

Meteorology in Latvia: History and future perspectives.

Dinara Gershinkova

Latvian Hydrometeorological Agency, Riga, Latvia

Dinara.Gershinkova@meteo.lv

Last years we see very high interest to our service and meteorology generally from society- mass media, ordinary people and school-age children. It is almost a rule to start presentations of our service from its history, when and how it was started and what is our success throughout these years.

The very beginning of weather observations in Latvia are found in 16th century (as traditionally in history monks were the first weather observers). The first observations were in the beginning and finishing of ice period of the Daugava (Duna) river. It was in 1530 (**Fig.2**). Starting from occasional weather records there was opened the Riga weather station on regular observation basis in 1795 (**Fig.1**). The first long range raw of weather observations was completed in 1795-1832 by professor of Latvian University I.Zand. Speaking about the beginning of weather observations in Latvia there is an interesting fact to be mentioned in this concern: the originator of regular weather observations was doctor J.Luter (1716-1764), who wondered how weather acts on human health. Luterr also was the first one who had published the observation data in 1762.



Figure 1. Baltic States in 1795

With years new measuring instruments were invented, set of observations was enlarged, new stations both - meteorological and hydrological were widely spread out in Latvian territory. Quite a dense network was established at the beginning of 20th century, which included about 50 weather stations and 100 rain stations.

Latvia in a frame of its initial state borders was a shipping country and nowadays remains the country with extensive sea border (500 km), where shipping industry plays a significant role also in country's further development. That's why first atlases, maps and

climatic reviews were dedicated to the Baltic Sea and the first researches were in the field of weather impact on shipping and work in harbors. The first detailed atlas of the Baltic Sea saw the light in 1757 by hydrograph Nagajev edition.

In 1872 the measurements of water level of the Daugava (in Riga) were started .

Aufgang der Düna in Riga.

(Mitgetheilt von N. NEESE. — Siehe Correspondenzblatt des Naturf. Vereins zu Riga, 6. Jg)

Das Eis ging aus:

1530 den 13. April. alten Styls.	1626 den 31. März.	1751 den 16. März.	1803 den 25.
1539 " 16. März.	1643 " 20. April.	1752 " 20. "	1804 " 1.
1540 " 4. April.	1649 " 1. "	1753 " 11. "	1805 " 2.
1543 " 4. "	1650 " 18. März.	1754 " 2. April.	1806 " 30.
1552 " 28. März.	1651 " 27. "	1755 " 31. März.	1807 " 3.
1556 " 30. "	1652 " 23. Januar.	1756 " 7. "	1808 " 11.
1557 " 10. April.	1653 " 24. "	1757 " 20. "	1809 " 9.
1558 " 12. März.	1659 " 22. April.	1758 " 9. April.	1810 " 14.
1562 " 1. April.	1662 " 8. Februar.	1759 " 4. März.	1811 " 29.
1563 " 28. März.	1667 " 8. April.	1760 " 16. April.	1812 " 13.
1564 " 18. "	1709 " 6. "	1761 " 9. März.	1813 " 17.
1565 " 7. April.	1710 " 5. "	1762 " 30. "	1814 " 31.
1566 " 4. März.	1711 " 26. März.	1763 " 7. April.	1815 " 26.
1567 " 19. "	1712 " 12. April.	1764 " 20. März.	1816 " 3.
1568 " 13. April.	1713 " 3. März.	1765 " 20. "	1817 " 21.
1571 " 19. März.	1714 " 28. "	1766 " 26. "	1818 " 14.
1572 " 31. "	1715 " 22. "	1767 " 20. "	1819 " 21.
1576 " 27. "	1716 " 10. April.	1768 " 9. April.	1820 " 30.
1577 " 17. "	1717 " 31. März.	1769 " 11. März.	1821 " 24.
1578 " 4. April.	1718 " 21. "	1770 " 16. April.	1822 " 19.
1579 " 22. März.	1719 " 31. "	1771 " 15. "	1823 " 23.
1580 " 31. "	1720 " 9. April.	1772 " 23. März.	1824 " 6.
1581 " 28. "	1721 " 29. März.	1773 " 31. "	1825 " 31.
1582 " 17. April.	1722 " 29. "	1774 " 24. "	1826 " 24.

Figure 2 fragment of ice records of the Daugava river printed in the beginning of the 20th century

Throughout the years before meteorology had grown in a separate science all meteorological research, observations, climatological analyses were carried out by geographers, sailors, etc. For example very interesting climate description and its variations is found in some geographical essays about Lifland (one of old names of Latvia) – Hupel (**Fig.3**) in 1774-1782; Recke und Napiersky in 1827-1832; Buhse in 1854. The information about Latvian climate given in these books is quite similar to modern one, although there were some absolutely rare phenomena nowadays, like auroras light, which were” very common contrarily to thunder and hail”. In hot summers 1775 and 1780” it was possible to grow apricots, peaches and melons” what is for 100% imported staff now. The great part of books about Latvian climate in 17-18 century was printed in Germany and originals are available in German or Latvian language in scientific library in Riga as well as in Latvian Hydrometeorological archive.

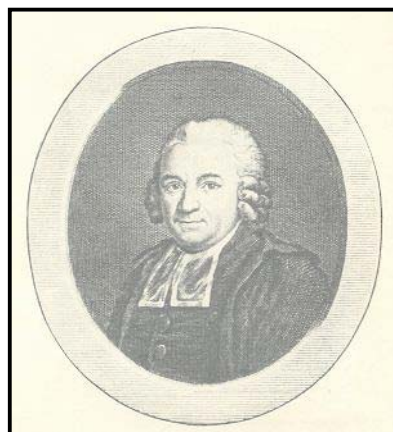


Figure 3. Pastor Hupel (1737-1819)



Figure 4. Riga at the beginning of 20th century

Since 1850 the weather records from Riga were published in “Informational leaf” by Riga Society of naturalists and from 1873- in “Weather review” by St.Petersburg Geophysical Observatory (**Fig.5**).

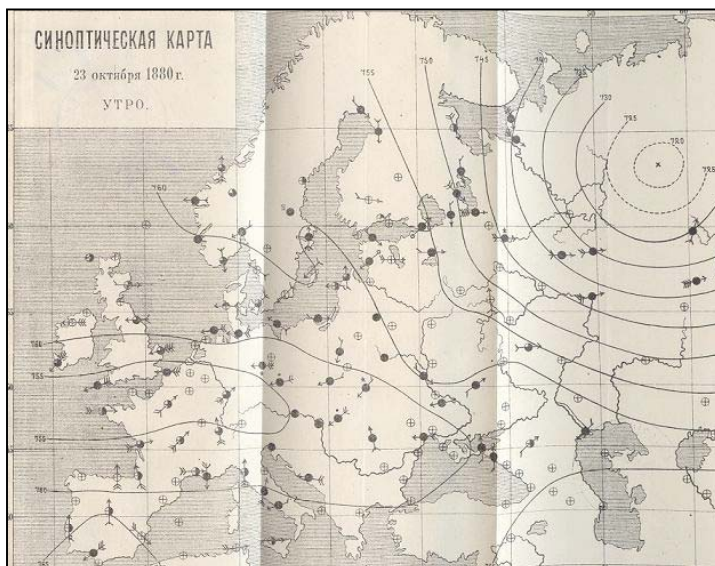


Figure 5.
Synoptic chart from 1880

The first weather bureau on providing regular meteorological information was opened in 1920 in the capital of Latvia- in Riga. Thus a new era of weather service on scientific base was started. Weather bureau served for agriculture, marines, mass medias. It should be mentioned that articles about extreme or hazardous weather phenomena had periodically appeared in news since Latvian local newspapers had been started to print. During 1920-1940 the observing network had been enlarged, new stations had been opened and weather bulletin had been regularly issued. The daily weather bulletin at that time included three charts: the European weather chart, the bigger resolution Latvian and Estonian charts and the Baltic Sea chart as well as actual weather reports and forecast for the next 24 hrs. It was even possible to order this bulletin for 2.70 lats per month (modern lats is equal to 0,65 Euro). As the weather forecasting more and more became a common thing, people wanted to know more about meteorology. Many books and educational materials about weather forecasting, famous meteorologists, global and Latvian climate were printed in period 1920-1940. There was established the meteorological institute in a frame of Latvian University in 1921. But still many educational activities were needed. For example, 1928 was very rainy and farmers lost almost all of the harvest, but on this year also dropped the maximum of activities in establishing the radio network in Latvia. People blamed radio as a source of persistent rain. Meteorologists had to deal with his, explaining to people the origins of rain.

The important historical events like lost of Latvia' s independence in 1940, years of Second World War (1941-1945), years of Soviet power and restoration of Latvia' s independence in 1991 of course had the significant influence on the development of a whole hydrometeorological service in Latvia. But it should be underlined that service' s employees or better to say the great weather enthusiasts always put on the cutting edge their duties. Undependably of any politic events they just were kept doing their job, sometimes in hard conditions indeed. There is a very bright fact to mentioned in this concern: one of Riga station weather observer took home the main measuring instruments during the hottest days of WWII in Riga in order to save the instruments and to continue observations from home. As a result nowadays we have "no- gap" weather records of more than 100 years from Riga station as well as from other parts thanks to similar people. The weather history framed in climatological weather records is a base for various research projects on climate change and variability, long-term weather forecasting which are carrying out in the Latvian Hydrometeorological Agency nowadays.

During the last 10-15 years the most important events for the Latvian Hydrometeorological service were joining WMO in 1992, the upgrading of observing network, the new services developing as well as supporting of previous ones. Our future development we link with a whole country development. Participating in WMO and in near future- in EUMETSAT, changes related to EU enlargement will give wide range of opportunities in continuous improvements of the quality of services provided, in strengthening of our positions in order to meet our customers' requirements and hopefully to enrich the history of Latvian meteorology with some bright facts.

