Cruise report

R/V VĖJŪNAS
Cruise No.
4KM/2015
5KM/2015

Date 2015-06-15
GENERAL INFORMATION

1. Name of research vessel: VĖJŪNAS

2. Dates of cruise and cruise No.:  
   14\textsuperscript{th} April 2015 – 4KM/2015 (1)  
   15\textsuperscript{th} April 2015 – 4KM/2015 (2)  
   5\textsuperscript{th} May 2015 – 5KM/2015 (1)  
   6\textsuperscript{th} May 2015 – 5KM/2015 (2)

3. Operating Authority: Environmental Protection Agency Marine Research Department  
   Taikos avenue 26, LT-91149, Klaipėda  
   Phone: +370 46 410 450  
   Fax: +370 46 410 460

4. Owner: Environmental Protection Agency

5. Particulars of ship:

   \textit{Table 1.} Particulars of ship

   \begin{tabular}{|l|l|}
     \hline
     Name & VĖJŪNAS \\
     Year of building & 2012 m. \\
     Water capacity & 424 m\textsuperscript{3} \\
     Length & 23,90 m \\
     Width & 8 m \\
     Draught & 1,30 m \\
     Average speed & 11 knots \\
     Call sign & LYTN \\
     IMO Nr. & 9640346 \\
     \hline
   \end{tabular}

6. Crew:  
   Name of captain: Gintautas Morkevičius

7. Scientific personal

   \textit{Table 2.} 1st and 2nd days scientific personal

   \begin{tabular}{|l|l|}
     \hline
     1. Vitalijus Malejevas & Hydrologist \\
     2. Ignas Vyšniauskas & Hydrologist \\
     3. Paulius Petrošius & Hydrologist \\
     4. Liudmila Kondratjeva & Chemist \\
     5. Víjolė Papreckienė & Chemist \\
     6. Rima Kavolytė & Biologist \\
     7. Irina Olenina & Biologist \\
     8. Sabina Solovjova & Biologist \\
     \hline
   \end{tabular}
BRIEF DESCRIPTION OF THE CRUISE

Aim of the cruise – collection of factual information about meteorological, hydrological, hydrochemical and biological state of the Curonian Lagoon according to the 2015 monitoring plan, which is based on National environment monitoring program of 2011-2017 (http://gamta.lt).

Fig. 1 Routes of the cruise
General information (used equipment)

Probe CTD 90 was used during the cruise. Current meter WHM300 ADCP-I-UG1 was used to measure current speed and direction. Water collection system Hydro - Bios "PRS 12 were used for the phytoplankton samples collection, which takes water from different water horizons automatically.

Fig. 2 Probe CTD 90

Fig. 3 Current meter ADCP WHM300-I-UG1
Table 3. Quantity of taken samples during the cruise

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<th>Monitoring station No.</th>
<th>Monitoring station</th>
<th>Coordinates of monitoring station</th>
<th>Date and time, UTM</th>
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<th>Hydrodynamic regime</th>
<th>Physico-chemical quality elements</th>
<th>General data</th>
<th>Other elements</th>
<th>Specific pollutants in water</th>
<th>Artificial radionuclides</th>
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Numbers represents in which horizons samples were taken and measurements were carried.

* Measurements and samples taken from the shore in stations.
BRIEF REVIEW OF THE APRIL

Hydrometeorological conditions
14 \textsuperscript{th} April 2015 in Curonian lagoon prevailed west winds (8-9 m/s), which caused 0,8 meter high waves. The second day in Klaipeda port waters prevailed north-west winds (4-6 m/s), which caused 0,2 m waves. Air temperatures ranged from 4,6 to 6,4 °C and a relative humidity ranged from 80 to 94%. Visibility was about 20 km during the first day, meanwhile the second day it was about 12 km.

Hydrological observations
Surface water level
Water temperature in central Curonian lagoon ranged from 7,2 to 8,1 °C. The water temperature in Klaipeda port waters ranged from 7,0 to 7,6 °C. The lowest temperature recorded at the station No. 1 – 7,0 °C and maximum at station No. 5 – 8,1 °C. Salinity in central Curonian lagoon ranged from 0,2 ‰ (in many stations) to 0,3 ‰ (station No. 6). Salinity in Klaipėda port waters ranged from 2,9 ‰ (station No. 3A) to 4,9 ‰ (station No. 1).

Bottom water level
In Klaipėda port waters, the water temperature ranged from 6,0 °C (station No.3B) to 6,9°C (station No. 3), salinity ranged from 5,1 ‰ (station No.3) to 6,8 ‰ (station No.3B). Minimum water transparency (0,4 m) was measured at the station No.12, meanwhile the highest (1,7 m) was recorded at the station No.3A.

BRIEF REVIEW OF THE MAY

Hydrometeorological conditions
On 5\textsuperscript{th} May 2015 in Curonian Lagoon south winds were prevailing (1-4 m/s), which caused 0,2 m waves. Air temperatures ranged from 9,0 to 18,0 °C. The relative humidity ranged from 63 to 100%. Visibility was about 2-20 km. On 6\textsuperscript{th} May 2015 in Klaipeda port waters prevailing west-south-west winds (2-5 m/s), which caused 0,2 m waves. Visibility was about 12 km.

Hydrological observations
Surface water layer
Water temperature in central Curonian lagoon ranged from 11,2 to 13,0 °C. In Klaipėda port waters ranged from 11,9 to 13,2 °C. The lowest temperature was in station No.4 – 11,2 °C, maximum temperature at station No. 1 – 13,2 °C. Salinity in central Curonian lagoon part in all stations was 0,2 ‰. In Klaipėda port waters ranged from 0,2 ‰ (stations No. 3 and No. 3B) to 0,5 ‰ (station No. 3A).

Bottom water level
In Klaipeda port water temperature ranged from 9,3 °C (station No. 1) to 13,0 °C (station No. 3B), salinity ranges from 0,2 ‰ (station No.3) to 6,8 ‰ (station No. 1). The smallest water transparency was in stations No. 5 and No.10 – 0,6 m, meanwhile the biggest transparency was fixed in station No. 7B – 1,7 m.

Hydrochemical and biological research are taken in the coast laboratory, the research results are present in Environment integral management information system.