals, on the scope of regulated sectors and on the timing of integrated permitting introduction. Second, during the implementation stage, the Environmental Permitting Division and relevant concerned authorities will have to collaborate among themselves and with the public in setting conditions in integrated permits.

The preparatory phase should take a maximum of 5 years from the political decision enabling the implementation of integrated permitting. The phase-in of integrated permitting requirements for industry is projected to last an additional 10 years.

The SAEP should provide leadership in the effort to introduce the integrated environmental permitting system, but a higher, government-level decision is needed to provide a strong political backing to the reform process. Once such definitive political decision has been made, the SAEP should proceed to develop and adopt an overall strategy for the transition and an implementation plan and begin to draft the necessary legislation and procedural and technical guidance, supported by pilot permitting projects.

ANNEX 1. COMPARISON OF THE KYRGYZ CLASSIFICATION OF ECONOMIC ACTIVITIES AND THE SCOPE OF THE IPPC DIRECTIVE

Kyrgyz Classification of Economic Activities (NACE-based)			IPPC Classification		
Name of the Section	Section	Activity Code	#	Name	
<i>Production and distribution of electricity, gas & water</i>	E	40-41		1. Energy industry	
Power generation	E	40.11-40.13	1.1		
Steam and hot water supply	E	40.3	1.1		
Gas production	E	40.21.0	1.4		
<i>Fuel production</i>	CA	10-12			
Crude oil and accompanying gas production	CA	11.10.1	1.2		
<i>Coke, oil products and nuclear fuel production</i>	DF	23			
Oil products production	DF	23.20.0	1.2		
Coke production	DF	23.10.0	1.3		
<i>Metallurgical production</i>	DJ	27-28			2. Production and processing of metals
Cast iron, steel and ferroalloy production	DJ	27.10	2.2		
Pipe production	DJ	27.2	2.3		
Pre-processing of cast iron, steel and ferroalloy	DJ	27.3	2.3		
Production of non-ferrous metals	DJ	27.4	2.5a		
Production of uranium and thorium ore	CA	12	2.5a		
Metal working and metal plating	DJ	28.5	2.3		
Production of knives, instruments and ironmongery	DJ	28.6	2.5, 2.6		
Metal casting	DJ	27.5	2.5b		
<i>Production of engines and equipment</i>	DK				
Production of engines and equipment	DK	29.1-29.5	2.4-2.6		
<i>Mining of minerals except fuel</i>	CB	13-14			
Mining of non-ferrous metals ore except uranium and thorium ores	CB	13.20	2.5a/b (add.)		
Mining and dressing of tin ore	CB	13.20.6			
Mining and dressing of antimony and mercury ore	CB	13.20.7			
Mining of precious metals and scarce metals ore	CB	13.20.8			
<i>Production of electric engines and equipment</i>	DL	30-33	2.5b	3. Processing of minerals	
Production of galvanic equipment	DL	31.40.0			
<i>Production of non-metal minerals</i>	DI	26			
Production of glass and glassware	DI	26.1	3.3		
Ceramics production	DI	26.2-26.4, 26.6	3.5		
Cement production	DI	26.51	3.1		
Lime production	DI	26.52	3.1		
Asbestos production	DI	26.82.1	3.2		
Production of isolation mineral materials	DI	26.82.2	3.4		
<i>Chemical industry</i>	DG	24			4. Chemical industry
Production of organic chemicals	DG	24.14	4.1		
Production of paints, varnish, typographic paints, etc.	DG	24.30	4.1		
Production of glue and gelatine	DG	24.62	4.1		
Production of ether oils	DG	24.63	4.1b		
Production of primary plastic	DG	24.16	4.1h		

Kyrgyz Classification of Economic Activities (NACE-based)			IPPC Classification	
Name of the Section	Section	Activity Code	#	Name
Production of artificial and synthetic fibres	DG	24.7	4.1h	
Production of synthetic rubber	DG	24.17	4.1i	
Production of dye and pigment	DG	24.12.0	4.1j	
Production of soap and detergents	DG	24.51.0	4.1k	
Production of inorganic chemicals	DG	24.13.0	4.2	
Production of industrial gases	DG	24.11.0	4.2a	
Production of fertilizers	DG	24.15	4.3	
Agrochemicals production	DG	24.20.0	4.4	
Production of pharmaceutical products	DG	24.4	4.5	
Production of explosives	DG	24.61	4.6	
<i>Production of engines and equipment</i>	DK	29		
Production of weapons and ammunition	DK	29.60.0	4.6	
<i>Public and individual services</i>	O	90-93		
Solid waste treatment and disposal	O	90.02.0	5.1/5.4	
Sanitary services, cleanup and similar services	O	90.03.0	5.1/5.4	
<i>Other branches of production</i>	DN	36-37		
Processing of ferrous metals wastes and scrap	DN	37.10.1	5.1/5.3	
Processing of non-ferrous metals wastes and scrap	DN	37.10.2	5.1/5.3	
Processing of non-metal wastes and scrap	DN	37.20	5.1/5.3	
<i>Pulp and paper industry, typographic production</i>	DE	21-22		
Production of paper pulp	DE	21.11	6.1a	6.1. Production of pulp and paper
Production of paper, cardboard	DE	21.12	6.1b	
<i>Textiles and clothing manufacturing</i>	DB	17-18		
Textiles manufacturing	DB	17	6.2	6.2. Pre-treatment of fibres or textiles
Processing and dyeing of fur	DB	18.3	6.2	
<i>Production of leather, leather products and shoes</i>	DC	19		
Genuine leather production	DC	19.10.1	6.3	6.3. Tanning of hides and skins
<i>Fishery and fish-breeding</i>	B	05		
Fishery	B	05.01.0	6.4b	6.4. Slaughterhouses and food production
Fish-breeding	B	05.02.0	6.4b	
<i>Production of foodstuffs including drinks and tobacco</i>	DA	15-16		
Meat production (slaughterhouses)	DA	15.11.0	6.4a	
Poultry and rabbit meat production	DA	15.12.0	6.4b	
Processing of potatoes	DA	15.31.0	6.4b	
Production of fruit and vegetable juices	DA	15.32.0	6.4b	
Processing and canning of fruits and vegetables	DA	15.33.0	6.4b	
Production of unrefined oils	DA	15.41.0	6.4b	
Production of refined oils	DA	15.42.0	6.4b	
Flour production	DA	15.61.1	6.4b	
Sugar production	DA	15.83.0	6.4b	
Production of child food	DA	15.88.0	6.4b/c	
Production of distilled alcohols	DA	15.91.0	6.4b	
Wine production	DA	15.93.0	6.4b	
Production of cider and other fruit wines	DA	15.94.0	6.4b	
Beer production	DA	15.96.0	6.4b	
Production of mineral water and soft drinks	DA	15.98.0	6.4b	
Processing of milk	DA	15.51.1	6.4c	
Ice-cream production	DA	15.52.0	6.4c	

Kyrgyz Classification of Economic Activities (NACE-based)			IPPC Classification	
Name of the Section	Section	Activity Code	#	Name
Processing and preserving of fish	DA	15.20	6.5	6.5. Disposal of animal waste
Production of animal fodder	DA	15.7	6.5	
<i>Agriculture, hunting and forestry</i>	<i>A</i>	<i>01-02</i>		6.6 Intensive rearing of poultry and pigs
Chicken farming	A	01.24.1	6.6a	
Pig farming	A	01.23.0	6.6b	
<i>Production of engines and equipment</i>	DK	29		6.7. Surface treatment using solvents
Production of typographic equipment	DK	29.56.7	6.7	
<i>Production of electric engines and equipment</i>	DL	30-33		6.8. Production of carbon & graphite
Production of carbon and graphite electrodes	DL	31.62.1	6.8	
Coal production (open pit)	CA	10.10.1		7. Coal and lignite mining (additional)
Coal production by underground mining	CA	10.10.2		
Lignite coal mining (open pit)	CA	10.20.1		
Wastewater removal and treatment	O	90.01.0		8. Wastewater treatment (additional)
Water abstraction, treatment and distribution	E	41.00.0		

ANNEX 2. ANALYSIS OF NECESSARY CHANGES IN KEY ENVIRONMENTAL LAWS AND REGULATIONS OF THE KYRGYZ REPUBLIC

1. Laws of the Kyrgyz Republic

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
Law of the Kyrgyz Republic On Environmental Protection No. 53 of 16.06.1999 (as subsequently amended)	Section I. General Provisions	<i>Article 1. Environmental Legislation of the Kyrgyz Republic</i> The article states that environmental protection is governed by the Constitution of the KR, this law, and other relevant laws and regulations of the Kyrgyz Republic. A new Law on Integrated Pollution Prevention and Control should become a key component of the environmental legislation governing the permitting system. The adoption of an IPPC Law would make it possible to bring together key provisions of the environmental permits and to ensure consistent adjustment of related regulatory elements, as mentioned below in comments to other existing regulations of the KR. Amendments to the current legislation should be introduced concurrently with the adoption of this law.
		<i>Article 2. Key Terms</i> The term “integrated environmental permit” should be introduced and terms “installation” and “operator” defined.
	Section VIII. Competency of Public Authorities; Powers of Public Associations;	<i>Article 42. Competency of Local Public Administrations and Local Self-Governance Authorities</i> The competency of the local public administrations and local self-governance authorities in the environmental regulation as a whole and the environmental permitting process in particular should be determined in the Environmental Code.

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
	Rights and Duties of Citizens and Users of Natural Resources in Environmental Protection	<p><i>Article 43. Competency of the State Environmental Authority of the Republic</i> The Article says that the competency of the central environmental authority includes:</p> <ul style="list-style-type: none"> • Issuance of licenses for recovery, placement, destruction, and disposal of waste of toxic materials and substances, including radioactive ones, and certificates for use, import, export, and sale of natural resources under the legislation of the KR; • Restriction, suspension, or termination of activities of enterprises and other installations if they are operated in violation of the environmental legislation or in excess of emission limit values. <p>When the IPPC Law is promulgated, the provisions of these paragraphs should be amended so that they provide for the issuance of integrated permits by the central environmental authority.</p> <p><i>Article 45. Rights of Public Associations</i> <i>Article 46. Rights and Duties of Citizens in Environmental Protection</i> These articles should provide for the involvement of public associations and citizens in the integrated environmental permitting process, which is not mentioned at present.</p>
	Section IV. Environmental Requirements for Economic and Other Activities	<p><i>Article 17. Environmental Requirements for Placement, Design, Construction, Reconstruction, and Putting into Operation of Enterprises, Infrastructure, and Other Installations</i> <i>Article 18. Environmental Requirements for Economic and Other Activities</i> <i>Article 22. Environmental Protection Against Hazardous Physical Impacts</i> <i>Article 23. Environmental Protection Against Industrial, Municipal, and Other Waste</i></p> <p>The provisions of these articles should be harmonised with the IPPC Law in order to provide for integrated consideration of the used production methods, of how a facility is designed, built, maintained, operated, and decommissioned. The concept of the best available techniques (BAT) and technical guidance should also be introduced.</p>
Law On Air Protection of the Kyrgyz Republic No. 51 of 12.06.1999 and No. 109 of 24.06.2003	Section I. General Provisions	<p><i>Article 1. General Terms</i> Key terms such as “pollutant”, “pollutant emission limit value”, or “special ambient air use” should be harmonised with the IPPC Law. Also, the terms “installation”, “operator”, and “best available techniques” should be defined.</p>
	Section III. Air Emission Limit Values and Negative Physical Impact Standards	<p><i>Article 8. Air Emission Limit Values and Negative Physical Impact Limits</i> Under this Article, pollutant emission limit values and maximum allowable hazardous physical impact limits are set for stationary sources. Such limits are set for each stationary source of emissions or negative physical impact on ambient air. Within the framework of the integrated permitting system, the ELVs should be based on BAT technical guidance for various categories of installations, which should be reflected in the law. At the same time, technology-based standards for the installations which do not fall under the integrated permitting system should become part of sectoral general binding rules (GBRs).</p>

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
		<p><i>Article 9. Requirements for Air Emission Limit Values and Negative Physical Impact Limits</i> <i>Article 10. Procedure for Setting Air Emission Limit Values and Negative Physical Impact Limits</i> Under these articles, air ELVs and maximum allowable negative physical impacts are set at the level at which negative impact of a concrete source and all other sources in the area would not lead to the exceedance, as per approved methodology, of the ambient air quality standards for pollutants or negative physical impact. These articles should be amended to reflect the combined approach to setting ELVs in integrated permits where primarily the technical guidance on BAT and then ambient air quality standards are considered.</p> <p><i>Article 11. Standards for Use of Ambient Air</i> The article provides for setting standards for the use of ambient air for industrial needs at the level at which its natural condition does not change. This provision should be eliminated from the Air Protection Law as it contradicts the international practice.</p> <p><i>Article 14. Restriction, Suspension, or Banning of Pollutant Emissions into the Atmosphere</i> Should permit conditions or requirements be breached or in the event of a threat to human health or environment, emission of pollutants into the atmosphere should be restricted, suspended, or banned by environmental authorities. <i>Article 14-1. Regulation of pollutant emissions by stationary sources into the atmosphere.</i> Air emissions by stationary sources are allowed on the basis of a permit issued by state environmental authorities in accordance with the legislation of the Kyrgyz Republic. An air emission permit stipulates ELVs and other conditions and air protection requirements. The provisions of this article should be harmonised with the IPPC Law. Also, GBR-based permitting should be stipulated for the installations which do not fall under the integrated permitting system.</p> <p><i>Articles 15 and 16. Regulation of Pollutant Emissions into the Atmosphere by Stationary Installations in Accidents or Unfavourable Meteorological Conditions</i> These articles require that enterprises notify the environmental authorities of accidents which entail the exceedance of the ELVs or unfavourable meteorological conditions which might lead to the exceedance of the ambient air quality standards and carry out appropriate activities. For installations regulated by integrated permits, emergency and notification requirements are part of an integrated permit. These articles should be harmonised with the IPPC Law.</p> <p><i>Article 17. Regulation of Negative Impacts on the Atmosphere in the Absence of Standards</i> The article provides that pollutant emissions and other negative impacts on ambient air for which no respective standards are set can be allowed in exceptional cases by licenses issued by environmental authorities for a certain period. With regulation by BAT-based integrated permits there is no need to set standards for all possible hazardous substances emitted. This article should be eliminated.</p>
	Section IV. Regulation of Pollutant Emissions into Atmosphere by Stationary Sources of Pollution	

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
	Section VI. Regulation of Negative Physical Impacts on the Atmosphere	<p><i>Article 20. Measures to Prevent, Reduce, or Eliminate Negative Physical Impacts on the Atmosphere</i> <i>Article 21. Restriction, Suspension, or Banning of Negative Physical Impacts on Atmosphere</i> In integrated permits, such requirements are set by conditions of operation of industrial installations stipulated by the technical guidance on BAT. These articles should be harmonised with the IPPC Law.</p>
	Section VII. Air Protection Requirements for Economic and Other Activities	<p><i>Article 22. Duties of Economic Entities to Protect Ambient Air</i> The article requires that the operational rules be complied with, control over compliance with the ELVs be exercised, energy-saving technologies be introduced, etc. Such requirements should be part of the conditions of integrated permits for respective installations and be based on the technical guidance on BAT. This article should be harmonised with the IPPC Law.</p> <p><i>Article 25. Conditions for Placement, Design, Construction, Reconstruction, and Putting into Operation of Enterprises, Infrastructure, and Other Installations Affecting Air Quality</i> <i>Article 33. Air Protection Requirements for the Introduction of Inventions, Innovations, New Technical Systems, Substances, or Materials or Their Purchase</i> It should be specified that such issues should be addressed in integrated environmental permits for respective installations.</p>
	Section VIII. Measures to Prevent Negative Impact on the Ozone Layer and Climate	<p><i>Article 35. Measures to Prevent the Negative Impact on Climate</i> The article provides for measures aimed to save heat and power, fuel and energy resources; to reduce emissions of greenhouse gases, to use renewable, environmentally-friendly sources of heat and power. These issues should be addressed in integrated environmental permits (as energy efficiency conditions) for respective installations.</p>
	Water Code of the Kyrgyz Republic No. 8 of 12.01.2005	Chapter 1. General Provisions

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
	Chapter 2. Competency of Public Water Management Authorities	<p><i>Article 12. Authorised Public Environmental Authority and Its Competency</i> <i>Article 13. Authorised Public Sanitary-Epidemiological Authority and Its Competency</i> <i>Article 14. Authorised Public Hydrogeology Authority and Its Competency</i></p> <p>The issuance of water use permits, which is part of the competency of the Ministry of Agriculture, Water Management and Processing Industry, and the issuance of permits for wastewater discharges into water bodies by the environmental authorities should be harmonised with the competency for integrated permitting which will be defined by the IPPC Law. The existing mechanisms of approval of wastewater discharge and special water use permits by the sanitary-epidemiological authority, as well as approval of water use permits by the hydrogeology authority should be harmonised with the integrated permitting procedure.</p>
	Chapter 4. Abstraction and Use of Water Resources	<p><i>Article 21. Rights and Duties of Water Users</i> It should be written that water users subject to integrated permitting are obliged to comply with the entire set of the BAT-based integrated permit conditions.</p> <p><i>Article 23. Water Use That Requires a Permit</i> The article provides for the types of water use that require a permit, including the use of groundwater, and sets the periods the permits can be issued for. These provisions should be linked with the scope and validity periods of integrated permits under the IPPC Law.</p> <p><i>Article 25. Content of Water Use Permits</i> <i>Article 26. Application for Water Use Permit and Their Approval</i> For installations regulated by integrated permits, the content of a permit and an application should be harmonised with the uniform integrated permitting procedure, as described in the IPPC Law.</p> <p><i>Article 27. Temporary Suspension or Modification of Water Use Permit</i> <i>Article 28. Cancellation or Temporary Modification of Water Use Permit</i> <i>Article 29. Renewal of Water Use Permit</i> <i>Article 30. Transfer of Water Use Permit</i> <i>Article 31. Administrative Fee for Issuance, Modification, Renewal, and Registration of Water Use Permit</i> <i>Article 32. Registration of Water Use Permit</i> These articles should not apply to installations regulated by integrated permits because the IPPC Law should determine these procedures for integrated permits.</p>
	Chapter 6. Development and Use of Groundwater	<p><i>Article 42. Use of Groundwater</i> Paragraph 1 of this article says that groundwater from wells more than 30 m deep with electrical pumping equipment should be used based on a water use permit. This provision should be harmonised with the requirements of integrated environmental permits for respective installations.</p>

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
	Chapter 9. Protection of Water Resources Against Pollution and Depletion	<p><i>Article 49. Water Classification</i> This article provides for water classification and setting of water quality standards. In order for the integrated permitting system to function effectively (ensuring compliance with water quality standards), the water classification and quality standards for each class should be reformed. The classification should be based on types of water use and quality standards should be realistically achievable.</p> <p><i>Article 50. General Ban for Water Pollution</i> The article bans any discharges into a water bodies without a permit. The wording should be harmonised with the IPPC Law.</p> <p><i>Article 51. Banned Substances and Provisions on Standards for Wastewater Discharges into Water Bodies, Sewers and on Land</i> For installations covered by the integrated permitting system, general and sectoral statutory ELVs should be regarded as minimum requirements. At the same time, technology-based standards for installations that do not fall under the integrated permitting system should become part of sectoral general binding rules (GBRs).</p> <p><i>Article 52. Permits for Wastewater Discharges into Water Bodies, Sewers and on Land</i></p> <p><i>Article 53. Application for Discharge Permit</i> Content of a discharge permit and an application for it for installations regulated by the integrated permits should be harmonised with the IPPC Law. Installations that do not fall under the integrated permitting system should be regulated by sectoral GBRs.</p> <p><i>Article 54. Suspension, Modification, or Cancellation of a Permit for Wastewater Discharges into Water Bodies, Sewers and on Land</i></p> <p><i>Article 55. Renewal of a Discharge Permit</i></p> <p><i>Article 57. Administrative Fee for Issuance, Modification, or Renewal of a Discharge Permit</i></p> <p><i>Article 58. Registration of a Discharge Permit</i> These articles should not apply to installations regulated by integrated permits as the IPPC Law should determine these procedures for integrated permits.</p>
	Chapter 16. Liability for Violation of Water Legislation	<p><i>Article 90. Liability for Violation of Water Legislation in the Kyrgyz Republic</i> The article provides for sanctions for operation without a permit, non-compliance with water use permit conditions, transfer of a water use permit to another person in violation of the legislation, wastewater discharge into a water body without, or in violation of, a discharge permit, and discharge of banned substances into a water body. The aforementioned provisions should be harmonised with the IPPC Law for installations regulated by integrated permits.</p>
Law On Industrial and Municipal Waste of the	Section I. General Provisions	<p><i>Article 2. Definition of Terms</i> The main terms should be harmonised with the IPPC Law. In addition, the terms “installation” and “operator” should be defined.</p>

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
Kyrgyz Republic No. 89 of 13.11.2001	Section II. Powers of Public Authorities in Waste Management	<p><i>Article 5. Powers of Competent Authority</i> The article does not provide for permitting by a competent (environmental) authority. Powers of environmental authorities should be added to this article consistent with the integrated permitting procedure, which will be set forth in the IPPC Law.</p>
	Section III. Waste Management Requirements	<p><i>Article 6. Requirements to Design, Construction, and Reconstruction of Enterprises, Infrastructure, and Other Installations</i> The article provides that in the design, construction, and reconstruction of operating enterprises, infrastructure, waste treatment plants, toxic waste landfills, and other installations, legal and physical persons must comply with waste management standards. Within the framework of the integrated permitting system, such standards should be based on BAT technical guidance, which should be reflected in the law. At the same time, technology-based standards for the installations which do not fall under the integrated permitting system should become a part of sector-specific general binding rules (GBRs).</p>
		<p><i>Article 7. Requirements for the Operation of Existing Installations</i> The article provides for the duties of legal and physical persons in the operation of existing installations. These requirements should be part of integrated environmental permit conditions for respective installations under the IPPC Law.</p>
		<p><i>Article 8. Waste Placement Requirements</i> The article does not specify that getting a waste placement permit is mandatory but bans uncontrolled placement of waste. This Law should be amended in accordance with the IPPC Law.</p>
		<p><i>Article 10. Hazardous Waste Management Requirements</i> The article provides for placement of hazardous waste in designated facilities. Furthermore, the Law on Licensing provides for the issuance of licenses for placement of toxic waste. These provisions should be linked with the IPPC Law because these issues should be addressed in integrated permits for respective installations.</p>
	Section IV. Control over Waste Management	<p><i>Article 14. State Control over Waste Management</i> The article provides for control over compliance by legal and physical persons with the statutory waste management requirements, including those set by international agreements and treaties. This article should be harmonised with the IPPC Law, which should provide for control over compliance with integrated environmental permit conditions.</p>
		<p><i>Article 15. Industrial Self-Monitoring on Waste Management</i> The article provides for control over waste management by operators themselves. Self-monitoring is part of integrated permit conditions under the IPPC Law, which should be reflected in the law on waste.</p>

Title	Section, Chapter	Proposals to Harmonise with the Integrated Permitting System
	Section V. Regulation, Recordkeeping and Economic Instruments in Waste Management	<p><i>Article 17. Regulation in Waste Management</i> The article says that limits for waste placement and concentration of toxic substances in wastes are set at the level at which the placement of waste and toxic substances in it would not lead to the exceedance of the environmental quality standards. Under the integrated permitting system, waste management conditions should be based on the technical guidance on BAT, which should be reflected in the law. Technology-based standards for installations which do not fall under the integrated permitting system should become part of the sector-specific general binding rules (GBRs).</p> <p><i>Article 18. State Recordkeeping in Hazardous Waste Management</i> <i>Article 19. State Waste Cadastre</i> When drafting regulations under the IPPC Law, it should be determined whether it would be possible and appropriate to use elements of current medium-specific documents (in particular, waste fiches) in permit applications and issuance of integrated environmental permits.</p>
	Section VI. Liability for Violation of Waste Legislation	<p><i>Article 21. Liability for Violation of Waste Legislation</i> The paragraphs of this article on non-compliance with environmental quality standards and norms by waste management or uncontrolled placement of waste should be harmonised with the provisions of the IPPC Law governing the liability for non-compliance with integrated environmental permit conditions.</p>
	Law On Industrial Safety of Hazardous Production Facilities of the Kyrgyz Republic No. 93 of 19.11.2001	Section I. General Provisions
Section III. Fundamentals of Industrial Safety		<p><i>Article 13. Industrial Safety Requirements for Operators of Hazardous Production Facilities</i> The Article requires a permit to operate a hazardous production facility. The environmental aspects of such permits, including emergency preparedness, should be included in integrated environmental permits and regulated by the IPPC Law.</p>
Law On Licensing of the Kyrgyz Republic No. 12 of 03.03.1997 (as amended)	Chapter I. General Provisions	<p><i>Article 9. Types of Activities Subject to Mandatory Licensing</i> The Law determines that licensing is mandatory for recovery, placement, destruction, disposal, and transportation (including trans-boundary) of toxic wastes and substances, including radioactive ones. This article should be harmonised with the IPPC Law by distinguishing toxic industrial waste management, which should be regulated by integrated permits, and management of radioactive substances, as well as transportation of waste, which would remain be subject to separate licenses.</p>

2. Government Decrees and Regulations of the Kyrgyz Republic Registered with the Ministry of Justice

Document Title	Proposals to Harmonise with the Integrated Permitting System
Decree of the Government of the KR No. 103 of 25.02.2004 “On the Approval of the Registry of Permitting Documents Issued by the Executive Authorities and Their Structural Subdivisions” (as amended)	The Registry comprises the permitting documents provided for by the laws of the Kyrgyz Republic. The issuance by the executive authorities or their structural subdivisions of permitting documents not included in the Registry, as approved by this Decree, is prohibited. A new permitting procedure for activities subject to permitting can only be introduced or cancelled by the laws of the Kyrgyz Republic, the President’s or Government decrees. The Registry should be harmonised with the IPPC Law.
Decree of the Government of the KR No. 759 of 28.12.2000 “On the Approval of the Registry of Free and Paid Public Services Provided by the Executive Authorities and their Structural Subdivisions”	The Decree approves levying of a fee for emission, discharge and waste placement permits. This Decree should be redrafted in view of the introduction of different permitting regimes (integrated, based on general binding rules, medium-specific). With regard to integrated permits, it should be harmonised with the IPPC Law.
Decree of the Government of the KR No. 386 of 30.07.2001 “On the Approval of the Regulation on Permitting Documents Issued by State Authorities to Enterprises”	This regulation governs procedures for issuing permits to enterprises, including a mechanism for resolving conflicts that may occur during this process. With respect to integrated permits it should be harmonised with the IPPC Law.
Decree of the Government of the KR No. 295 of 25.05.2000 “On the Approval of the Regulation on State Control over Environmental Protection, Natural Resource Management, and Ensuring Environmental Safety of the Kyrgyz Republic”	The Regulation determines the objectives of, and procedure for, state control in environmental protection, use of natural resources, and ensuring environmental safety. When the IPPC Law is promulgated and the integrated environmental permitting system is introduced, respective changes should be made in the existing state environmental control system by providing for integrated control not only over pollution values and required documentation, as is the case at present, but also over key process indicators related to other permit conditions.
Ambient Air Protection Rules, registered with the Ministry of Justice of the KR on 18.04.2000, No. 62	These Rules regulate in detail the organization of air protection activities; setting of ELVs; issuance of emission permits; and implementation of activities to reduce air emissions by both existing and new installations. The Rules require gas-cleaning and dust-collecting equipment at air pollution sources. When integrated environmental permitting is introduced, the Rules should be amended. For installations regulated by integrated permits, the IPPC Law should define a procedure for determining ELVs as integrated permit conditions, taking into account BAT. The Rules should also be amended with regard to installations not covered by the integrated permitting system, which will be regulated by GBRs.
Instruction on State Control over Stationary Air Pollution Sources in the Kyrgyz Republic, registered with the Ministry of Justice of the KR on 28.12.1999, No. 114	This Instruction should not apply to installations regulated by integrated permits under the IPPC Law.

Document Title	Proposals to Harmonise with the Integrated Permitting System
Surface Water Protection Rules, registered with the Ministry of Justice of the KR on 13.10.1993, No. 136	The Rules regulate all wastewater discharges into water bodies and various types of economic activities which have or may have an adverse impact on surface water quality. They also set water quality standards for the water bodies used for drinking and domestic water supply and fishing purposes. Furthermore, the Rules define the mechanism for setting ELVs for wastewater discharges into water bodies, taking into account the ambient water quality at the point of discharge and water use category of the water body. For installations regulated by integrated permits, the IPPC Law should define the procedure for setting ELVs as integrated permit conditions, taking into account BAT. These Rules may remain in force for installations that will continue to be regulated by medium-specific permits. However, they would have to be amended in connection with the reform of the classification of water bodies and water quality standards.
Decree of the Cabinet of Ministers of the Republic of Kyrgyzstan No. 472 of 23.09.1991 “On Water Body Classification by Water Use Category”	As stated in the comments to Article 49 of the Water Code and the Surface Water Protection Rules, the classification of water bodies and respective water quality standards should be revised, without which effective functioning of the integrated permitting system is impossible (ELVs based on best available techniques would conflict with water quality standards).
Rules on Wastewater Discharges into Sewerage Systems, registered with the Ministry of Justice of the KR on 22.09.1994, No. 216	The Rules define a procedure for developing local “Rules on Industrial Wastewater Discharge into Sewerage Systems”, including the calculation of allowable concentrations of pollutants in industrial wastewater and setting other requirements. It should be taken into account that the issues of industrial wastewater discharges into the sewer are addressed in integrated environmental permits. For installations regulated by integrated permits, the Rules should be harmonised with the IPPC Law.
Instruction on the Procedure for Setting Waste Management Norms in the Kyrgyz Republic, registered with the Ministry of Justice of the KR on 01.10.1999, No. 73	This regulation determines: <ul style="list-style-type: none"> • Rules for setting waste placement limits; • Environmental requirements for waste placement and waste storage and disposal facilities; • Permitting procedure for waste placement. For installations regulated by integrated permits, the IPPC Law should define a procedure for determining integrated permit conditions regarding waste management, taking into account BAT. The provisions of this decree should not apply to installations governed by the IPPC Law.

3. Departmental Instructions

Document Title	Proposals to Harmonise with the Integrated Permitting System
Instruction on Setting Maximum Allowable Discharges of Pollutants into Water Bodies, approved by the State Environmental Protection Committee of the KR on 08.12.1993	For installations regulated by integrated permits, the IPPC Law should define a procedure for determining ELVs as integrated permit conditions, taking into account BAT. This decree will only remain in force for installations that will continue to be regulated by medium-specific permits.

Document Title	Proposals to Harmonise with the Integrated Permitting System
Instruction on the Organization and Conducting of Inspections of Water Use and Protection by Water Users, approved by the State Environmental Protection Committee of the KR, 1993	This Instruction should apply to installations regulated by integrated environmental permits.
Recommendations on the Preparation and Content of Draft Air ELVs for Enterprises, Novosibirsk, 1987	This document should not apply to installations regulated within the integrated permitting system under the IPPC Law.
Instruction on the Procedure for Environmental Impact Assessment (EIA) of Planned Activities in the Kyrgyz Republic (approved by the Ministry of Environment of the KR on 27.06.1997)	When the IPPC Law is promulgated, the EIA procedure should be coordinated with that for integrated environmental permitting for new installations, and respective amendments should be made to this Instruction.
Minrybkhhoz (Ministry of Fisheries) of USSR, 1990. Combined List of Maximum Allowable Concentrations (MACs) and Tentatively Safe Impact Levels (TSIL) of Hazardous Substances for Fishery Water Bodies	This list should be revised and adjusted, in particular, taking into consideration the tentative list of substances in Annex III of the IPPC Directive and the Guidelines to the European Pollution Emission Registry (EPER) developed under Article 3 of the European Commission Resolution of 17 July 2000 (2000/479/EC).
State Sanitary Rules and Standards, Ministry of Health of the USSR, 1988. SanPiN No. 4630-88. Sanitary Rules and Standards of Surface Water Protection Against Pollution	The provisions of this Instruction should not apply to installations regulated within the integrated permitting system under the IPPC Law.

ANNEX 3. SCORES FOR THE INDUSTRIAL SECTOR PRIORITISATION

Weighting factors							4	2	3	2	1	
Industrial activities	Environmental impact (EI)						Potential for environmental improvement	Anticipated compliance costs	Financial performance	No. of enterprises	Overall score	
	air	water	waste	soil	accident risk	total EI						
Textile dyeing and leather tanning	1	3	2	2	2	2.0	2	2	2	3	5.00	
Pulp and paper industry	1	3	2	1	2	1.8	2	2	2	3	4.84	
Waste management	2	2	3	3	1	2.2	2	2	1	3	4.76	
Coal and lignite mining	3	2	3	2	2	2.4	2	1	2	3	4.72	
Chemical industry	2	3	2	2	3	2.4	2	1	2	2	4.52	
Fuel and energy industry	3	1	2	1	3	2.0	3	1	2	1	4.40	
Wastewater treatment	1	3	2	2	2	2.0	2	2	1	2	4.40	
Production and processing of metals	3	2	3	1	2	2.2	3	1	1	2	4.36	
Food production	1	3	2	1	1	1.6	3	1	2	2	4.28	
Processing of minerals	3	1	1	1	1	1.4	1	2	2	3	4.12	

For the column indicating the number of enterprises, the scores correspond to the following:

- 1 more than 40 facilities
- 2 between 20 and 40 facilities
- 3 less than 20 facilities