



Environmental Monitoring Report

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Annual Report (August 2010–December 2011)
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Mongolia: Agriculture and Rural Development Project

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ARDP environmental performance monitoring for 2011

Main goal of the monitoring of ARDP projects was to ensure their compliance with ADB and GOM environmental protection requirements and identify problems that should be addressed in future.

During the reporting period, which covers period from August 2010 to 31 December 2011. ARDP's cooperation with ADB, PBs and PEs resulted in issue of 7 loans. (See the table 1).

Table 1. VCD loans as of 31 December 2011

#	Company	Activity	Date of approval	Issuing bank
1	Darkhan Nekhii	Tannery & garment factory	Aug 12, 2010	Khan bank
2	Mongol Shevro	Tannery	Aug 12, 2010	Xac bank
3	Sor Cashmere	Cashmere	Sep 13, 2010	Khan bank
4	Monos Pharma*	Pharmaceutical	Dec 28, 2010	Khan bank
5	Erdenet Carpet	Wool processing	Dec 28, 2010	Khan bank
6	Mon Fresh Suu LLC	Milk processing	May 24, 2011	Golomt bank
7	Mogol Noos LLC	Wool scouring and felt making	Jul 21, 2011	TDB
8	Mon Meat LLC	Meat processing	Oct 20, 2011	Khaan bank

Notes: Monos Pharma LLC left the project after receiving 1st financing from ARDP due to another investor (EBRD) is committed larger size of investment for longer period.

During the project implementation PEs were responsible for internal monitoring of the environmental protection plan and environmental monitoring program for the company.

Also monitoring of these projects were performed by PMU and applicable state professional agencies such as Professional Inspection Agency (PIA) of city, aimag and soum in order to ensure compliance with national environmental protection requirements.

In total of seven projects which received funding in 2010 and 2011 from the ADB through ARDP were involved in monitoring by PMU in 2011.

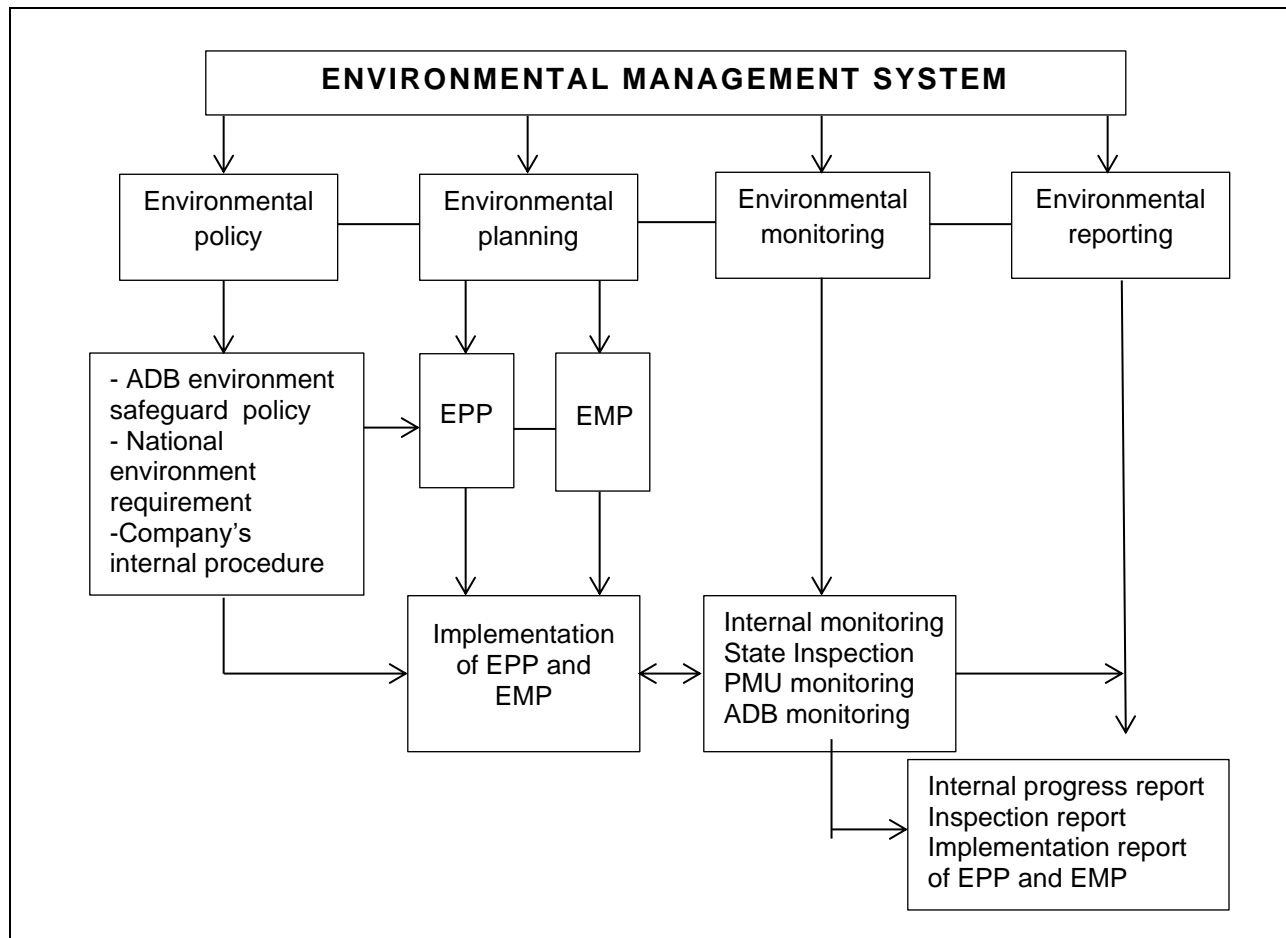
Monitoring of these projects were performed in accordance with the following Environmental Management System flow chart since the issue of the ADB loan.

During the PMU monitoring the Environmental specialist used the following methods for monitoring:

- Visual inspection during the field visits;
- Review of results of tests and analysis;

- Review of reports of government inspections and follow-up actions of the company;
- Collection and review of company's reports on EPP and EMP etc.
- Tracking implementation of recommendations provided by GEA/DEIA and PMU based on the company reports;
- Communication with company's management, specialists etc.
- Obtaining enquiries from applicable government agencies and inspectors;
- Study of published information about the company's environmental performance (news and articles on newspaper, TV and websites etc.).

Environmental Management System flow chart



During the reporting period PMU oversaw environmental protection performance of each company and implementation of measures addressed in EPP and EMP in order to mitigate, prevent and minimize the potential impacts on the environment and human health from their project implementation.

During the project monitoring PMU were developed cooperation with Department of Environment and Natural Resources (DENR) of MNET, State Professional Inspection Agency (Department of the Environment, Geology and Mining Inspection, and Veterinary Department of Food,

Agriculture, Industry and Service Inspection), Department of Environmental Protection and Tourism of aimag, district and environmental inspectors of soums.

Results of environmental monitoring of projects are shown in the following table which outlines the each company's environmental problems and progress made to mitigate, prevent and minimizes negative impacts from the project implementaion.

As part of the monitoring activities PMU updated the IEE reports of the Darkhan Nekhii and Erdenet Khivs as DEIA for these companies were updated at the end of 2010 in accordance with conclusion of GEAs conducted by the MNET.

The following issues were found as common weaknesses at the most of the PE companies:

1. Poor internal monitoring due to lack of an assigned staff,
2. Poor reporting practice and skills,
3. Unjustified delays of follow-ups after the state inspections
4. Inadequate understanding of environmental protection concerns
5. Lacking of national laws and regulations etc.

In order to improve environmental performance at these companies ARDP PMU plans to take following measures in future:

1. Visit company/project field more often (on monthly/quarterly basis);
2. Communicate with management who is in charge for environmental protection, occupational safety and health, food safety issues at the plant more often;
3. Communicate with local professional and inspection agencies regarding the environmental issues of the plant regularly,
4. Assist to educate and train management of companies on environmental protection management, including planning, monitoring and reporting etc.

Environmental monitoring results of projects

[illegible]

#	Project name Main issue	Implementation progress of EPP and EMP	Conducted environmental inspection by state inspection agencies			Required action
			Date	Conclusion	Follow up action	
		-Analysis on waste water was conducted regularly, and on soil and air was conducted once. According to the conclusion of certified lab samplings were under acceptable level required by national standards, All employees were involved in health check-ups. 25 of them were diagnosed with brucellosis and treated by specialized clinic etc.				
2	Darkhan Nekhii -Waste water -Sludge - Chemicals handling -Work place condition	<p>Implementation of EPP and EMP for 2011 was good in general. As a result of the project implementation the work condition at the plant was improved noticeably as most of planned renovation works at the factory were implemented, namely, factory shops were renovated, all roofs were replaced, windows were replaced, plumbing works were done. Due installation of new machines and equipment productivity was increased (reduced hand work by 20%), and use of chemicals was reduced by 15%, water use by 33% (due to new mixer). use of Cr was reduced by 5-6 times due to new machine/technology was installed.</p> <p>The following measures were implemented during the monitoring period:</p> <ul style="list-style-type: none"> -Cleaned and repaired sewage system, replaced filters, -The in-house treatment facility upgrading project is completed successfully and was operational, -Conducted analysis on sewage regularly, -Conducted analysis on soil and air by certified lab, soil pollution level in some areas were higher than acceptable limit, -Removed construction waste, metal waste was transported to metallurgy plant for recycling, bricks waste was sold to other people, -Planted trees, bushes (including 60 sea-buckthorn etc.) and flowers near the plant building, -Waste was handled and transported in accordance with the contract (3,721 m³), -Workers were provided with occupational protective apparel and equipment in accordance with internal procedure, -Placed fire extinguishing tools and utilities in 9 units of the plant, 	<p>25 Apr</p> <p>25 May</p>	<p>PIA aimag conducted inspection on work condition in accordance MNS 4990:2000, MNS 4996:2000, MNS 5002:2000, MNS 4994:2000, MNS 5480:2005, Noise in some units was higher by 1-14.9 times, and lighting was less by 42.6-64.8 lux. Also number of bacteria in the air of wet units was higher.</p> <p>During the inspection conducted by PID of the aimag required to:</p> <ul style="list-style-type: none"> -Develop and submit EMP to the professional agency in timely manner, -Comply national requirements during handling of chemicals, -Conduct occupational safety, work place 	<p>The company developed follow-up plan and have been implementing measures regarding the inspection requirement: Developed EMP and send it to the MNET, Conducted analysis on sewage, soil and air,</p>	<p>Improve waste handling and house-keeping at the plant.</p> <p>Improve internal monitoring and reporting.</p>

#	Project name Main issue	Implementation progress of EPP and EMP	Conducted environmental inspection by state inspection agencies			Required action
			Date	Conclusion	Follow up action	
		<ul style="list-style-type: none"> -Conducted workers training on fire extinguishing practice etc., -Conducted workers training on occupational safety and hygiene (328 workers), -228 employees were involved in health check-ups, -Chemicals storage room and lab are under construction (renovation work was stopped in cold season and will be continued in spring). 		<ul style="list-style-type: none"> condition assessment and take measures to improve work condition (noise, lighting, dust etc.), -Improve waste handling practice, Improve chemicals handling practice by improving shelves, placing references of chemicals etc 	<ul style="list-style-type: none"> Renovated waste storing point and sludge area, Updated internal procedure on safety handling of chemicals, Improved chemicals handling practice etc. 	
3	Mongol Shevro <ul style="list-style-type: none"> -Waste water -Sludge -Chemicals handling -Work place condition 	<ul style="list-style-type: none"> Implementation of EPP and EMP for 2011 was satisfactory. During the project monitoring period the company implemented the following measures: -Chemicals storage was improved by placing shelves, references of chemicals, improving lighting etc, -Chemicals use was reduced by 21.5 ton and water by 500 m³ due to installed cow hide splitting machine, -Waste is transported in accordance with the contract, -Air ventilation was improved due to installation of two ventilators on initial processing unit, -Conducted sewage analysis regularly etc. 	<ul style="list-style-type: none"> 26 Feb. 27 May 15 March 3 May 	<ul style="list-style-type: none"> Replace old filters for the waste water treatment facility Reduce Cr in initial hide processing line Get certification on Safety operation of equipment and machines Occupational safety, hygiene parameters met requirements of MNS 5003:2000, MNS 4996:2000. Cr in initial processing unit was higher than acceptable level (MNS 4990:2000) by 1.36 times. 	<ul style="list-style-type: none"> Filters for the waste water treatment facility were replaced to reduce sewage pollution level Installed dual line which reduced Cr Safety operation of equipment and machines was certified by PID of the district Air ventilation was improved due to installation of two ventilators on initial processing unit, two 	<ul style="list-style-type: none"> Fulfill measures required by state inspection in timely manner. Improve internal monitoring and reporting.

#	Project name	Implementation progress of EPP and EMP	Conducted environmental inspection by state inspection agencies			Required action
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					more ventilators will be installed in 2012	
4	Sor Cashmere -Work place condition	Implementation of EPP and EMP for 2011 was satisfactory. During the project monitoring period the company implemented the following measures: -Waste is transported in accordance with the contract, -Occupational safety instructions were renewed and workers were provided with daily instructions, -Workers were provided with occupational protective apparel and equipment in accordance with internal procedure, -Procured and placed fire extinguishing equipment and tools in initial sorting and spinning units, -21 workers of hair sorting unit were involved in X-ray exams etc.	21 Sept.	Occupational safety, hygiene parameters met requirements of MNS 4990:2000, MNS 4996:2000, MNS 5003:2000. Dust in hair sorting unit was higher than acceptable limit by 0.43 mg/m ³	Dust was occurred due to insufficient scouring of camel hair which was outsourced. The company plans to procure and install hair cleaner and opener (machine) at the plant.	Improve planning and internal monitoring. Improve work place condition in hair sorting unit

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5	Mon Fresh -Waste water -Chemicals handling	Implementation of EPP and EMP for 2011 was satisfactory. Due to project implementation water use was reduced by 20% by reusing of water generated from the cooling equipment. During the project monitoring period the company implemented the following measures: -Installed air ventilation system in milk production units, -Developed detailed references on toxic chemicals used at the plant and put them in accessible place for employees, -Maintained records on chemicals expenditure, -Conducted work place assessment by professional agency, -All employees (34) were involve all employees in medical check-ups and flu vaccination, -Provided all employees with occupational apparel and protective devices for their occupational safety and security twice a year in accordance with internal procedure of the company, -Organized workers training on occupational safety and fire prevention, -Held regular instructions on safety operations for employees on daily basis, -Provide all production units with set of fire extinguishing tools, -Organized regular clean-up within the production units on daily basis, -Handbook on quality management was developed and introduced to workers during ISO serial trainings (16 trainings). -Developed safety handling of chemicals etc.	14 May	PID of the city inspected occupational safety, hygiene, sanitation, internal monitoring, food safety, environmental performance. It required to -Develop internal monitoring procedure, -Improve ventilation system of the dairy plant, -Improve lighting in dressing room for workers, -Get certification for equipment and machines from the PID, -Improve fire safety operation at the plant etc.	As follow-up action the following measures were implemented: -Developed internal monitoring procedure, -Ventilation system was replaced -Improved lighting in dressing room for workers, -Improved procedure on fire safety operation and installed set of fire extinguishing equipment in all units etc.	Fulfill measures required by state inspection in timely manner Improve internal monitoring and reporting.
6	Mogol Noos -Waste water -Sludge removal -Work condition	Implementation of EPP and EMP for 2011 was good. Some of the planned measures were delayed due to late receipt of loan. As a result of the project implementation work condition at the wool scouring plant was improved noticeably as most of planned renovation works at the factory were implemented. -Installed water meter in water well of Wool scouring plant, -Upgraded and fixed the waste water channel and fence,	19 Oct	PID of the aimag conducted inspection on occupational safety, work place condition, water and sewage management of the company and required the company to :	The company implemented most of measures required by the PID inspection.	Improve internal monitoring and reporting.

#	Project name	Implementation progress of EPP and EMP	Conducted environmental inspection by state inspection agencies			Required action
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		<ul style="list-style-type: none"> -Reservoir was cleaned/emptied from its sludge and sludge was transported to the landfills of the bag, -Research work on treatment of waste water was conducted by the Research institute of food and light industry (RIFLI). The sub-project is under implementation and will be over in spring of 2012, - Sludge and solid waste was transported in accordance with the contract regularly, -Built storage for washing detergents, -Developed procedure on handling of detergents, -Planted trees and grass on 18 x 20 m area, -Improved work condition in all units of the plant (T°, lighting, air ventilation etc.) due to renovation work, -Built workers rest room, canteen, shower room at the plant, -Conducted workers training on occupational safety, hygiene and workers health with assistance of professional agency of the soum, -Developed and followed general procedure on employees occupational safety, sanitation and health, -Conducted training of employees on fire prevention with cooperation with specialized agency, -Placed complete set of fire extinguishing equipment at all facilities of the plant, -Developed procedure on Supply of occupational apparel and protective equipment, -All employees were provided with occupational apparel twice a year and protective equipment on weekly basis (gloves, mask), -48 employees were involved in medical health check-ups etc., -Most of the planned measures of environmental monitoring program were implemented (some results of the samplings were included in the IEER). 		<ul style="list-style-type: none"> -Get conclusion on water use from the PID and ETD, - Install water meter in water well, -Fix and renovate reservoir fence 		
7	Mon Meat Trade -Waste water,	1. Implementation of EPP and EMP for 2011 at the meat processing plant in Ulaanbaatar was good. -Contracts on sewage and solid waste disposal were extended, -Solid waste was transported waste to the designated landfills by company's truck,	28 Feb., 30 May,	PID of the district conducted inspection on meat and meat products through its	The company procured 2 refrigerated trucks for meat transportation.	Fulfill EMP in timely manner. Improve internal monitoring

#	Project name	Implementation progress of EPP and EMP	Conducted environmental inspection by state inspection agencies			Required action
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	<ul style="list-style-type: none"> -Meat safety, -Occupational hygiene, -Solid waste (at slaughter house) 	<ul style="list-style-type: none"> -Plant area was covered with mix of cement, -Planted grass in front of the plant building, -Renovated all facility of the plant (floor, wall, ceiling) etc. in accordance with hygienic requirements, -Built waste storage in accordance with hygienic requirements, -Developed a procedure on storage and handling of disinfectants and occupational safety -Conducted daily instructions on occupational safety and hygiene, -Conducted occupational condition assessment by specialized agency, -Conducted regular cleaning and disinfection of the work area and equipment and tools etc. -All employees were involved in health check-ups quarterly, -All employees were provided with protective apparel and equipment twice a year, Gloves and mask on daily basis, -Placed fire extinguishing equipment at the plants 5 units, -Veterinary service with professional authority conducted sampling of meat and meat products regularly in accordance with the contract, -PID of the district conducted inspection on meat and meat products through its certified lab on a quarterly basis. <p>2. Most of the planned measures related to the slaughterhouse in Khentii aimag were delayed because of short season for construction work (Most of the planned measures related to the slaughterhouse building were delayed due to late receipt of loan).</p> <ul style="list-style-type: none"> -Built fence around the building (1 ha), -Prepared material for construction work (gravel, sands etc. were transported) 	2 Sept., 21 Dec	<p>certified lab on quarterly basis. According to conclusions of these inspections meat products of the plant met requirements of national standards: MNS ISO 4433:1995 MNS ISO 6579:1999 MNS 1161:2002 MNS 5023:2001.</p> <p>The company was required to improve compliance of national requirements of storage and transportation of meat products.</p>		and reporting.

Prepared by environmental specialist in PMU of ARDP
2 February 2012