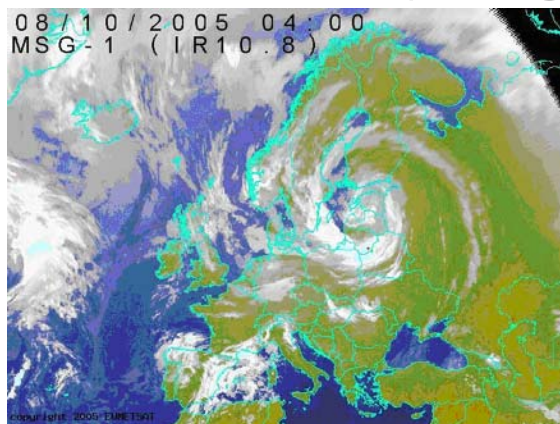




*Lithuanian Hydrometeorological Service
under the Ministry of Environment*

<http://www.meteo.lt>

**2005 ACTIVITY REPORT AND
MAIN PRIORITIES FOR 2006**
(abridged version)





MISSION

To provide state and municipal institutions, economic entities and general public with hydrometeorological information to support sustainable development of national economy and to mitigate eventual impact of adverse hydrometeorological conditions on natural environment and human population, and to discharge state responsibilities for international exchange of hydrometeorological information

World Meteorological Day 2006:



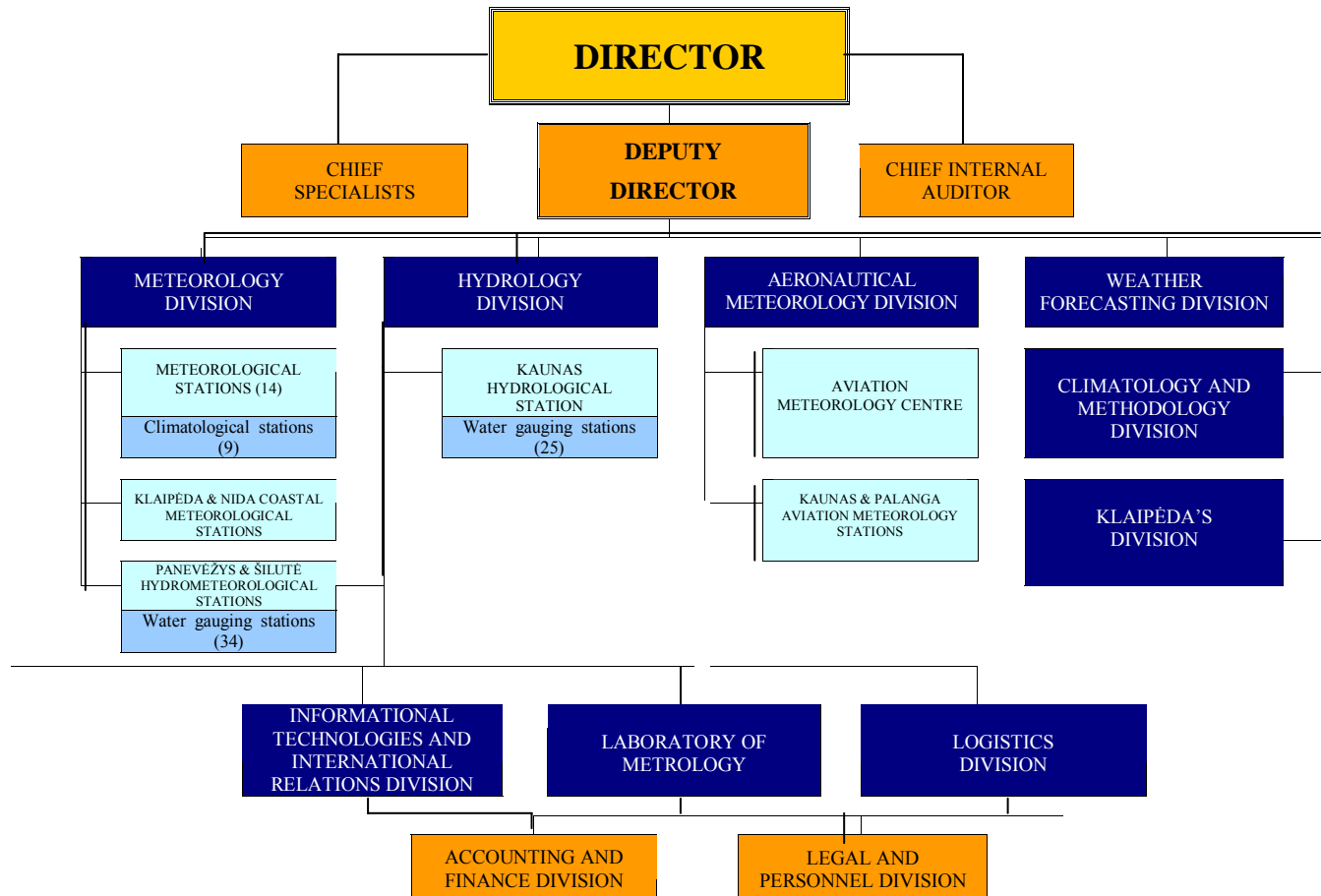
WMO

**“PREVENTING AND MITIGATING
NATURAL DISASTERS”**



STRUCTURE

ORGANIZATIONAL CHART OF LITHUANIAN HYDROMETEOROLOGICAL SERVICE



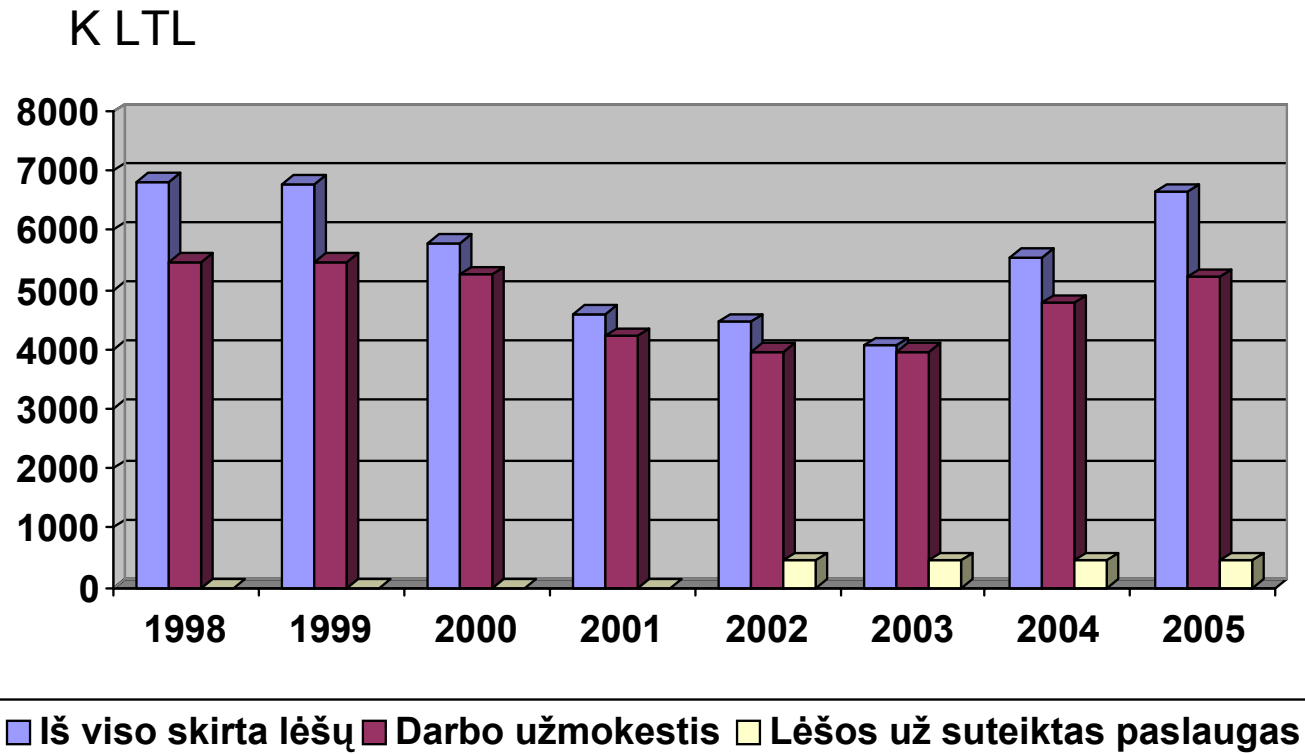


HUMAN RESOURCES

<u>2004</u>	<u>2005</u>
313 staff members (including 156 in the observation network), <u>including:</u>	313 (156)
35 – administrative (General, divisional, stations and laboratory's managers)	34
52 – senior and chief specialists	54
44 – specialists	45
181 – office workers (technical personnel)	183
19 – manual workers	19
41 % holding university degrees	43 %
25 % – college graduates	25 %
34 % – high school graduates	32 %
72,5 % females	72,5 %
50 – pensioners	54



STATE BUDGET ALLOCATIONS 1998–2005





HYDROMETEOROLOGICAL MONITORING AND FORECASTING PROGRAMME

Observations – meteorological, hydrological, phenological, solar radiation, aerological (upper-air), total ozone

Forecasts – meteorological, hydrological, marine hydrometeorological, ultraviolet (UV) solar radiation, UV index

Warnings – about dangerous, disastrous and catastrophic meteorological and hydrological phenomena, sudden weather changes

Climate elements database formation and management



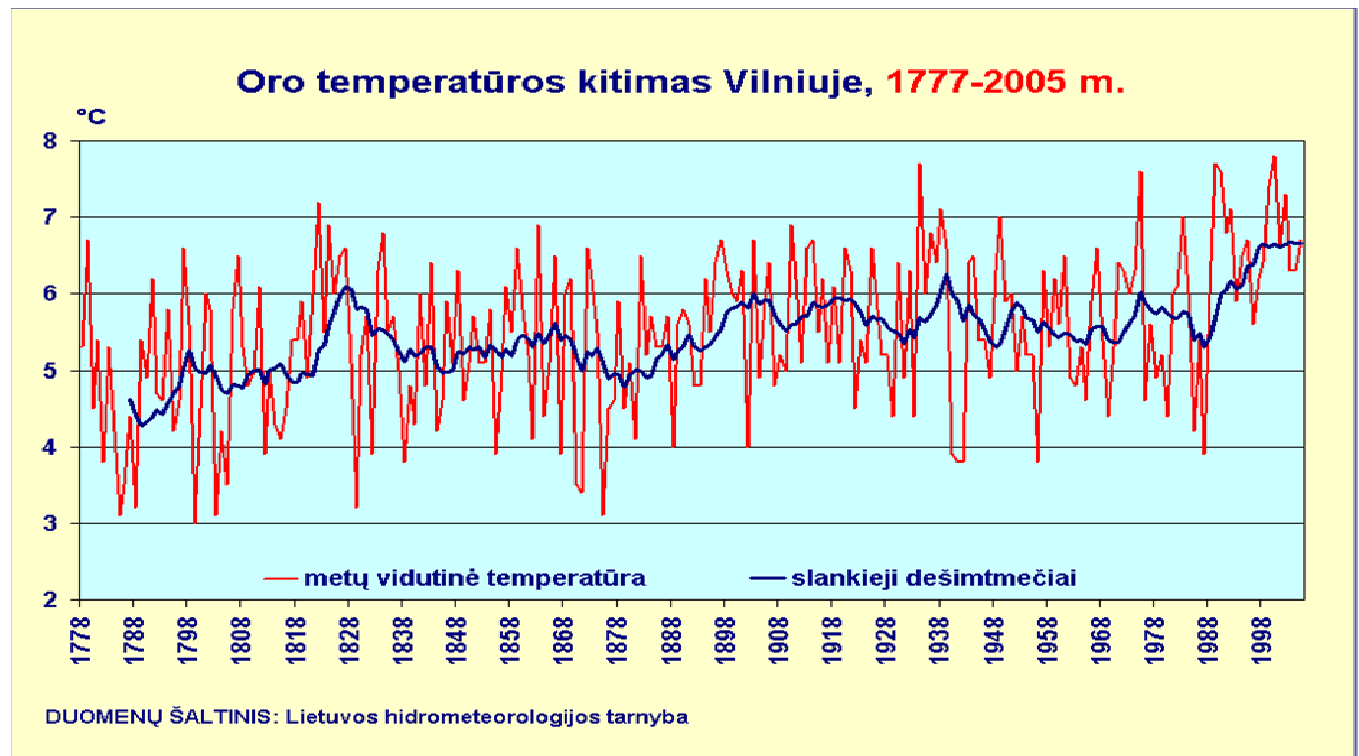
HIDROMETEOROLOGICAL FORECASTS VALIDATION

<u>Meteorological</u>	2003	2004	2005
• One-day	95%	95%	95%
• Two-day	92%	93%	94%
• Three-day	91%	91%	92%
• Four-day	88%	88%	89%
• Five-day	86%	86%	86%
<u>Hydrological</u>			
• Water discharge for 1–4 days	98,5%	98 %	93%
• Water lever for 1–3 days	99%	97%	98%
<u>Marine hydrometeorological</u>			
• Waving	99%	98%	98%
• Water temperature	99%	99%	99%
• Water level	97%	96%	98%
• traukūno	100%	100%	99%



CLIMATE CHANGE (1)

Air temperature change in Vilnius in 1777-2005



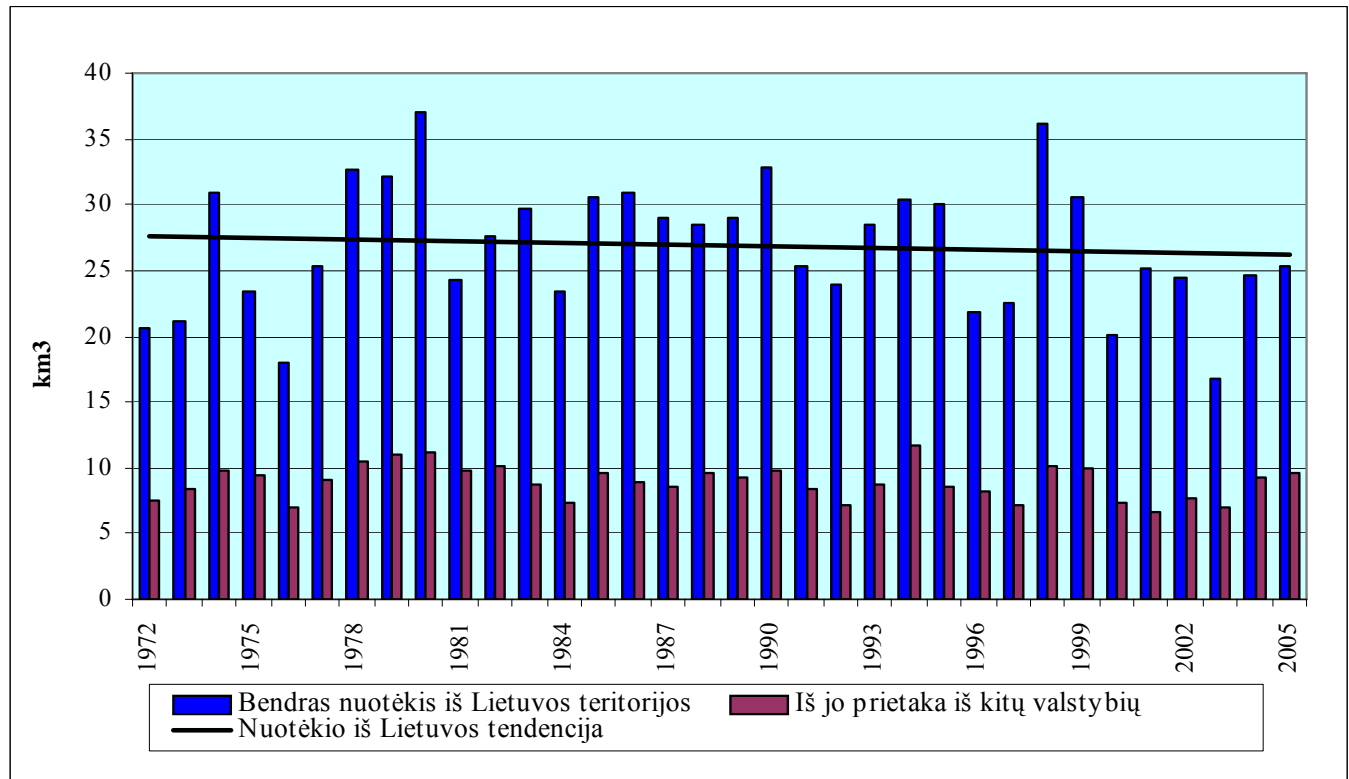
Air temperature norm (1961-1990) for Vilnius: **6.0 C**; in 2005: **6,9 C**

Mean precipitation norm (1961-1990) for Vilnius - **683 mm**; in 2004 - **720 mm**; in 2005 - **783 mm (115 % of normal)**



CLIMATE CHANGE (2)

Water runoff in 1972-2005



**Mean normal (1961-1990) runoff – 26 km³, in 2004 - 24 km³, in 2005 - 25 km³
(highest in the last 6 years)**



CLIMATOLOGICAL PROCEEDINGS AND INFORMATIONAL PUBLICATIONS

- “Climate change in Lithuania over the last decade“
- “Snow cover“ reference book, part III
- “Lithuanian climate“ monograph (under preparation)
- Meteorological annals
- Hydrological annals
- Monthly and daily bulletins, etc.



EU TRANSITION FACILITY INSTITUTIONAL STRENGTHENING PROGRAMME

Two projects have been prepared under this programme:

1. „Institutional strengthening in preparation for upgrading of Lithuanian meteorological observation network”
2. „Strengthening of Lithuanian institutional capacities in the ambient air quality modelling and forecasting “

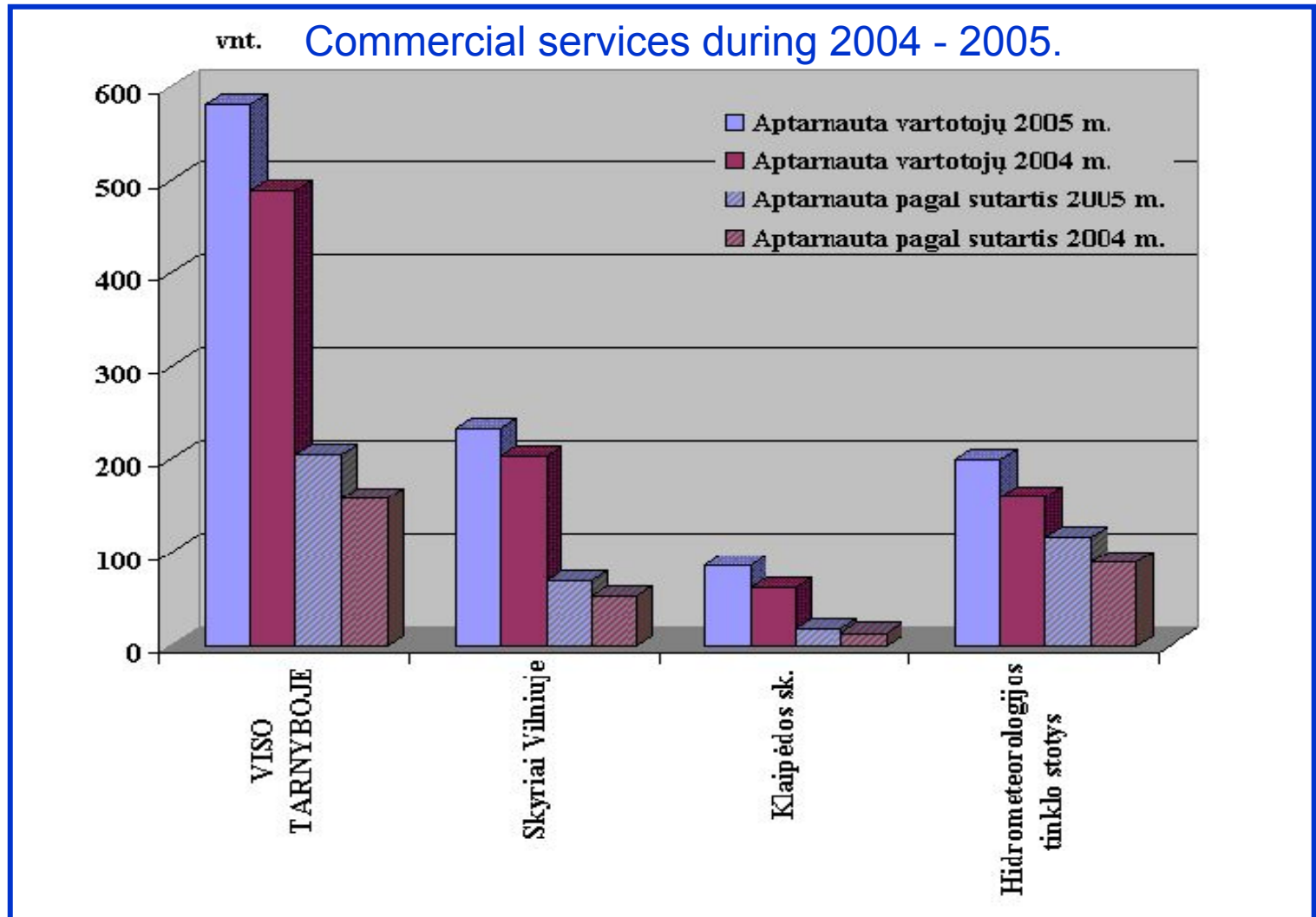
In 2005, preparatory work was completed, terms of reference formulated, procurement tenders organized.

Signed 2 contracts:

1. For provision of services by Finnish Meteorological Institute
2. For procurement of computer hardware and software from B.G.M. Joint Stock Co., Lithuania. The equipment was purchased and prepared for introduction of a numerical weather prediction model

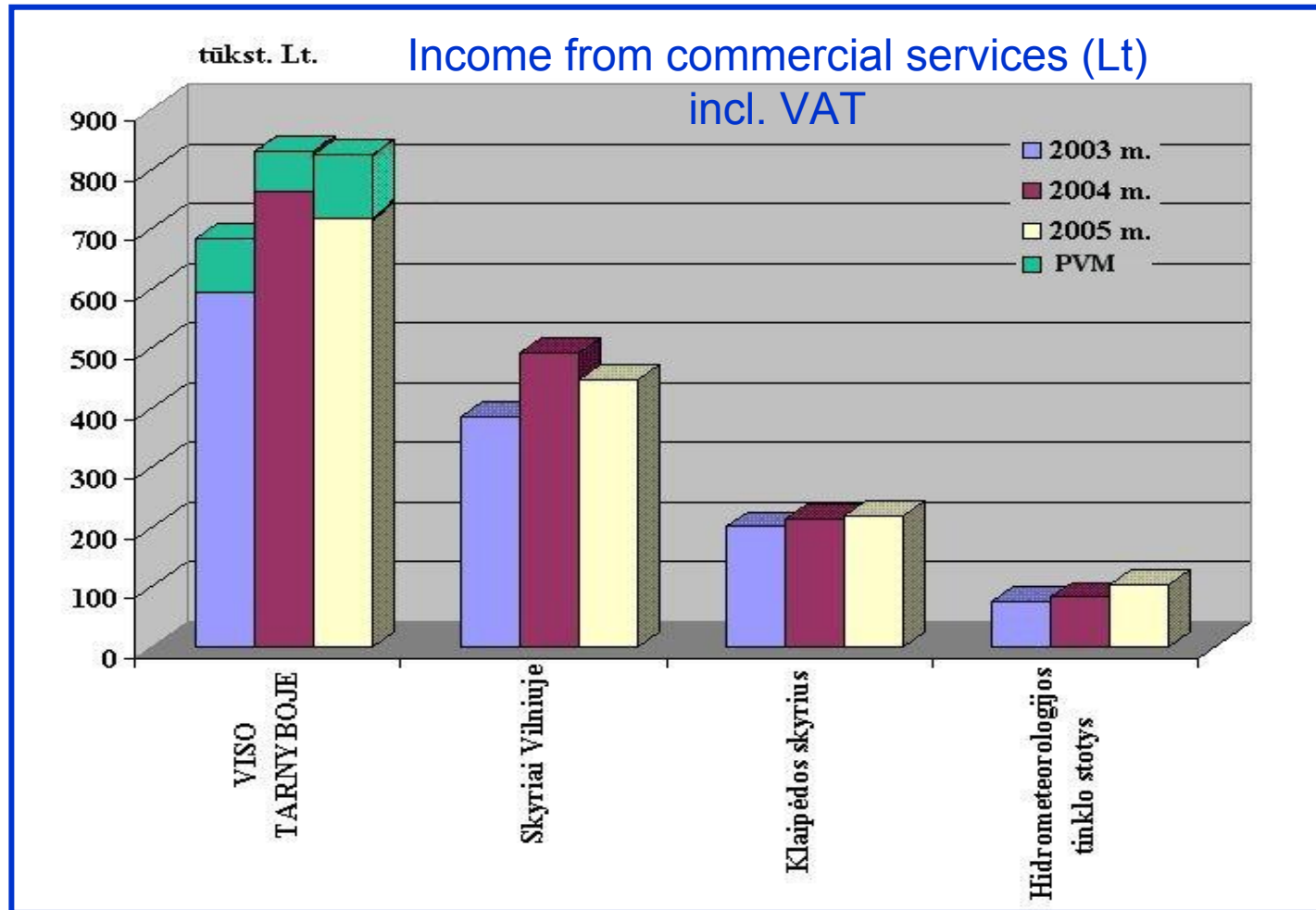


COMMERCIAL SERVICES PROGRAMME (1)





COMMERCIAL SERVICES PROGRAMME (2)



Main sources of income were **media** (17 customers), navigation and lading (12), oil (7), power generation and central heating companies (63)



COMPLETED PROJECTS

- **Spring flood forecasting in the downstream of river Nemunas**

*Completed **15/05/2005** Hydrological model software (a precipitation-runoff model) installed at the Hydrology Division of LHMS and relevant staff trained to operate the model. Project partner - Swedish Meteorological and Hydrological Institute. Project was funded by Swedish International Development Agency (**SIDA**), allocated funds - 152 thousands Lt.*

- **Modernization and development of a water gauging stations network of the Lithuanian Hydrometeorological Service in the Lielupė river basin**
- *Completed **30/09/2005** Established 6 new and modernized 2 existing water gauging stations. Project costs: ES PHARE funds – 364 340 Lt, LHMS – 103 845 Lt (22,18%)*



HYDROLOGICAL ACTIVITY HIGHLIGHTS





ONGOING PROJECTS (1)

Replacement, modernization and automation of meteorological elements measuring system at Kaunas airport

*Project is financed by the **European Regional Development Fund and State Budget of the Republic of Lithuania**. Available funds – 1 500 000 Lt. Implementation period - until **30/06/2007**.*

In 2005, the first project activity was completed, including preparation of project documentation, terms of reference, tendering for procurement of services in preparing technical specifications and tender documentation for the instrumentation (sensors). Completed 25/11/2005. This year, the second project activity is underway since the announcement of an open procurement tender on 26 January 2006. The tender provides for procurement of the equipment (AWOS system) worth 1,300,000.00 Lt. Envelope opening ceremony was scheduled for March 31st.



ONGOING PROJECTS (2)

Institutional strengthening in preparation for upgrading of Lithuanian meteorological network

*Project is funded from the PHARE 2003 unallocated envelope for the institutional strengthening. Total cost of the project – 862 500 Lt. The tender was won by the Finnish Meteorological Institute. Service contract was signed on **15/11/2005**. Project leader and team made their site visits, prepared an inception report, elaborated their work plan and time schedule. Computer cluster procurement tender was won by the B. G. M. Joint Stock Company, Lithuania, and the procurement contract was signed on **25/12/2005**. Project completion is scheduled for **30/06/2006**.*



ONGOING PROJECTS (3)

- **Strengthening of Lithuanian institutional capacities in the ambient air quality modelling and forecasting**

Project is financed from the EU 2004 Transition Facility funds. Total costs of the project – 2 640 000 Lt. Service procurement tender was won by the Finnish Meteorological Institute. Project implementation terms are: 15/12/2006 (signature of contracts) and 15/12/2007 (payment of the final installment)

- **Strengthening of the environmental protection laboratories (including rehabilitation of the LHMS Laboratory for Metrology)**

Project is financed from the European Regional Development Fund. The LHMS part of the funding – 490 000 Lt. Project implementation period is scheduled by the end of 2007.



INTERNATIONAL COOPERATION



- Protocol on Data Exchange with Hydrometeorological Department of Belarus signed in Minsk on February 3rd and countersigned in Vilnius on February 18th, 2005
- Cooperation Agreement with Latvian Environment, Geology and Meteorology Agency signed in Riga on 17 September 2005
- Cooperating State Agreement between the Republic of Lithuania and EUMETSAT entered into force on November 7th and the Lithuanian flag raised at the EUMETSAT headquarters in Darmstadt (Germany) on November 29th, 2005.
- In 2006, cooperation agreements with Russian and Polish national hydrometeorological services will be renewed

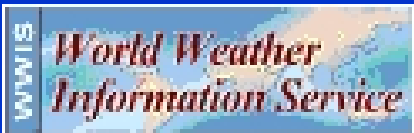


INTERNATIONAL COOPERATION





PARTICIPATION IN INTERNATIONAL PROGRAMMES AND PROJECTS



WMO project **WORLD CITIES FORECAST**



HIRLAM (high resolution limited area NWP model development and application programme)



WMO integrated flood management programme



CLIPS (WMO climate information and prediction system)



PARTICIPATION IN INTERNATIONAL PROGRAMMES AND PROJECTS



NAVTEX safe navigation programme



WOUDC (World ozone and UV data centre)



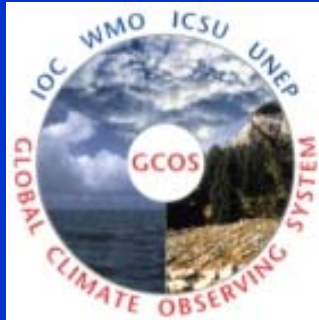
CLIDATA climatological database project with Czech Republic



COST (European scientific and technological cooperation)



PARTICIPATION IN INTERNATIONAL PROGRAMMES AND PROJECTS



GCOS (Global climate observing system)



GRDC (Global runoff data centre)



IMMEDIATE PRIORITIES

- To prepare and commence a programme of modernisation of the hydrometeorological observation network
- To increase both timescale and range of hydrometeorological forecasts
- To strengthen legal background for hydrometeorological activities (to draft the Law on Hydrometeorology of the Republic of Lithuania and subordinate legal instruments regulating hydrometeorological activities)
- To prepare a weather radar network project and to identify available funding sources
- To implement ISO 9001 quality management system
- To improve administrative structure of LHMS (to strengthen public information and marketing capacities) and to upgrade its current salary system



THANK YOU !

