

سلطة المياه الفلسطينية

Palestinian Water Authority

The technology of real time monitoring for water resources

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Palestinian Water Authority

**Water and Nature Conservation Knowledge sharing in MENA region
Sharm-Esh-sheikh**

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INTRODUCTION

- The groundwater resources are the main sources of water in Palestine.
- However, despite their importance, the groundwater resources are under stress of exploitation and contamination.
- Widely observed effects are decline of the water table as well as deterioration of groundwater quality
- in many coastal areas of the region seawater intrusion and land subsidence.

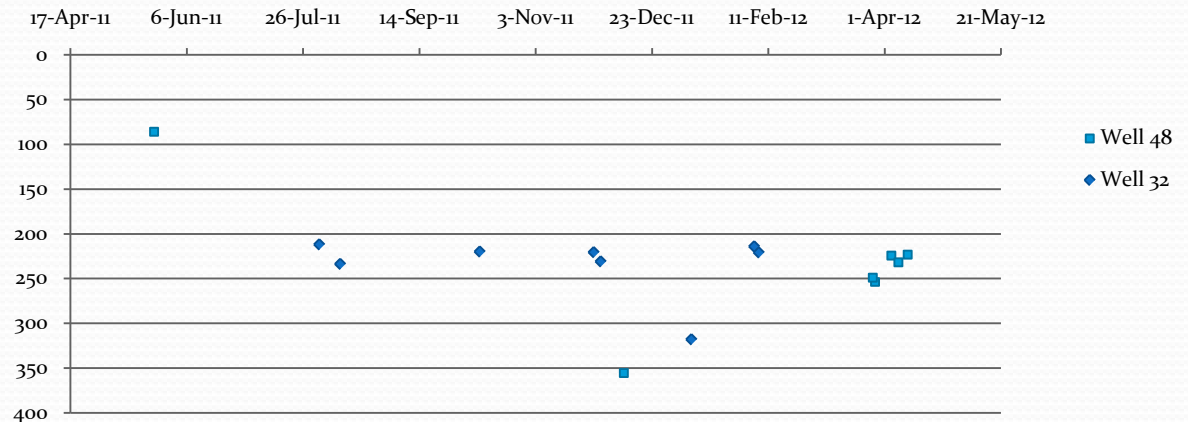
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- Monitoring of an aquifer is of fundamental importance as a basis for groundwater resources management.
 - Monitoring, data collection and analysis provide the information that permits rational management decisions on all kinds of groundwater resources sustainability issues:

Manual measurements of Water Level

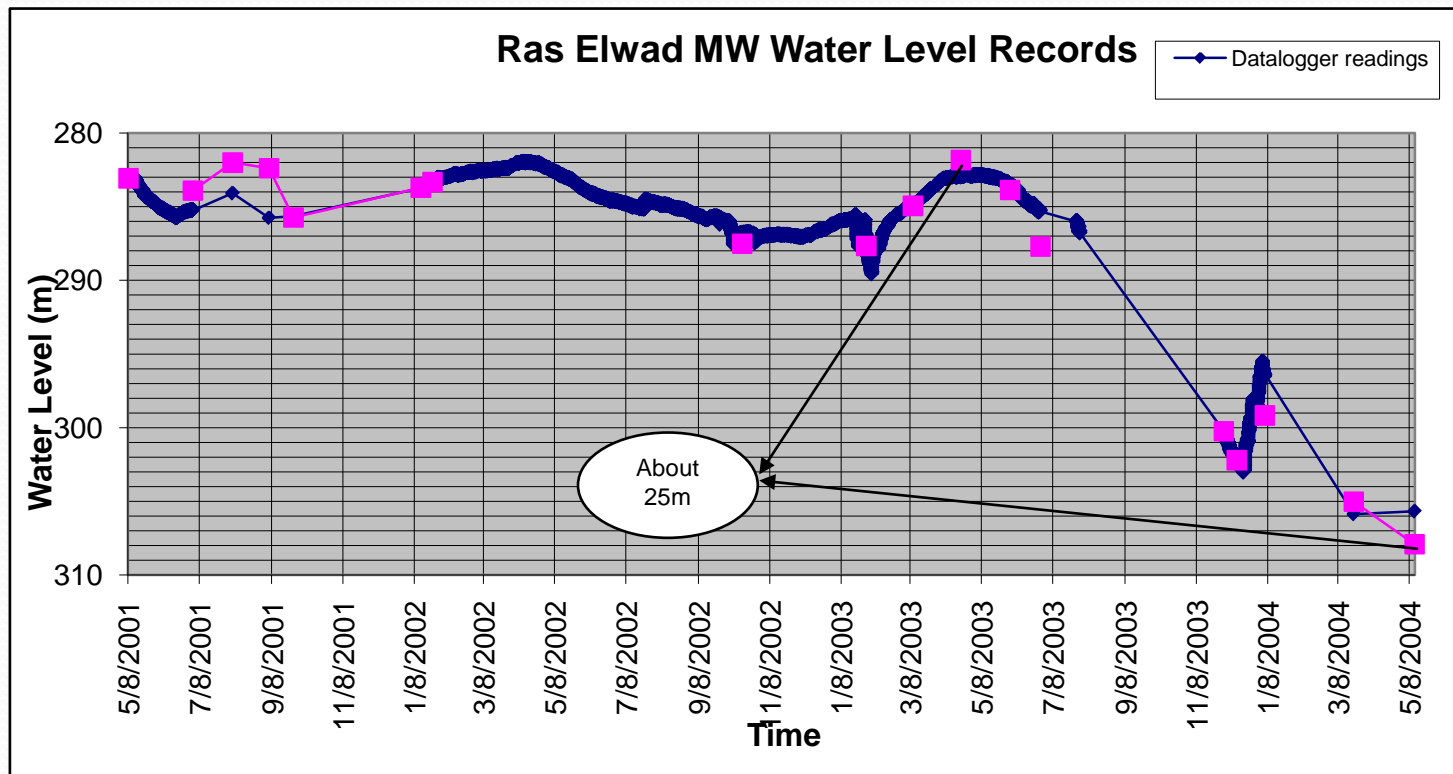


- Time, money and efforts consuming
- Requires 2 or more persons
- Possible damage of equipment
- Non continuous data series

Wells Water Level History



Measuring water level using
cable data loggers:
Non-continuous data series

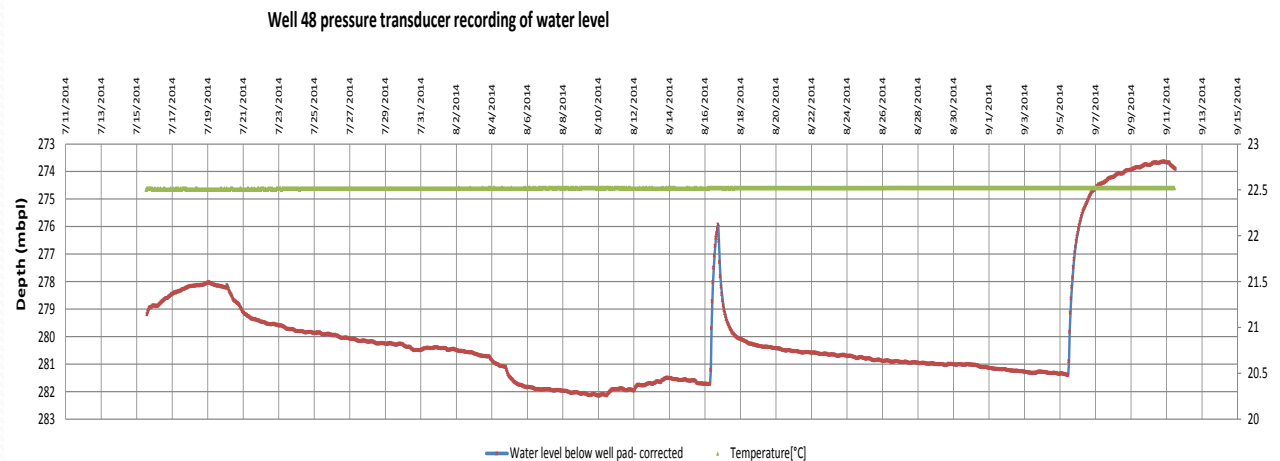


Optimized Practices

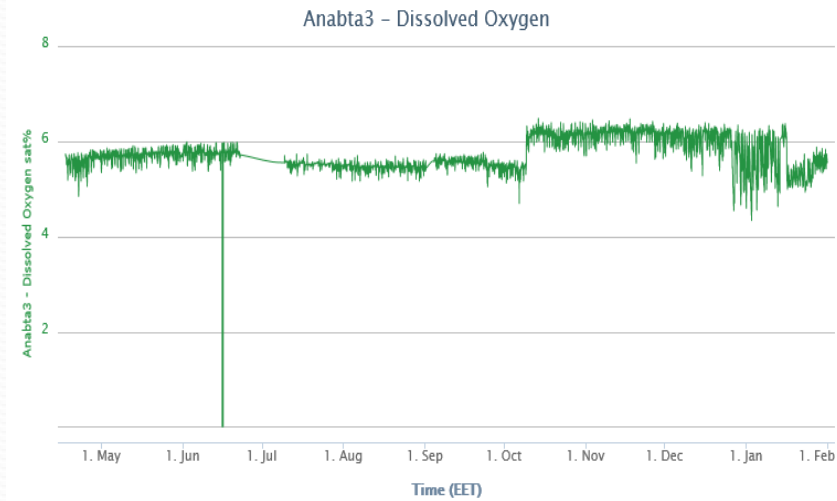
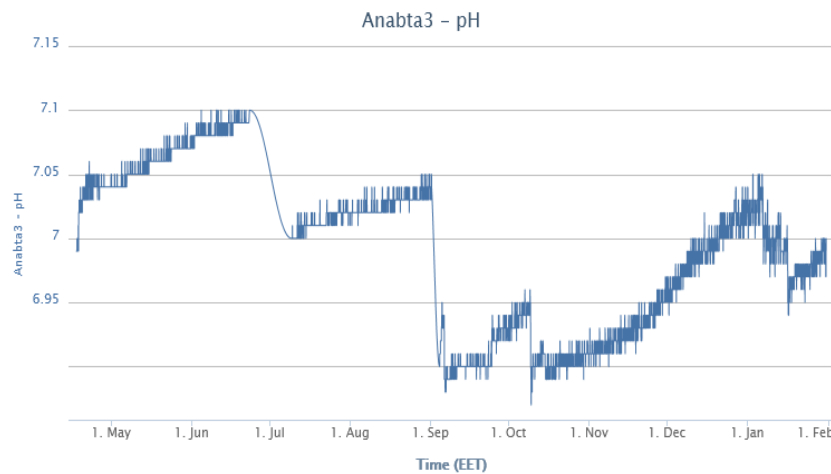
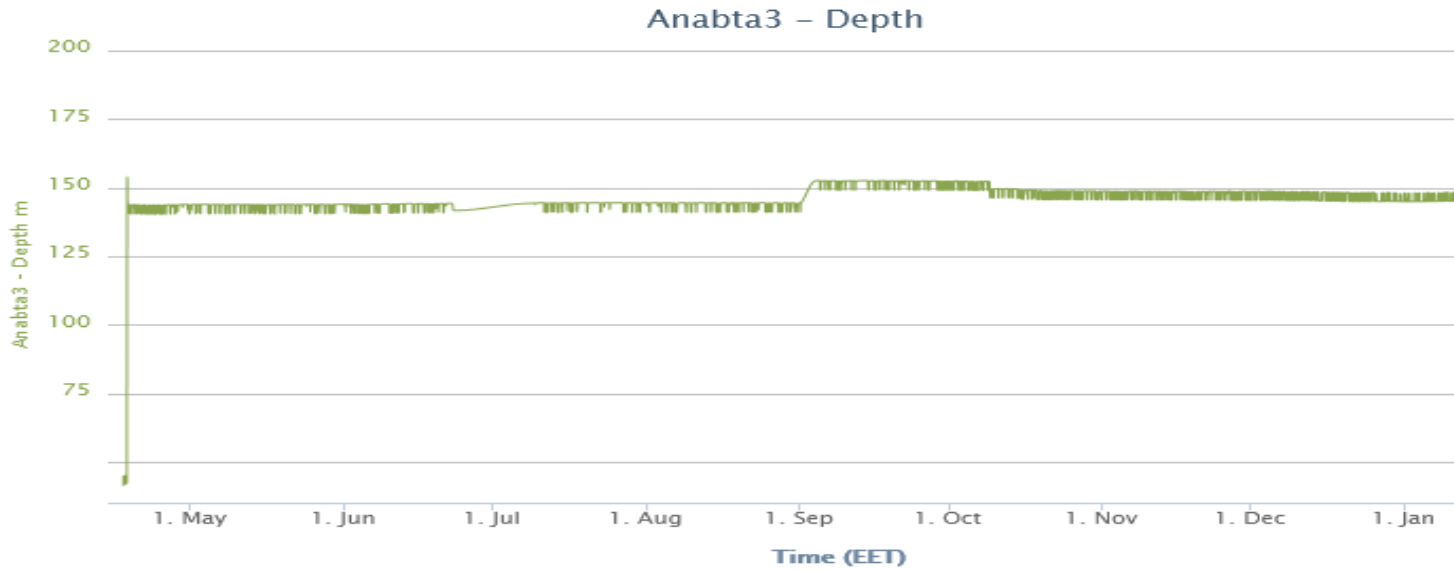


Automated Installing and retrieval of diver data and water level measurement

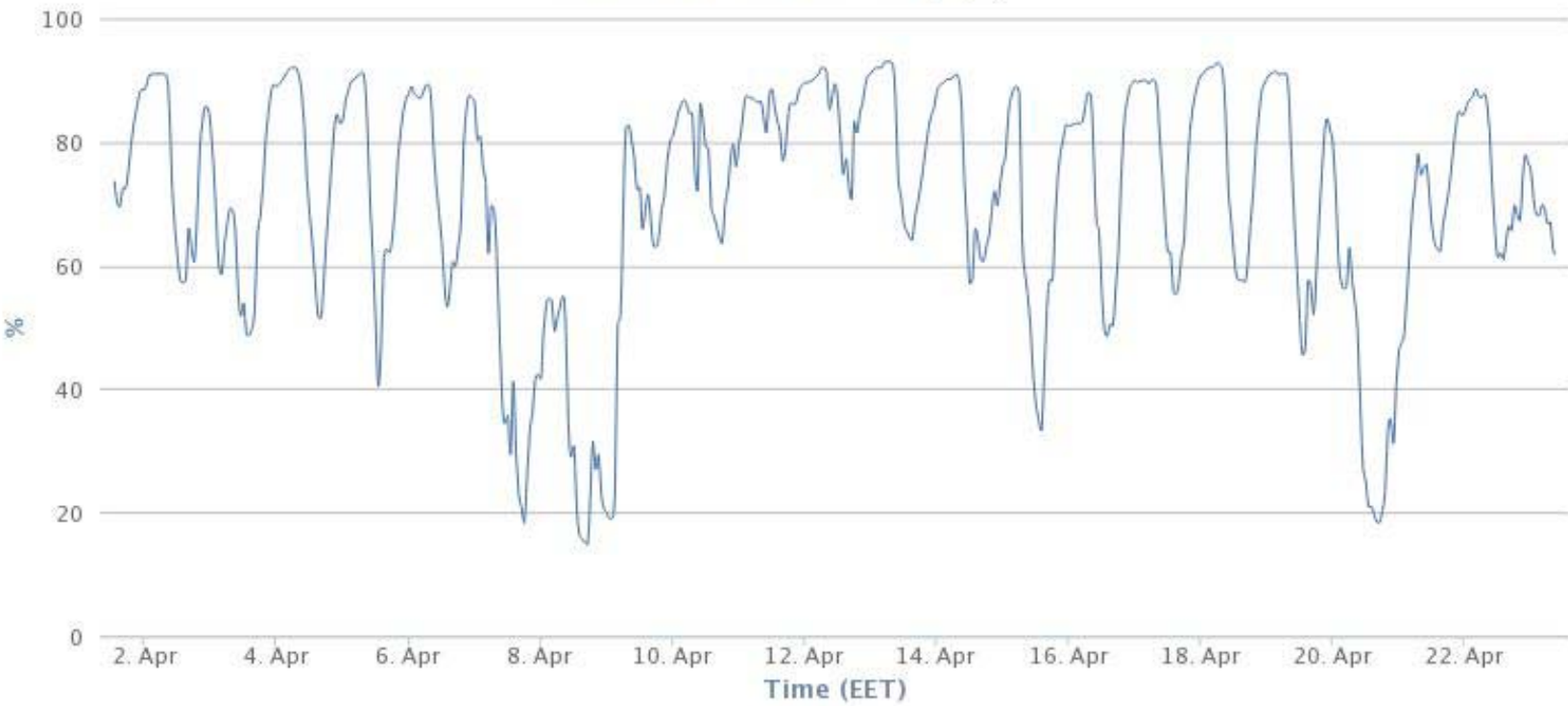
- Significant time and efforts saving
- Automated reels for installing divers
- Minimal manual involvement
- Less chance of damage to diver
- Collect more data in less time



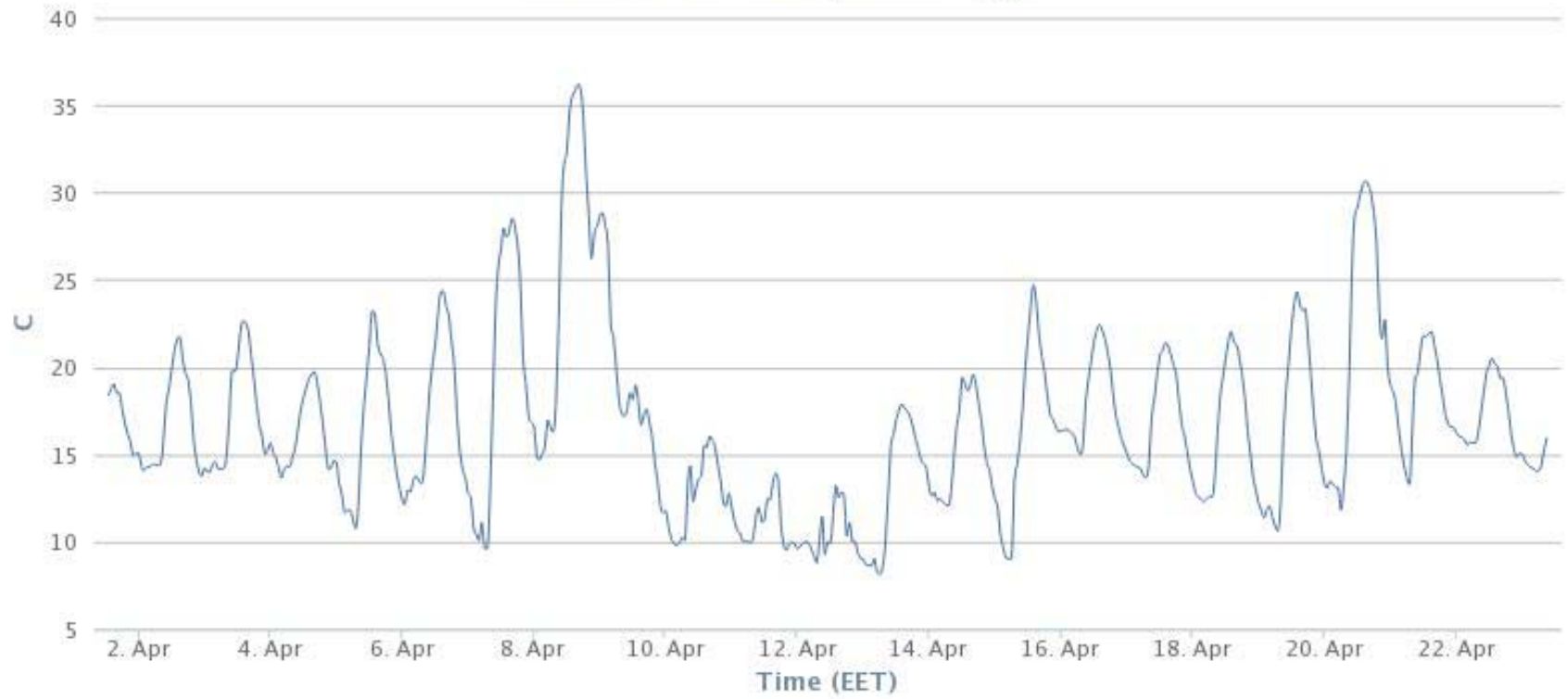
Real-Time Monitoring in WB & GS – Anabta pilot Project

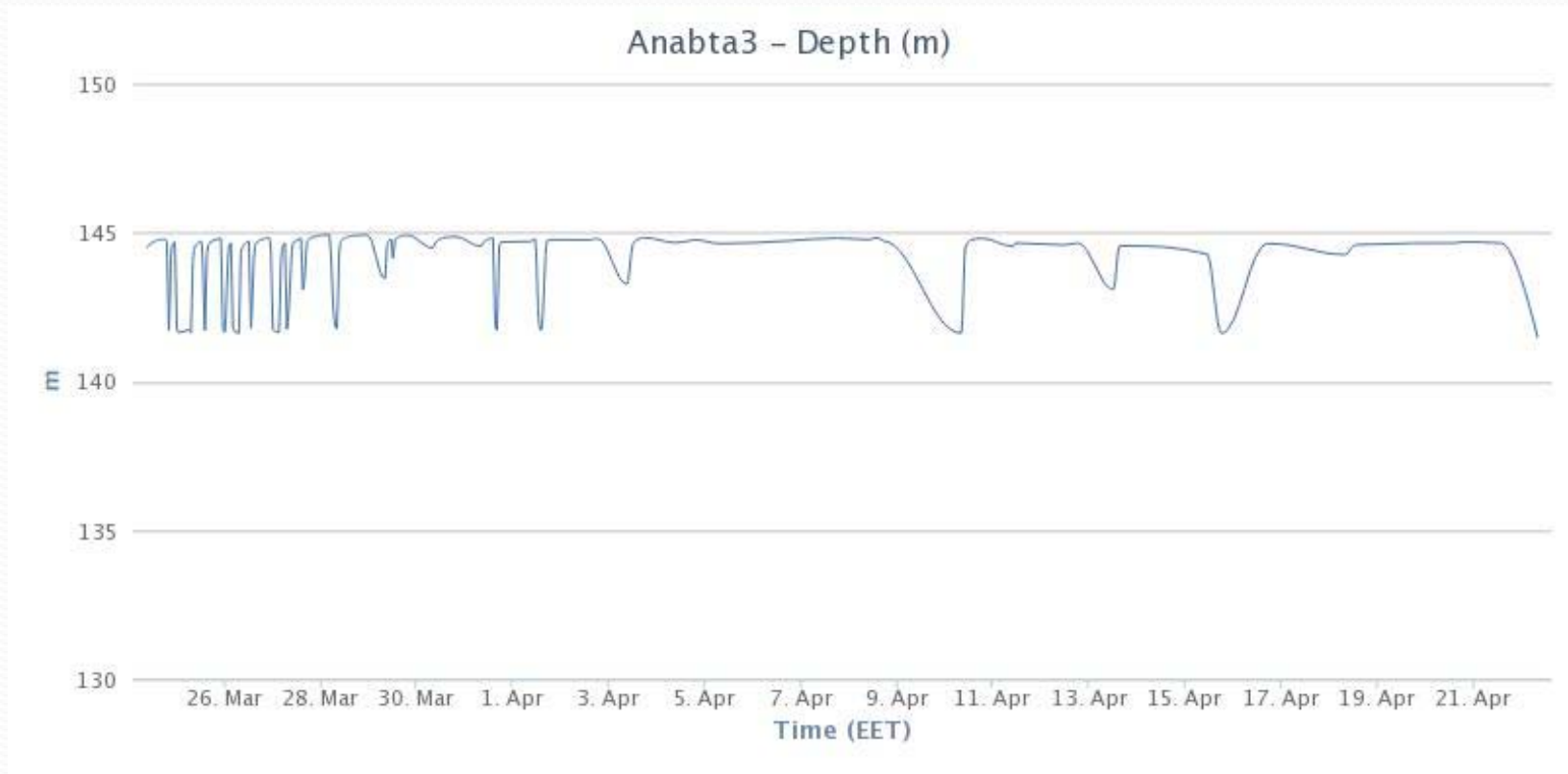


Anabta3 - Rel. Humidity (%)



Anabta3 - Air Temperature (C)





ONLINE Flow meters Project for Domestic wells

- Online Well flow monitoring for 48 potable water wells and transmission of the flow data to a central control room in the WBWD in Ramallah. (completed in May 13, 2014)



In near Future.....Automated installing, wireless data measurement



Automated installing, wireless data measurement

- Automated reels for installing divers
- No manual involvement for retrieval
- Substantial time savings
- Requires one person
- No chance of diver damage
- Collect much more data in much less time



THANK YOU