## Theme 4

## NATIONAL MONITORING SYSTEM AND DEPARTMENTAL RESOURCES OF PRIMARY ENVIRONMENTAL INFORMATION

The Law of Ukraine "On Protection of the Environment" (articles 20 and 22) envisages establishment of the state environment monitoring system (hereinafter – SEMS) and observations over the environment and level of pollution.

Implementation of these functions is vested in the *Ministry of Environment and Natural Resources of Ukraine* and other central authorities that are parties of the SEMS, as well as in the enterprises, institutions and organizations whose activity leads or may lead to the deterioration of the environment.

The main goals of SEMS are provision of observations, collection, processing, transfer, storage and analysis of information about the state of the environment, prediction of its changes and development of scientifically grounded recommendations for the management decisions in the sphere of environment protection, rational use of natural resources and environmental safety.

The main principles of SEMS operation are defined in the resolution of the Cabinet of Ministers of Ukraine № 391 dated 30.03.1998 "On Approval of Statement on the State Environmental Monitoring System".

Functions and objectives of observations and information provision (in the state system of environmental monitoring) are fulfilled by such parties at the national level:

- Ministry of Environment and Natural Resources of Ukraine
- Hydrometeorological Service
- Ministry of Internal Affairs of Ukraine
- Ministry of Agrarian Policy and Food of Ukraine
- Ministry of Health of Ukraine
- State Forest Resources Agency of Ukraine
- State Water Resources Agency of Ukraine
- State Land Resources Agency of Ukraine
- State Service of Geology and Mineral Resources of Ukraine
- Ministry for Regional Development, Building and Housing of Ukraine
  - State Statistics Service of Ukraine

- At the regional level, environmental monitoring is carried out by the following main organizations:
- State regional environmental inspections (Minprirody);
- Oblast hydrometeorological centres;
- Oblast sanitary and epidemiological stations (MOZ);
  - Oblast agencies on melioration and water economy (Minagropolitiki);
- Oblast agencies of forest and hunting (Goslesagenstvo);
  - Basin agency of water resources (Gosvodagenstvo);
- Oblast agency of land resources (Goszemagenstvo);
  - Agencies of housing and utilities at the Oblast State
     Administrations;
- State regional geological enterprises (Minprirody).

Each body of SEMS monitors those objects of the environment that are defined by the Statement on the state system of monitoring and statements on the state monitoring of some natural components of the environment.

The current system of environmental monitoring comprises the sub-systems of state parties of monitoring and is based on the fulfillment of the distributed functions that are defined by the Statement on the state monitoring system. Each sub-system (at the level of separate body of the monitoring system) has its own structural, organizational, scientific, methodological basis. However, each sub-system functions on the basis of single statutory, methodological and metrological provision.

In Ukraine, the work of the monitoring bodies is regulated by the statutory and methodological documents. The only principle that is adopted in these documents is the environmental (different components of environment) approach in the monitoring i.e. monitoring of air, surface waters, ground water, geological environment, etc. Inter-institutional cooperation in environmental sector

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Institution	Component of the		and objectives	Inter-institutional cooperation for
	environment	In the sphere of	In the sphere of	data exchange
		information provision		
Inter-agency	All components	- Coordination of	- Coordination of activity	Receives information from:
Commission on		activity of bodies of	of the bodies of	- the Ministry of Environment and
the issues of		environmental	environmental	Natural Resources of Ukraine,
environmental		monitoring;	monitoring;	- the Ministry of Internal Affairs of
monitoring		- Consideration of	- Consideration of general	Ukraine,
		general issues related	issues of the state and	- the Ministry of Health of
		to monitoring on the	regional level related to	Ukraine,
		national and regional	monitoring;	- the Ministry of Agrarian Policy
		levels;		and Food of Ukraine,
				- State Forest Resources Agency of
				Ukraine,
				- State Water Resources Agency of
				Ukraine,
				- State Land Resources Agency of
				Ukraine,
				- the Ministry for Regional
				Development, Building and
				Housing of Ukraine,
				- State Service for Geology and
				Mineral Resources (Subsoil) of
				Ukraine,
				- State Statistics Service of
				Ukraine,
				<ul> <li>enterprises and organizations,</li> </ul>
				local authorities.

Institution Component of the Functions and objectives			objectives	Inter-institutional cooperation
	environment In the sphere of information provision In the sphere of environmental		In the sphere of environmental	for data exchange
			monitoring	
The Ministry of	Atmospharis air	- Observations, collection and	Control of atmospheric air:	Receives information from
Environment	Atmospheric an	accumulation of data, analysis of the	· '	
	Sources of	· · ·		Affairs of Ukraine,
		state of natural environments and	<b>'</b>	,
	emissions	ļ'	- Control of surface and marine	•
Ukraine	o	- Information and analytical support	, i	Ukraine,
	Surface (including	of a decision-making process related	_	
	marine water)	to natural environment protection,		Policy and Food of Ukraine,
	_	use of natural resources and	_	
	Sources of	ecological safety;	•	Agency of Ukraine,
	discharge	- Informational services to power		
	_	· •	designation;	Agency of Ukraine,
	Ground waters	environmental information to the		- State Land Resources Agency
		population and international	· '	of Ukraine,
	Soils and	organizations;	- Control of industrial and	- State Services for Geology
	landscapes	- Management of information systems	household waste dumps.	and Mineral Resources of
		and databases on the components of	Implementation of these	Ukraine,
	Waste	the environment;	functions is based on long-term	- State Statistics Services of
		- Development of a regulation on	systematic observations of the	Ukraine,
		information exchange at local,	integrated environmental	- enterprises and
		regional and national levels;	network of monitoring points.	organizations, local
		These functions are implemented	The functions are carried out to	authorities.
		via establishment of information	assess, analyze and predict the	
		monitoring systems and databases of	state of natural environment to	
		environmental indicators to support	support managerial decisions.	
		managerial decisions, provision of	This activity is fulfilled via State	
		information to power bodies and the	Environmental Inspection of	
		population about the state of natural	Ukraine and institutions that are	
		environment.	managed by the Ministry	

Institution	Component of the	Functions ar	Inter-institutional	
	environment	In the sphere of information	In the sphere of environmental	cooperation for data
		provision	monitoring	exchange
The Ministry of	Atmospheric air	- Collection of information for	- Control of atmospheric air and	Receives information from
Internal		operational actions in case of a	precipitation;	establishments managed
Affairs of	Surface	crisis or environmental	- Control of surface and ground	by the Ministry (including
Ukraine	(including	emergency situations;	waters;	Hydrometcentre),
	marine) waters	- Informational and analytical	- Monitoring of terrestrial and	enterprises and
		support for assessment and	water ecosystems (bio indicator	organizations, local
	<b>Ground waters</b>	analysis of risks related to	identification);	authorities.
		emergency situations occurrence;	- Control of soils and landscapes;	
	Soils and	- Forecasting possible negative	- Control of the radiation	
	landscapes	consequences and supporting	situation, hazardous nature	
		decision-making on their	events and disasters;	
	Radioactive	liquidation;	- Monitoring of sites of	
	waste	- Operational provision of	radioactive waste disposal;	
		information to authority bodies	Implementation of these	
		and people in case of	functions is based on	
		environmental hazard;	observations of the integrated	
		- Development of a regulation on	environmental network of	
		information exchange on local,	monitoring points according to	
		regional and national levels in	special programmes in areas of	
		case of emergency situations;	increased environmental	
		These functions are	pressure, zones of catastrophes	
		implemented through the	and hazardous nature events. The	
		establishment of information	functions are fulfilled via	
		channels and systems of crisis	establishments managed by the	
		monitoring.	Ministry to ensure operational	
			actions in response to crisis and	
			environmental emergencies.	

Institution	Component of the	Functions a	Inter-institutional	
	environment	In the sphere of information	In the sphere of environmental	cooperation for data
		provision	monitoring	exchange
The Ministry of	Atmospheric air	- Receiving and processing of	- Control of atmospheric air;	Receives information from
Health of		information about pollution of	- Control of surface and marine	the establishments
Ukraine	Surface waters	the environment and levels of	waters;	managed by the Ministry
		negative impact on people;	- Control of drinking water;	(including sanitary and
	Drinking water	- Informational and analytical	- Control of marine, mineral and	epidemiological stations),
		support to assess and analyze	thermal waters;	enterprises and
	Soils	risks for people's health;	- Control of soils;	organizations, local
		- Informational and analytical	- Control of physical factors	authorities
	Impact of	support for decisions related to	(noise, radiation, vibration, etc)	
	physical factors	people's health protection;		
		- Management of information	Implementation of these	
		systems and databases on the	functions is based on long-term	
		components of the environment.	systematic observations of the	
		These functions are implemented	integrated network of monitoring	
		through the establishment of	points in residential and	
		information systems and	recreational areas, as well as	
		databases of social and hygienic	resorts.	
		monitoring.	The functions are fulfilled in	
			order to assess, analyze and	
			predict the level of impact on	
			people to support managerial	
			decisions.	
			The activity is carried out via	
			sanitary and epidemiological	
			stations and other establishments	
			that are managed by the	
			Ministry.	

	environment	In the sphere of information	In the sphere of environmental	cooperation for data
		provision	monitoring	exchange
The Ministry of	Surface waters	- Receiving, processing and	- Control of surface waters of	Receives information from
Agrarian Policy		provision of information on the	agricultural designation;	the establishments
and Food of	Soils	quality of agricultural soils;	- Control of agricultural soils;	managed by the Ministry,
Ukraine		- Receiving, processing and	- Monitoring of agricultural plants	enterprises and
	Plants	provision of information on the	and products produced out of	organizations, local
		quality of surface waters;	them;	authorities.
	Animals	- Collection and provision of	- Monitoring of agricultural	
		monitoring data on agricultural	animals and products produced	
		plants and animals;	out of them;	
		- Participation in the information		
		systems of collective data	Implementation of these	
		exchange and provision of	functions is based on long-term	
		information to power bodies and	systematic observations of the	
		the population;	integrated network of monitoring	
		- Management of information	points and areas as well as full or	
		systems and databases in the	selective control of plants and	
		subject area.	animals in agricultural zones.	
			The functions are fulfilled in order	
		These functions are	to assess, analyze and predict	
		implemented through the	level of impact on agricultural	
		establishment of information	objects to support managerial	
		systems and databases that refer	decisions.	
		to the activity of the Ministry.	The activity is implemented via	
			establishments that are managed	
			by the Ministry in the regions.	

**Functions and objectives** 

Inter-institutional

Component of the

Institution

Institution Component of the		Functions a	nd objectives	Inter-institutional		
environment		In the sphere of information	In the sphere of environmental	cooperation for data		
		provision	monitoring	exchange		
State Forest	Soils	- Receiving, collection and	- Control of soils and lands of	Receives information		
Resources		provision of information on	forest fund;	from the establishments		
Agency of	Forest	the state of lands of forest	- Control of the state of forest	managed by the Ministry		
Ukraine	vegetation	fund;	vegetation;	(that are under the		
		- Receiving, processing and	- Control of the state of game	Ministry) enterprises		
	Game fauna	provision of information on	fauna;	and organizations, local		
		the state of forest vegetation		authorities.		
		and game fauna;	Implementation of these			
		- Participation in the	functions is based on long-term			
		information systems of	systematic observations of the			
		collective data exchange and	integrated network of			
		provision of information to	monitoring areas as well as full			
		authorities and population;	or selective control of plants			
		- Management of information	and animals in the forest fund			
		systems and databases in the	areas.			
		subject area;	The functions are carried out			
			in order to assess, analyze and			
		These functions are	predict the level of impact on			
		implemented through	forests and animals to support			
		establishment of information	managerial decisions.			
		systems and databases that	The activity is implemented			
		refer to the activity of the	via forestry organizations in the			
		Agency.	regions.			

Institution	Component of the	Functions a	Inter-institutional	
environment		In the sphere of information	In the sphere of environmental	cooperation for data
		provision	monitoring	exchange
State Wat	er Water objects	Possiving processing and	- Control of the state of rivers,	Pacaivas information from
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Resources		[ ·	water reservoirs, canals, water	
0	of .	-	areas within boundaries of water	' ' '
Ukraine	Surface waters	and discharge of sewage waters;	_	enterprises and
			- Control of the state of water	• '
			bodies in areas impacted by	authorities.
	drained lands	the quality of surface waters;	nuclear power stations;	
		•	Monitoring of surface waters in	
	Submergence	systems of collective data	border regions;	
	area	exchange and provision of	Control of irrigated and drained	
		information to power bodies and	lands;	
		population;		
		- Management of information	Implementation of these	
		systems and databases in the	functions is based on long-term	
		subject area.	systematic observations of the	
			integrated network of monitoring	
		These functions are	posts and areas.	
		implemented through	The functions are carried out in	
		establishment of information	order to assess, analyze and	
		systems and databases that refer	predict a level of impact on water	
		to the activity of the Agency.	resources to support managerial	
			decisions.	
			The activity is implemented via	
			Basin Agencies of Water	
			Resources and Water	
			Organizations in the regions.	
			O Danizations in the regions.	

Institution	Component of the	Functions a	nd objectives	Inter-institutional		
	environment	In the sphere of information	In the sphere of environmental	cooperation for data		
		provision	monitoring	exchange		
State Land	Lands	- Receiving, processing and	- Control of lands, soils and	Receives information		
Resources		provision of information on	landscapes;	from the establishments		
Agency of	Soils	the structure of land fund and	- Monitoring of vegetation	managed by the		
Ukraine		use of lands;	cover;	Ministry, enterprises and		
	Landscapes	- Participation in information	- Monitoring of coastal lines of	organizations, local		
		systems of collective data	the rivers, seas, lakes and	authorities.		
		exchange and provision of	water reservoirs;			
		information to power bodies				
		and the population;	Implementation of these			
		- Management of information	functions is based on long-term			
		systems and databases in the	systematic observations of			
		subject area;	integrated network of			
		- Development of geo	monitoring area.			
		information systems of land	The functions are carried			
		resources and vector maps of	out in order to assess, analyze			
		the territory;	and predict a level of impact on			
			land resources to support			
		These functions are	managerial decisions.			
		implemented through the	This activity is implemented			
		establishment of information	via Agencies of Land Resources			
		systems and databases that	in the regions.			
		refer to the activity of the				
		Agency.				

Institution	Component of the				and objective				Inter-institutional		
	environment		e of informatio	n	In the sphere of environmental			ntal	cooperation for data		ata
		pro	ovision			mon	nitoring		ex	change	
The Ministry	Drinking water	- Receiving,	processing	and	- Control	of	drinking	water	Receives	inform	ation
for Regional		provision of	information	on	quality of	the	centralized	water	from		the
Development,	Sewage waters	the quality o	f drinking w	ater	supply syst	em;			establishr	nents	
<b>Building</b> and		and sewage w	aters;		- Control o	f sew	age waters	of the	managed	by	the
Housing of	Green	- Receiving,	processing	and	city sew	vage	system	and	Ministry,	enterp	rises
Ukraine	plantations	provision of	information	on	treatment	facili	ties;		and o	organizat	tions,
		monitoring r	esults of g	reen	- Monitorir	ng of	green plant	tations	local auth	orities.	
	Submergence	plantations;			in settleme	ents;					
	areas	- Participat	tion in	the	- Monitor	ing	of subme	rgence			
		information	systems	of	areas in set	ttlem	ents;				
		collective dat	a exchange	and							
		provision of	information	to	lmp	leme	entation of	these			
		power bod	ies and	the	functions i	is ba	sed on lon	g-term			
		population;			systematic	o	bservations	of of			
		- Managemen	nt of informa	tion	integrated	netw	ork of mon	itoring			
		systems and	databases in	the	sites and o	perat	tional contro	ol.			
		subject area;			The fu	nctio	ns are carri	ed out			
					in order t	o ass	sess, analyz	e and			
		These fu	ınctions	are	predict a	leve	el of impa	ict on			
		implemented	through	the	objects k	eing	controlle	d to			
		establishment	of informa		1 -	anage	erial decisio	ns.			
		systems and			''	_					
		refer to the				_	-				
		Ministry.	•		regions.						
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Institution	Component of the	Functions and objectives Inter-institutional
	environment	In the sphere of information provision   In the sphere of environmental   cooperation for data
		monitoring exchange
State Service	Ground waters	- Receiving, processing and - Monitoring of ground waters; Receives information
for Geology		provision of information on - Monitoring of endogenic and from the
0,		water intake, use of ground exogenic geological processes; establishments
	_	
Ukraine	exogenic	waters and their quality; - Control of geophysical fields; managed by the
	processes	- Receiving, processing and - Control of geochemical state Ministry,
		provision of information on of landscapes; enterprises and
	Geophysical	results of monitoring of - State ecological and organizations, local
	fields	geological and geophysical geological mapping of the authorities.
		processes; territory of Ukraine;
	Landscapes	- Participation in the Implementation of these
	•	information systems of functions is based on
		collective data exchange and long-term systematic
		provision of information to observations of integrated
		'
		population; These functions are carried
		- Management of information out in order to assess, analyze
		systems and databases in the and predict a level of impact
		subject area; on ground waters, areas of
		These functions are land surface and landscape to
		implemented through the support management
		establishment of information decisions.
		systems and databases that The activity is implemented
		refer to the activity of the via state geological enterprises
		Service. in the regions.

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Institution	Component of the		and objectives	Inter-institutional cooperation for
	environment	In the sphere of information	In the sphere of environmental	data exchange
		provision	monitoring	
State	Atmospheric air	Preparation and	This Service is not a body of	Receives information from
Statistics				- the Ministry of Environment
Service of	Sources of	collections of	work is focused on the	and Natural Resources of
Ukraine	emissions	environmental	collection and provision of	Ukraine,
		information for regions	statistical information related	- the Ministry of Internal
	Surface waters	and Ukraine in total.	to technogenic impact on the	Affairs of Ukraine,
		<b>Accumulation</b> and	environment.	- the Ministry of Health of
		maintenance of		Ukraine,
	Sources of	information databases of	1	- the Ministry of Agrarian
	discharge	statistical and		Policy and Food of Ukraine,
i		administrative reporting.	1	- State Forest Resources
i	Land resources			Agency of Ukraine,
				- State Land Resources Agency
	Forest resources			of Ukraine,
				- State Water Resources
	Reserved			Agency of Ukraine,
	territories and			- the Ministry for Regional
	game areas			Development, Building and
			1	Housing of Ukraine,
i	Waste			- State Service for Geology
i			1	and Subsoil of Ukraine,
				- enterprises and
			1	organizations, local
				authorities.
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At the *regional level* interaction between the environmental monitoring bodies is determined by the Regulation on informational interaction between the monitoring bodies that is adopted and approved at the level of the Regional State Administrations of the country and cities of central subordination.

Pursuant to these documents, the monitoring bodies provide the government authorities, State Agencies of Natural Resources and the Environment, Agencies on Emergency Situations, other interested organizations and enterprises with information of several types:

- Operational/updated information on threats or occurrence of natural disasters or extremely high levels of environmental pollution;
- Current information about the state of environment;
- One-time information upon requests from interested enterprises, civil society organizations and population.

The operational information is promptly communicated by the environmental monitoring bodies by means of electronic mail, telephone or fax to the officers on duty of the State Administrations, State Agencies of Natural Resources and the Environment, Agencies on Emergency Situations, as well as employees on duty of other interested organizations and enterprises.

Current information from the environmental monitoring bodies is transferred in electronic format or as hard copy to the State Agencies of Natural Resources and the Environment within the timeframes given in the table. Such information is usually submitted in the form of bulletins, reports, reviews, summaries or descriptions.

If necessary the monitoring bodies may provide the available information upon one-off requests of interested enterprises and institutions, population and civil society organizations. Such information is provided against actual requests received by the environmental monitoring bodies.

The monitoring bodies distribute the main types of information at the regional level as well as vertically to the coordinating organizations of the central level. The existing system of informational interaction between agency subsystems of environmental monitoring envisages exchange of information at the national level.

Organizational integration of the environmental monitoring bodies at all levels is carried out by the Ministry of the Environment and Natural Resources.

Procedure of information provision to the State Agencies of Natural Resources at the regional level			
Body of regional environmental monitoring system	Information provided	Frequency of information provision	
	- control of surface waters	Monthly	
Regional State Environmental Inspection	<ul> <li>control of sources of industrial emissions;</li> <li>control of sources of waste waters discharge;</li> <li>control of surface waters;</li> </ul>	Quarterly	
	- state of soils of various designations;	Annual	

Quarterly

**Annual** 

- state of atmospheric air;

- state of surface waters;

- state of soils;

intake;

Regional

Sanitary-Epidemiologi

cal Stations

quality of drinking water;

- levels of impact from physical factors;

- levels of water pollution in the areas of water

- assessment of the state of controlled objects;

Body of regional environmental	Information provided	Frequency of information
monitoring system		provision
Regional Agencies of Land Resources	<ul> <li>state of soils and landscapes;</li> <li>state of vegetation cover of lands;</li> <li>state of coastal lines of the rivers, lakes and water reservoirs;</li> </ul>	Annual
Agencies of Housing and Utility Services	<ul> <li>fulfillment of greenery planting plans in populated areas</li> <li>quality and volumes of drinking water consumption;</li> <li>quality and volumes of waste water from municipal sewage systems and waste water treatment facilities;</li> </ul>	Annual
Regional Agencies of Forestry and Hunting	- state of forests and game fauna;	Annual

<b>Body of regional</b>		Frequency of
environmental	Information provided	information
monitoring system		provision
Regional Hydrometeorology Centers	<ul> <li>state of atmospheric air;</li> <li>state of precipitations, surface water bodies;</li> <li>radiation situation;</li> </ul>	Monthly
	- levels of soil contamination; - assessment of the state of controlled bodies	Annual
	- natural disasters and natural hazardous phenomena;	Timely warning
Regional Amelioration and Water Agencies	<ul> <li>flooding of agricultural lands and rural populated areas;</li> <li>state of irrigated and drained lands;</li> <li>state of coastal areas of the water reservoirs;</li> </ul>	Annual

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Body of regional environmental	Information provided	Frequency of information
	Information provided	
monitoring system		provision
	- level of surface water pollution in places	
Basin Authorities of Water Resources	of its intensive practical use;	Quarterly
	- levels of surface water pollution;	
	- use of water (form 2 TP-water);	
	- state of water in water bodies in areas of water	Annual
	intake;	
Regional Geological Enterprises	- ground water pollution levels;	Quarterly
	- data of the state cadastre on ground waters;	Quarterly
	<ul> <li>dissemination of endogenic and exogenic processes;</li> <li>geo-chemical state of landscapes;</li> </ul>	Annual