



Ministry of national economy of the
Republic of Kazakhstan Committee
on statistics



United Nations



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SEEA: Compilation of Air emissions account (AEA) in Kazakhstan



Almaty 2019



Agenda

- SEEA implementation: priority accounts for Kazakhstan;
- Air emissions account;
- Work at the national and international level;
- Main challenges;
- Next steps.



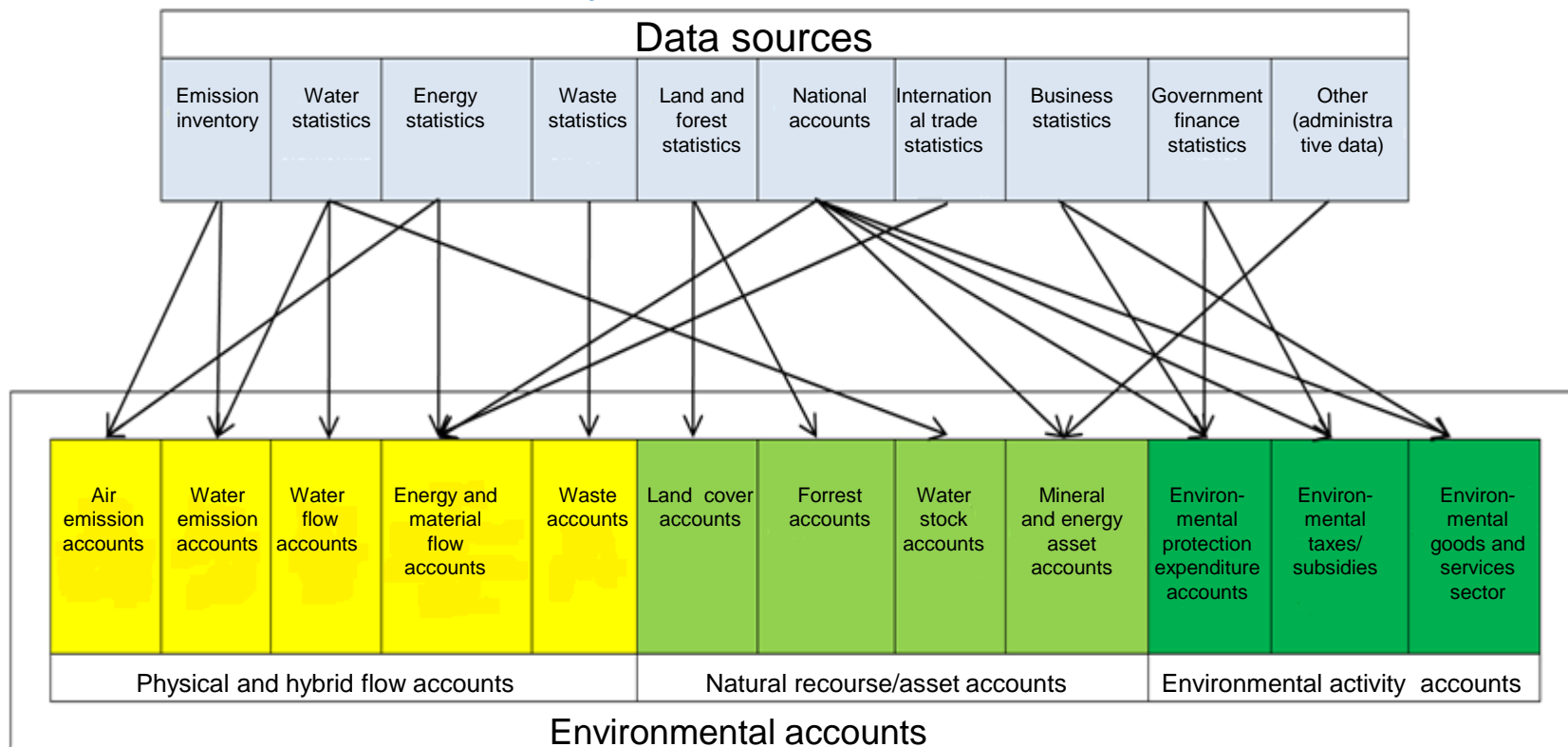
CS activities on implementation of the SEEA

- Analyzed manual SEEA CF
 - Developed action plan
 - Established working group
 - Organized several WG meetings
 - Identified priority accounts of SEEA
 - Compiled pilot accounts
 - Continuously working with responsible GO and IO



Structure of the SEEA Central Framework

Priority Accounts for Kazakhstan



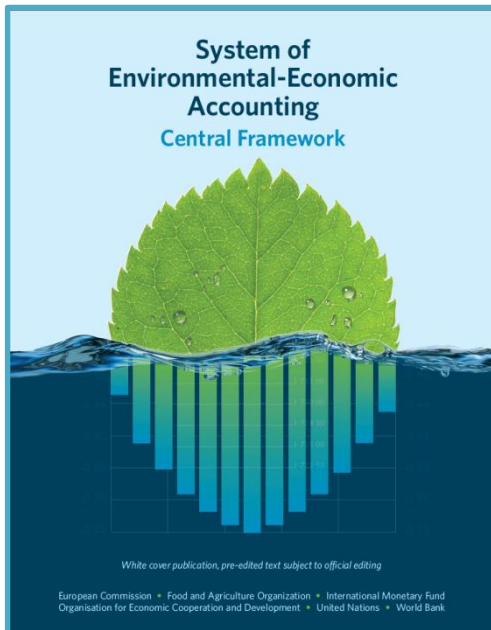


Air emissions account (AEA)

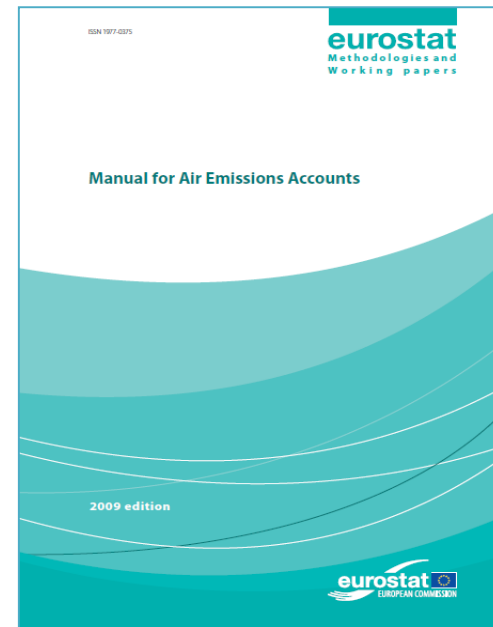


Main standards

Central Framework of the System of environmental-economic accounting (UN)



Manual for air emissions accounts (EUROSTAT)





Data sources

**Division of production and
environment statistics
(CS MNE RK)**

2-TP (air) -
"Report on
protection of
atmospheric air"

"Zhasyl Damu" JSC (ME RK)

National
Greenhouse Gas
Report



Table 3.7
Air emissions account (tonnes)

Type of substance	Supply table for air emissions										Use table for air emissions	
	Generation of emissions								Accumulation		Flows to the environment	
	Industries—by ISIC					Households			Emissions from landfill	Total supply of emissions	Emissions released to the environment	Total use of emissions
	Agriculture	Mining	Manufacturing	Transport	Other	Transport	Heating	Other				
ISIC A	ISIC B	ISIC C	ISIC H	Other	Transport	Heating	Other	Emissions from landfill	Total supply of emissions	Emissions released to the environment	Total use of emissions	
Carbon dioxide	10 610.3	2 602.2	41 434.4	27 957.0	82 402.4	18 920.5	17 542.2	1 949.1	701.6	204 119.6	204 119.6	204 119.6
Methane	492.0	34.1	15.8	0.8	21.9	2.4	15.5	1.7	222.0	806.3	806.3	806.3
Dinitrogen oxide	23.7		3.5	0.8	2.6	1.0	0.2	0.1	0.1	32.0	32.0	32.0
Nitrous oxides	69.4	6.0	37.9	259.5	89.0	38.0	12.1	1.3	0.3	513.6	513.6	513.6
Hydrofluorocarbons			0.3		0.4					0.7	0.7	0.7
Perfluorocarbons												
Sulphur hexafluoride												
Carbon monoxide	41.0	2.5	123.8	46.2	66.2	329.1	51.2	5.7	1.1	666.9	666.9	666.9
Non-methane volatile organic compounds	5.2	6.5	40.0	16.4	27.2	34.5	29.4	3.2	0.9	163.3	163.3	163.3
Sulphur dioxide	2.7	0.4	28.0	62.4	8.1	0.4	0.4	0.1	0.0	102.5	102.5	102.5
Ammonia	107.9		1.7	0.2	0.9	2.3	11.4	1.2	0.2	125.9	125.9	125.9
Heavy metals												
Persistent organic pollutants												
Particulates (including PM10 and dust)	7.0	0.1	8.5	9.3	4.4	6.0	2.8	0.5	0.0	38.5	38.5	38.5



Air emissions account 2018 (tonnes)

Type of substance	Supply table for air emissions					Use table for air emissions		
	Generation of emissions					Total supply of emissions	Flows to environment	Total use of emissions
	Industries*						Emissions released to environment	
	Agriculture	Mining	Manufacturing	Transport	Other			
Particulates	16 863,778	74 716,770	134 658,886	9 187,926	272 540,523	507 967,883	507 967,883	507 967,883
of them:								
PM10 (particulate matter)	1 962,236	1 589,392	1 945,383	484,723	10 846,012	16 827,746	16 827,746	16 827,746
PM2,5 (particulate matter)	118,441	931,367	239,451	38,472	6 180,649	7 508,380	7 508,380	7 508,380
Gaseous and liquid	19 998,748	288 075,207	580 065,364	108 979,135	941 612,552	1 938 731,006	1 938 731,006	1 938 731,006
sulfur dioxide (SO2)	2 621,392	101 844,878	233 201,798	1 859,131	498 787,508	838 314,707	838 314,707	838 314,707
hydrogen sulfide (H2S)	546,050	503,610	391,253	28,161	919,592	2 388,666	2 388,666	2 388,666
carbon monoxide (CO)	9 053,222	91 105,048	237 009,804	13 286,108	126 415,425	476 869,607	476 869,607	476 869,607
nitrogen dioxide (NO2)	919,120	28 832,982	52 294,198	5 728,216	184 389,719	272 164,235	272 164,235	272 164,235
ammonia	917,209	85,255	1 049,566	4,718	416,752	2 473,500	2 473,500	2 473,500
hydrocarbons (excluding VOC)	168,072	13 428,990	6 073,203	6 237,632	9 425,411	35 333,308	35 333,308	35 333,308
volatile organic compounds (VOC)	395,195	32 934,707	24 968,731	16 760,537	16 653,668	91 712,838	91 712,838	91 712,838
other	5 378,488	19 339,737	25 076,811	65 074,632	104 604,477	219 474,145	219 474,145	219 474,145
Total	36 862,526	362 791,977	714 724,250	118 167,061	1 214 153,075	2 446 698,889	2 446 698,889	2 446 698,889

*according to NACE Rev.2



International cooperation



United Nations
(UN)



Organization for
Economic
Cooperation and
Development
(OECD)



KAZSTAT
Project





Main challenges

- Emissions from mobile sources;
- Emissions of households;
- Allocating GHG to NACE codes;
- Adjusting AEA to residents and non-residents;
- Lack of human resources;
- Need for international expertise;
- Lack of seminars, workshops and trainings.



Next steps

- Estimate emissions from mobile sources;
- Estimate emissions of households;
- Allocate GHG to NACE codes;
- Adjust AEA to residents and non-residents;
- January 2020 WG meeting on the SEEA;
- Interaction with responsible GO;
- Revision of CS and GO toolkit (methodologies, questionnaires, classifiers, reference books);
- Interaction with international experts and organizations.

Thank you for attention

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