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24 Maja 2011, Gdańsk

MORPHOLOGICAL IMPACTS AND COASTAL RISKS INDUCED BY EXTREME STORM EVENTS

Pakiet Roboczy - 3

Kampanie Pomiarowe

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Instytut Nauk o Morzu





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Mierzeja Dziwnowska





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Rodzaje pomiarów zaplanowane w projekcie:

- ✓ **GPS RTK Station**
(EPP TOPCON Hiper PRO)
- ✓ **Lidar – lotnicze skanowanie laserowe**
(Topograficzny: Riegl LMS Q560i; TopEye)
(Batymetryczny: HawkEye II)
- ✓ **Echo-sonda**
(ODOM DigiBar Pro Sound Velocity Profiler)
- ✓ **Mareografy**
(E-Sea Tide Gauge)

Dodatkowo:

- ✓ **Lidar - mobilne skanowanie laserowe – współpraca z GISPRO**
(Mobile Mapping System/ Mobile Laser Scanning) Riegl VZ-400, VQ-250
- ✓ **Kamera**
(Mobotix M12 D45 N45)





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GPS RTK (EPP TOPCON Hiper PRO)





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Pomiar całego obszaru badań z wykorzystaniem GPS RTK

7.02. – 8.05.2009





Pomiar obszarów testowych z wykorzystaniem GPS RTK

- 1.07.2009 (1,2)
- 15-17.09.2009 (1,2)
- 6.10.2009 (1,2)

Ekstremalny Szstorm 14-17.10.2009

- 20.10.2009 (1,2)
- 12.11.2009 (1,2)
- 15.12.2009 (1,4)
- 1.03.2010 (1)
- 19.04.2010 (1,4)





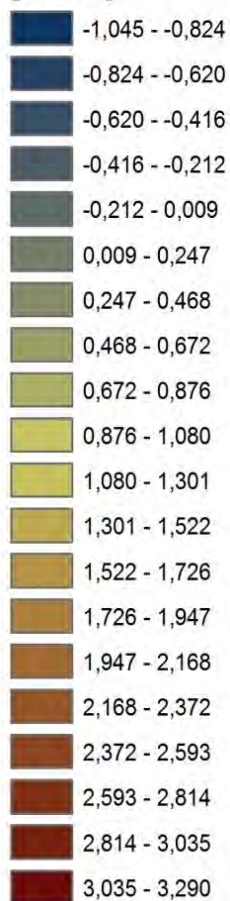
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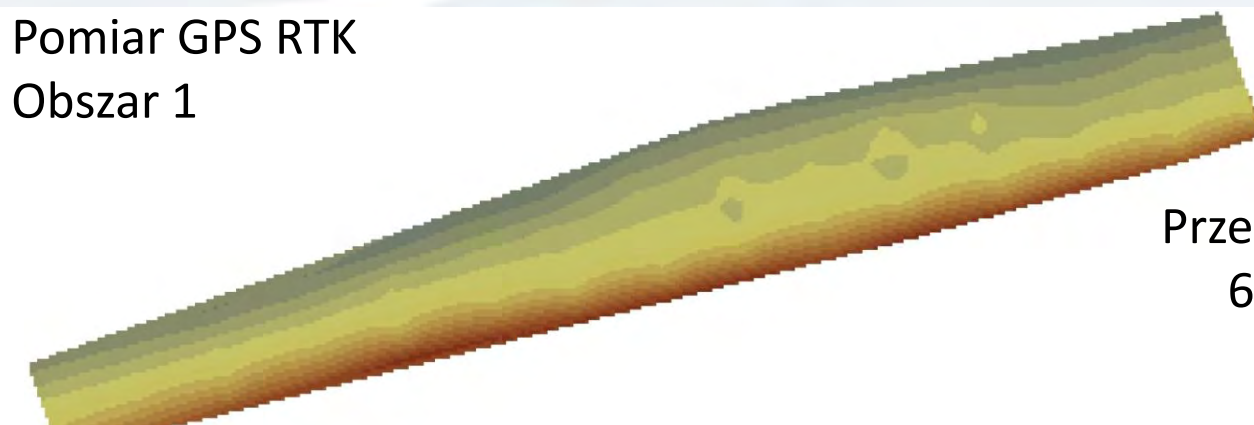
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Legend

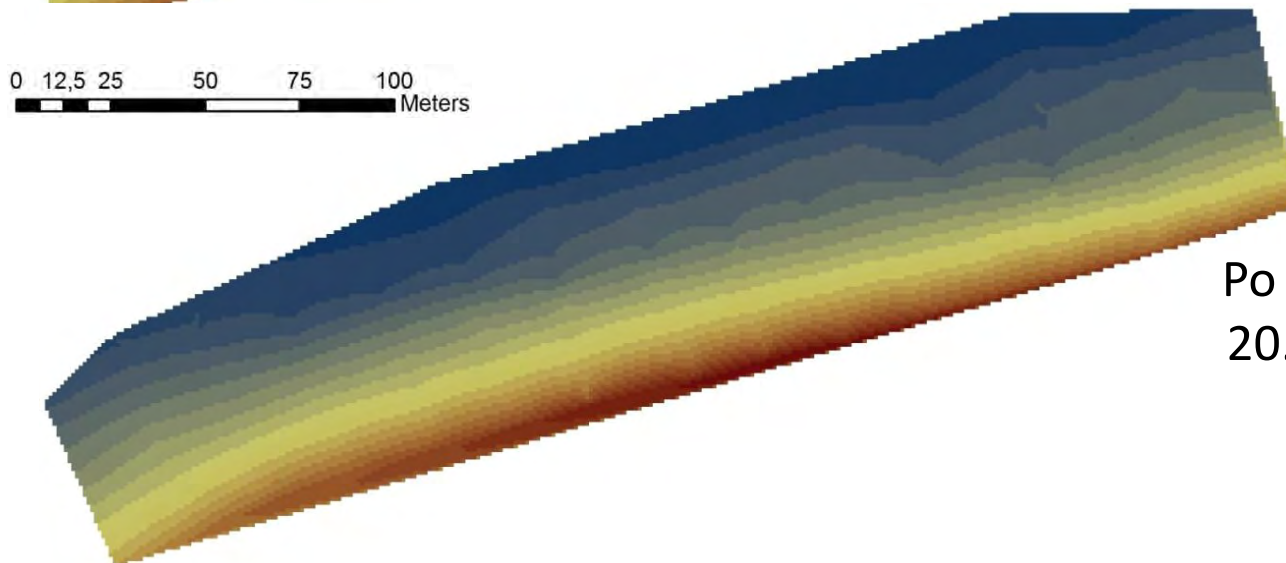
[meters]



Pomiar GPS RTK Obszar 1



Przed sztormem
6.10.2009



Po sztormie
20.10.2009

0 12,5 25 50 75 100 Meters





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Lidar – lotnicze skanowanie laserowe

(Batymetryczne: HawkEye II)

20.11.2009

Gęstość:

1 pts/4 m²





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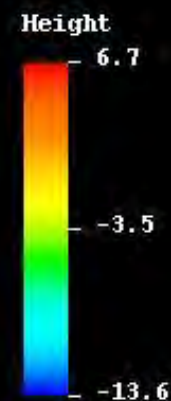
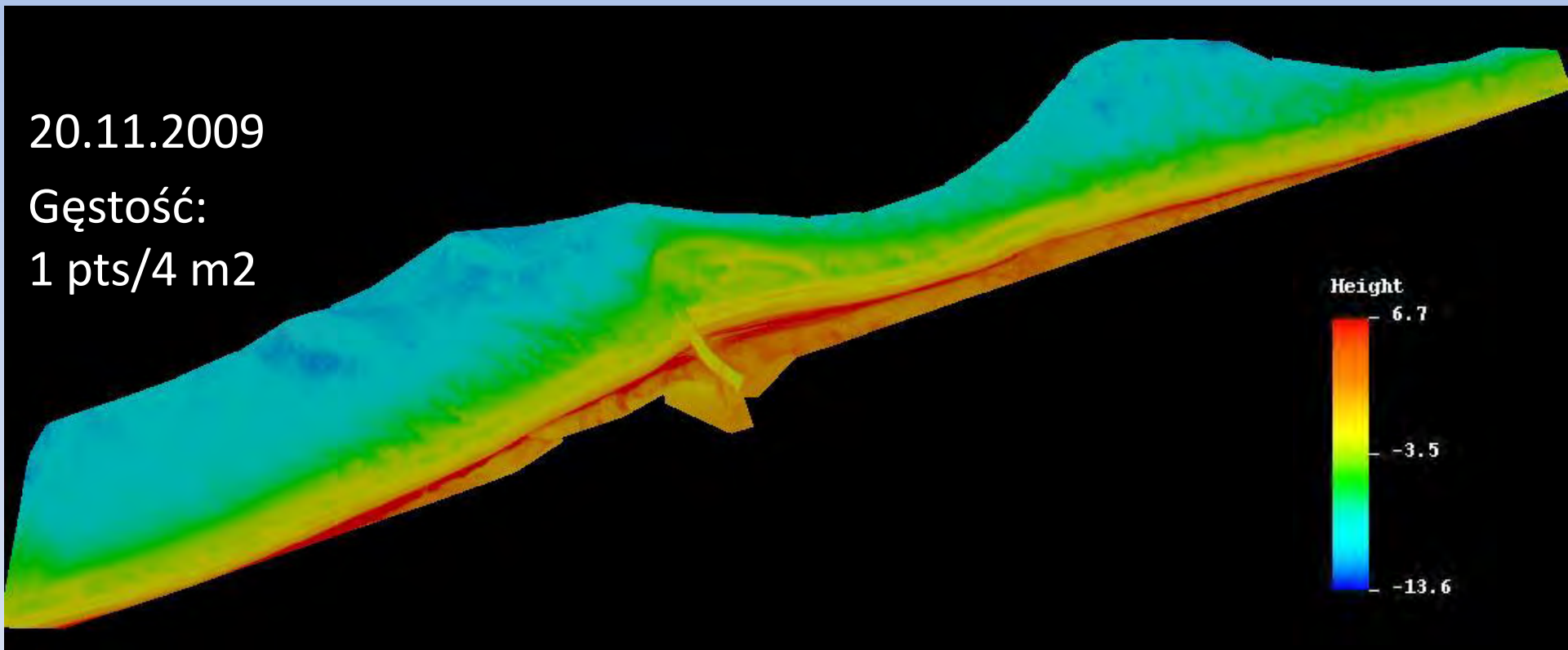
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Lidar – lotnicze skanowanie laserowe

20.11.2009

Gęstość:

1 pts/4 m²





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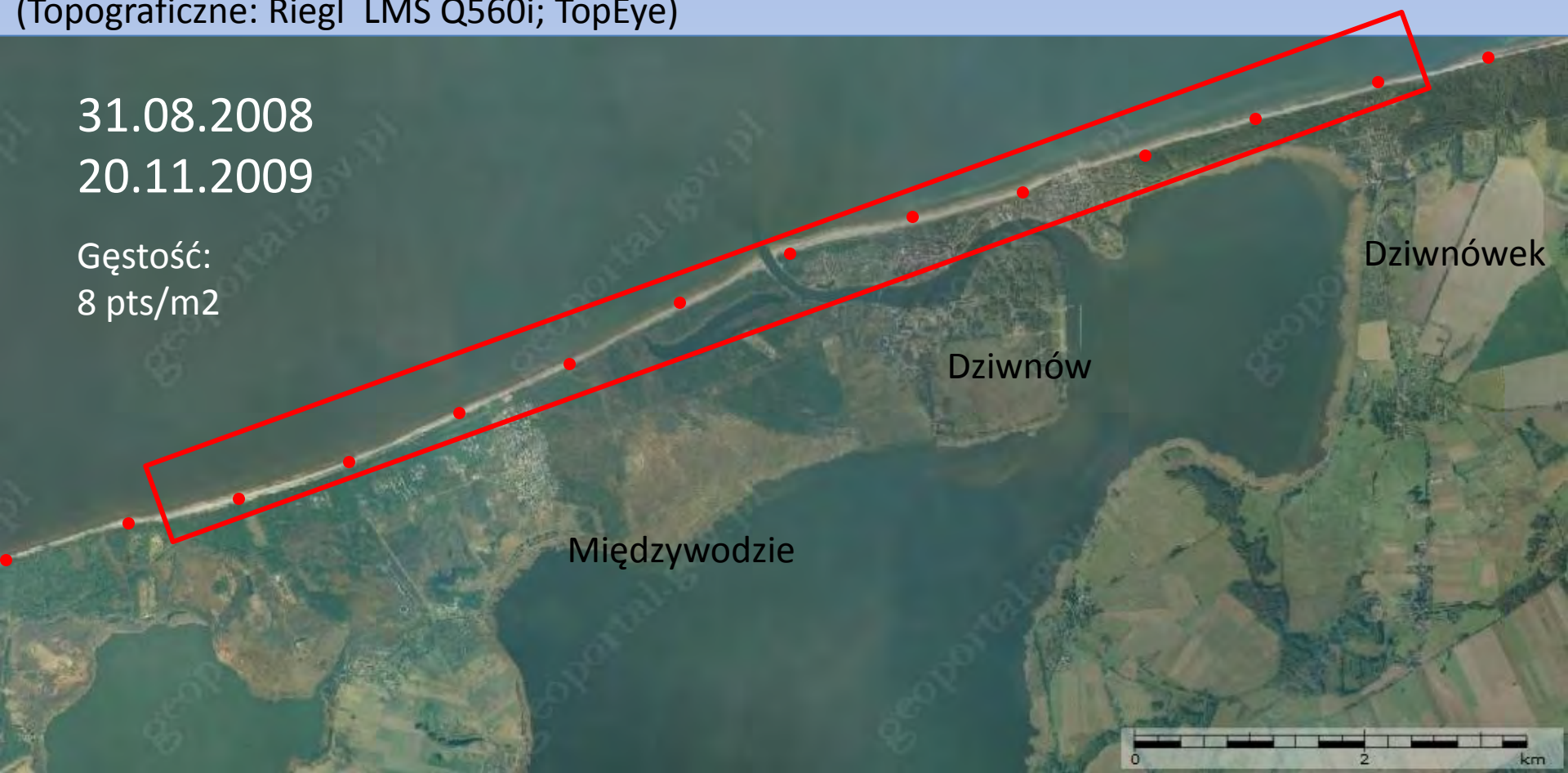
Lidar – lotnicze skanowanie laserowe (Urząd Morskie w Szczecinie)

(Topograficzne: Riegl LMS Q560i; TopEye)

31.08.2008

20.11.2009

Gęstość:
8 pts/m²





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Pomiary Echo-sondą (ODOM DigiBar Pro Sound Velocity Profiler)





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Profile batymetryczne

8.08.2009 E

9.08.2009 W



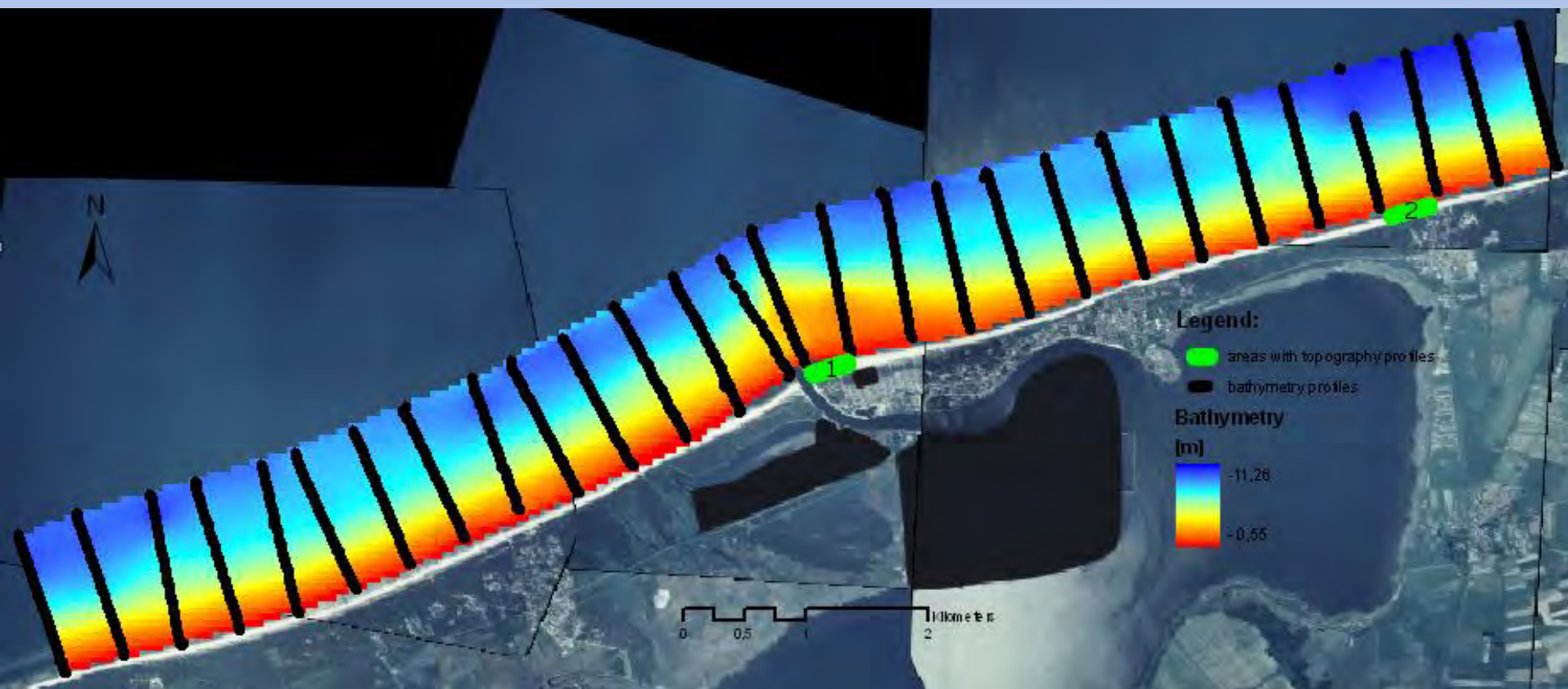


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Profile batymetryczne i wyinterpolowana na ich podstawie batymetria





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Mareografy (E-Sea Tide Guage)





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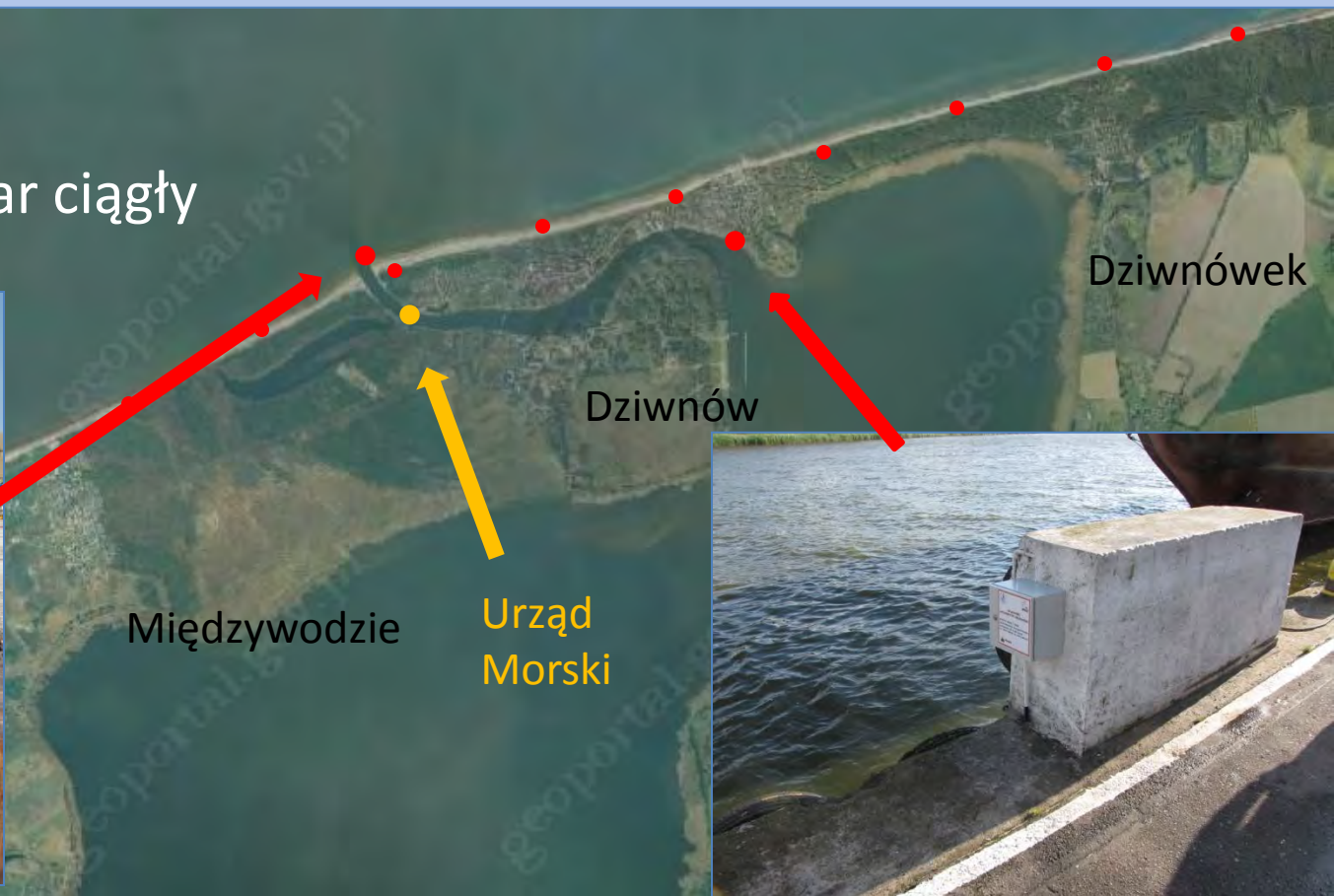
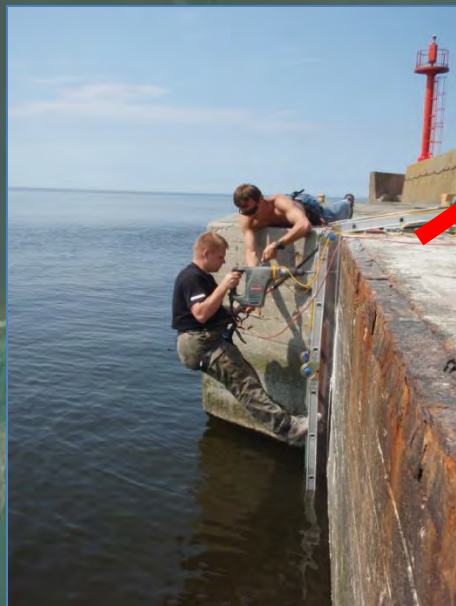
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Mareografy

27.07-14.09.2009

23.10-27.10.2009

od 28.10.2009 pomiar ciągły

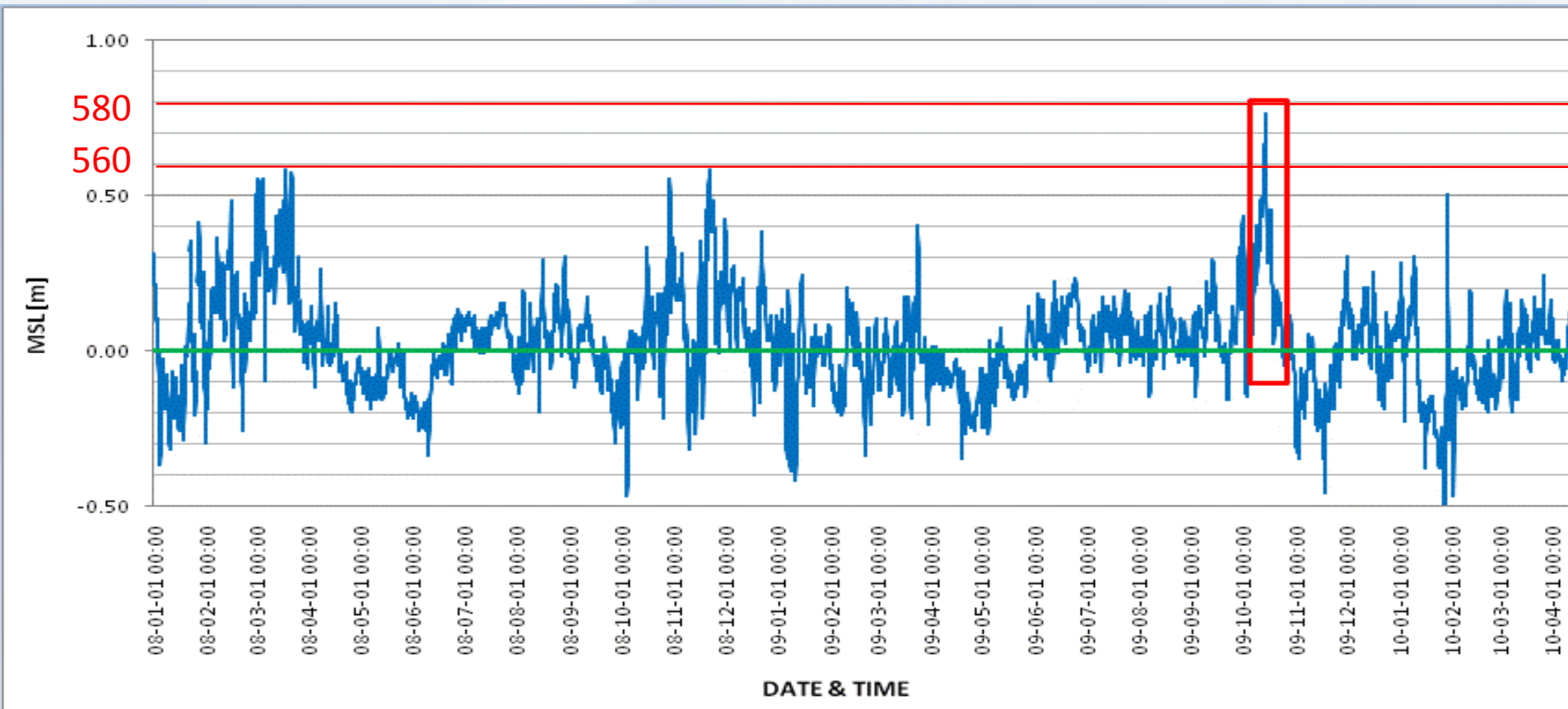




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Lidar – mobilne skanowanie laserowe (Mobile Mapping System/ Mobile Laser Scanning)

Riegl VZ-400, VQ-250





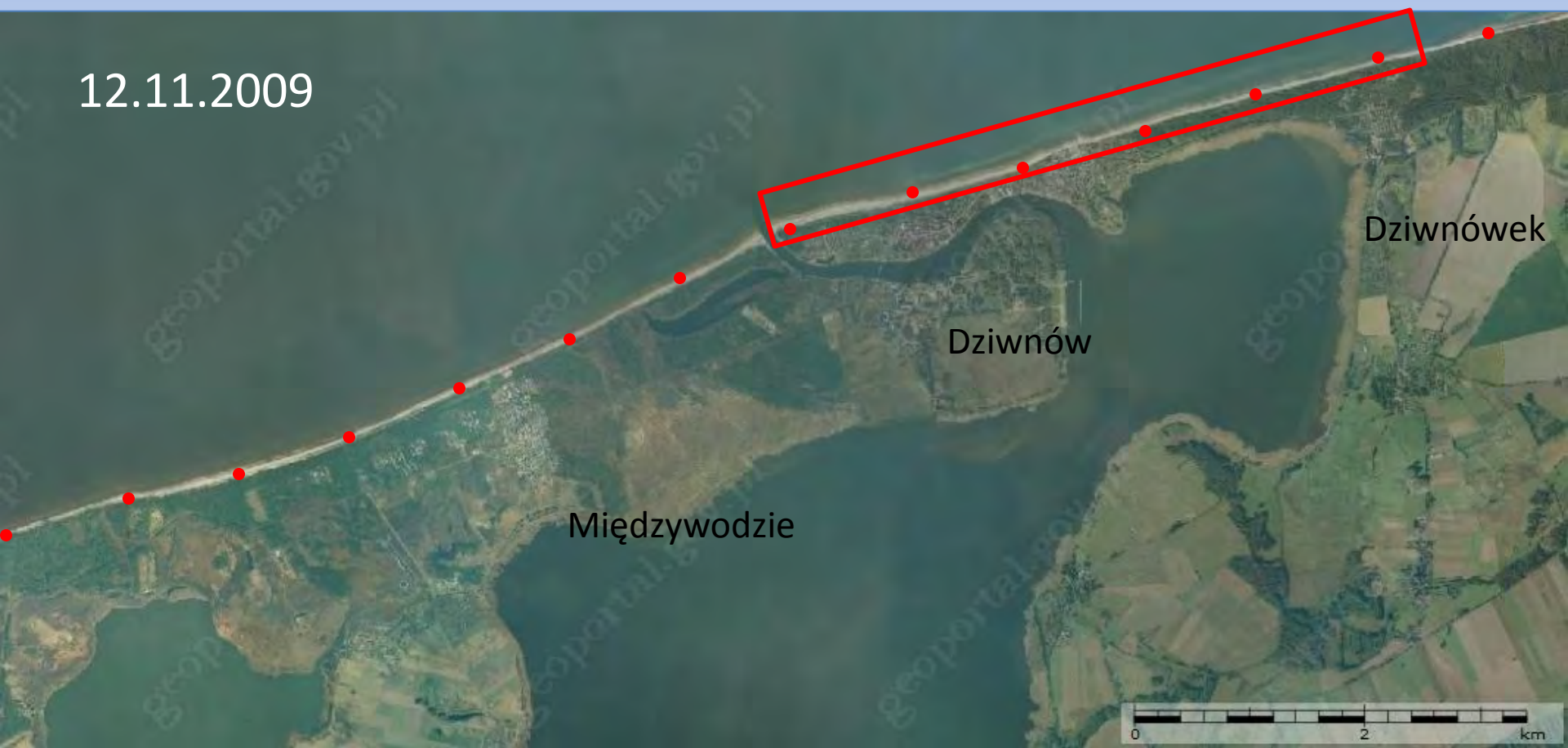
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Lidar – mobilne skanowanie laserowe (Mobile Mapping System/ Mobile Laser Scanning)

12.11.2009



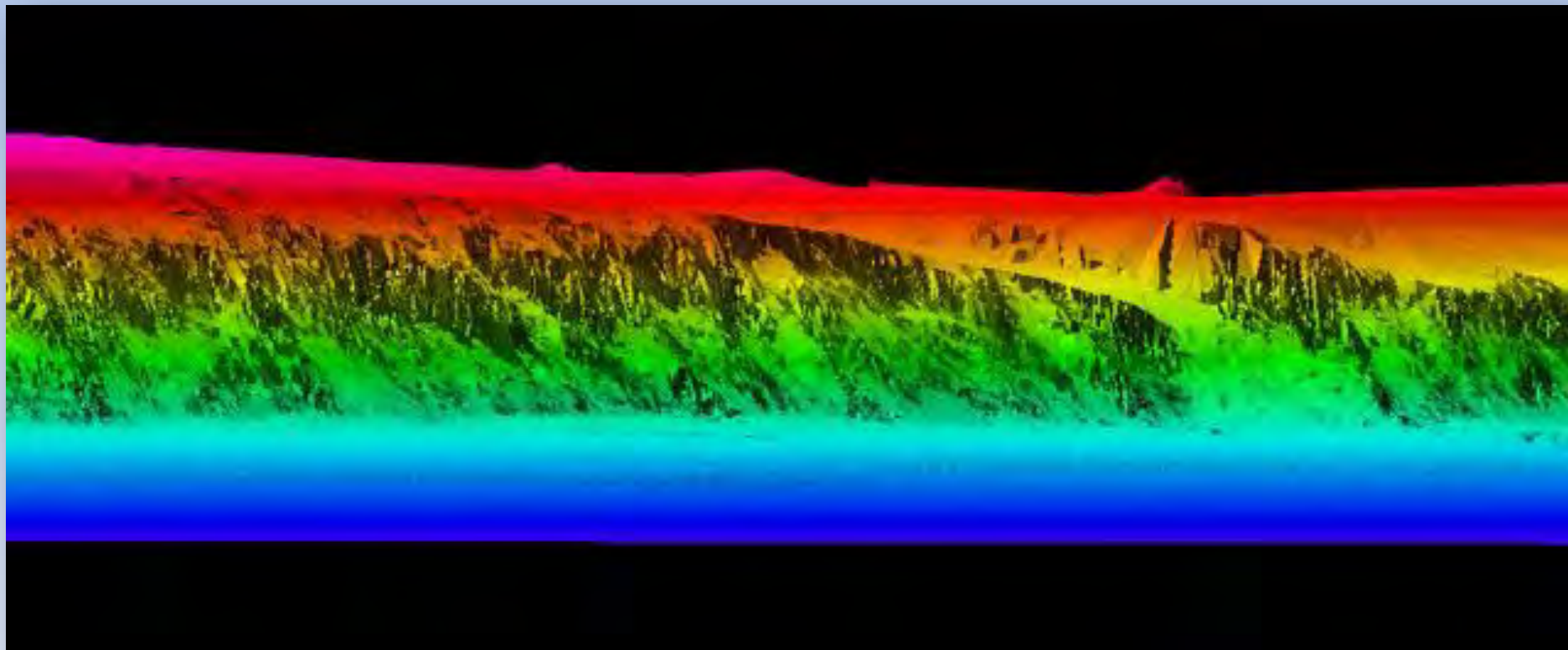


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Lidar – mobilne skanowanie laserowe (Mobile Mapping System/ Mobile Laser Scanning)

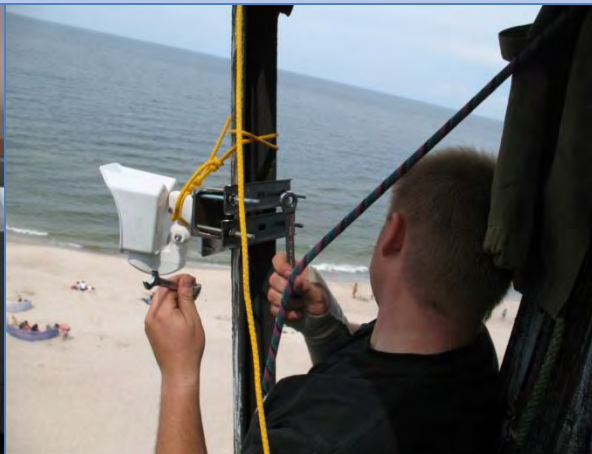




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MORPHOLOGICAL IMPACTS

Kamera (Mobotix M12 D45 N45)





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04.07.2009 – 08.09.2009



