

OMAN SEISMOLOGICAL NETWORK DATA ACQUISITION AND ANALYSIS

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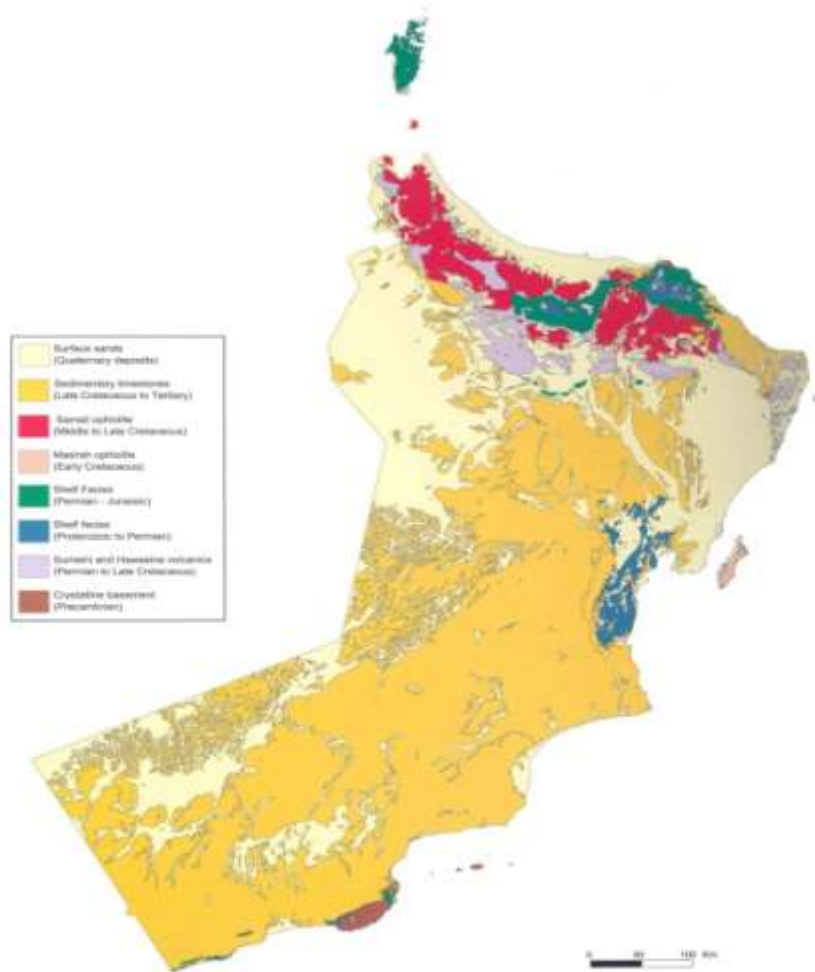
Objectives

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- The major objective is to assess the seismic hazard in the Sultanate through locating all seismic zones and determining their characteristics and effects on all types of projects.
- The center also aims at offering advice and consultations, conducting earthquake-related seminars and spreading knowledge to the public about earthquakes, and reducing their hazards.
- Advise government bodies on their programs of research, development and implementation.

Geological Setting in Oman

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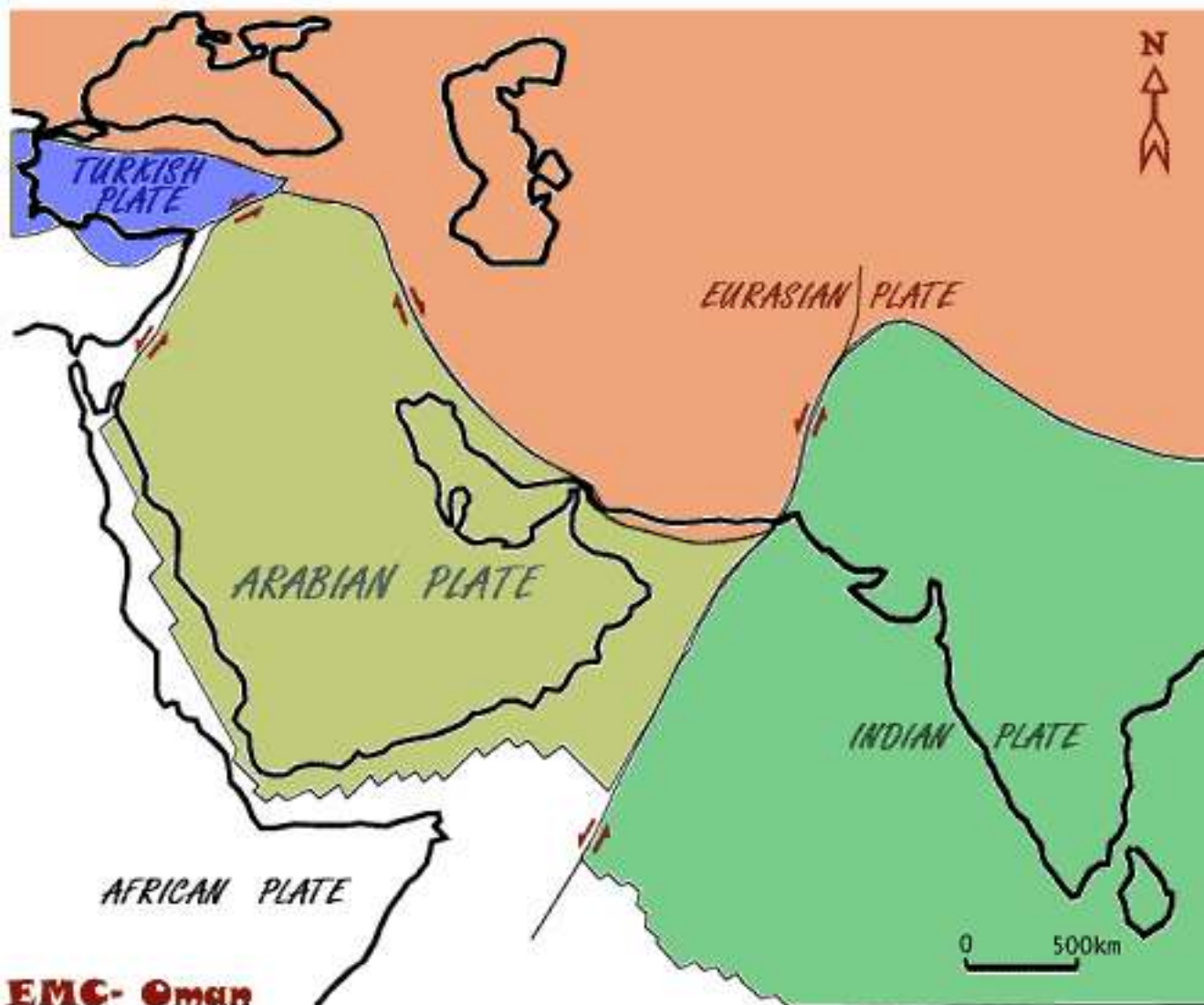


Oman is mainly characterized by Late cretaceous ophiolites (5-10km) and Deep oceanic or shallow marine sediments

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Regional Tectonic of Oman

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Oman is surrounded by major tectonic boundaries. Most of the earthquakes occur on Zagros Suture zone, Sea of Oman, Owen fracture zone and Gulf of Aden

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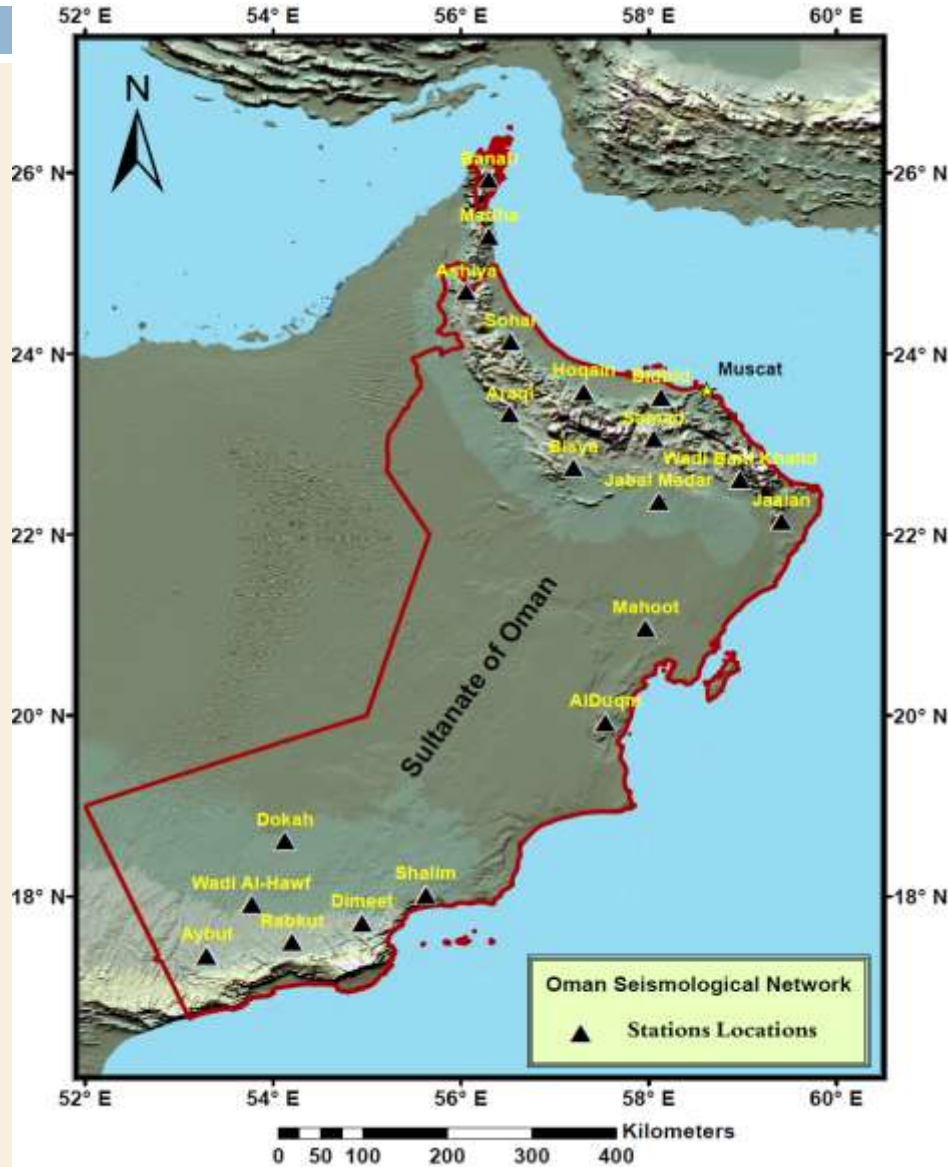
Site Selection

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- Factors considered in the selection of site for seismic stations are:
 - Earthquake sources around Oman
 - Population and infrastructures
 - Station accessibility, hard-rock foundation, low seismic noise level etc
 - Station distribution
 - Communication links

Oman Seismological Network

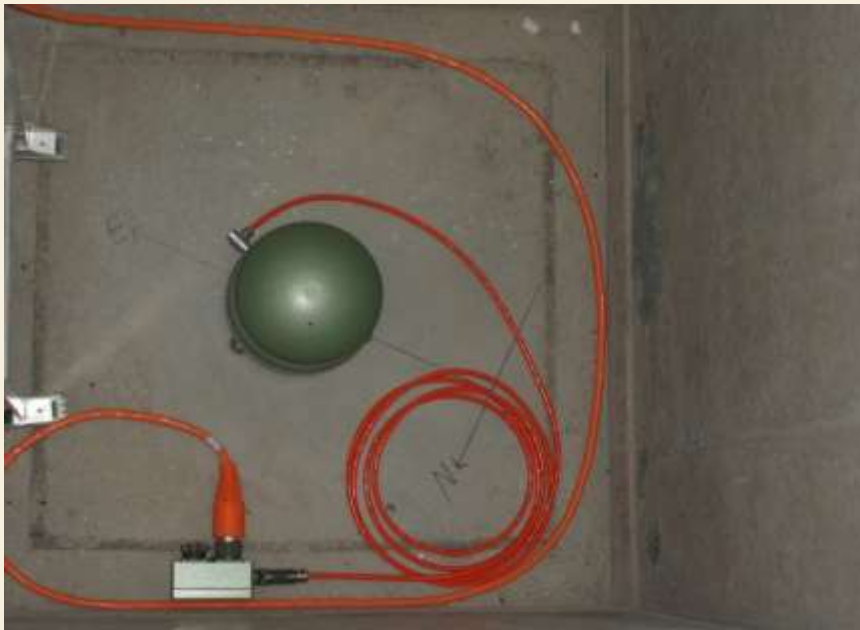
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Equipments

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Equipments

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Equipments

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Equipments

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General View of Remote Stations

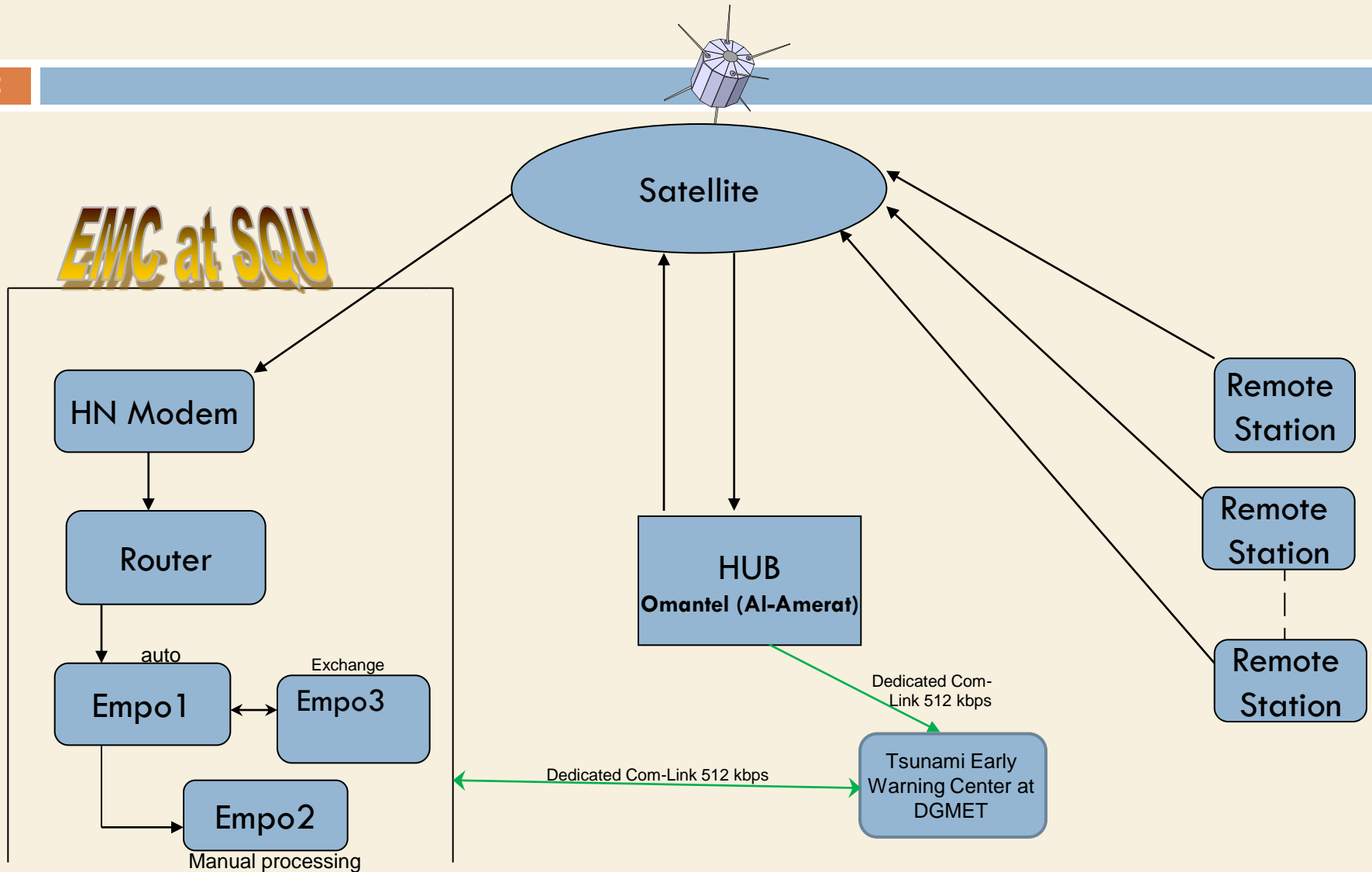
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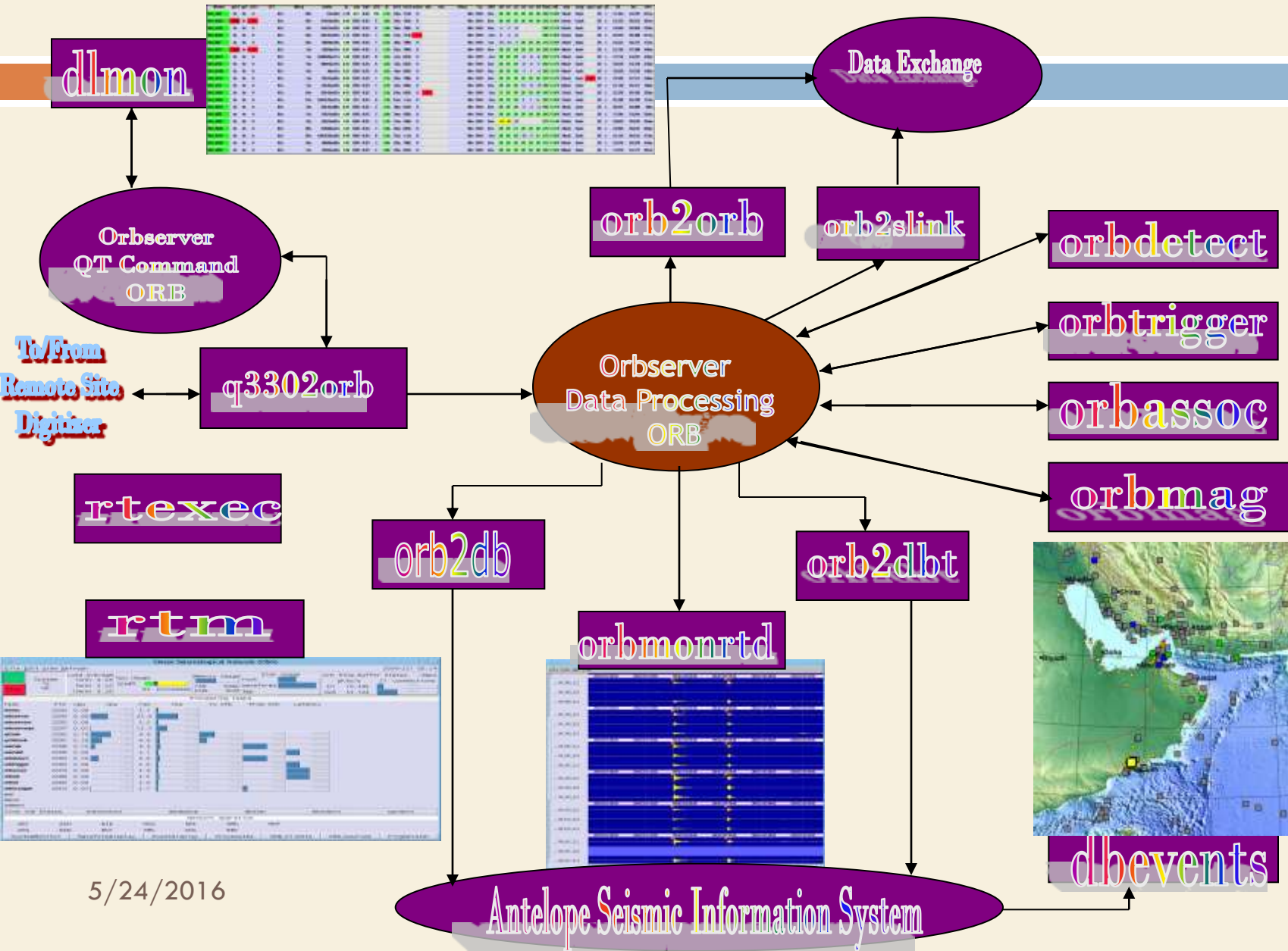
Communication System at EMC

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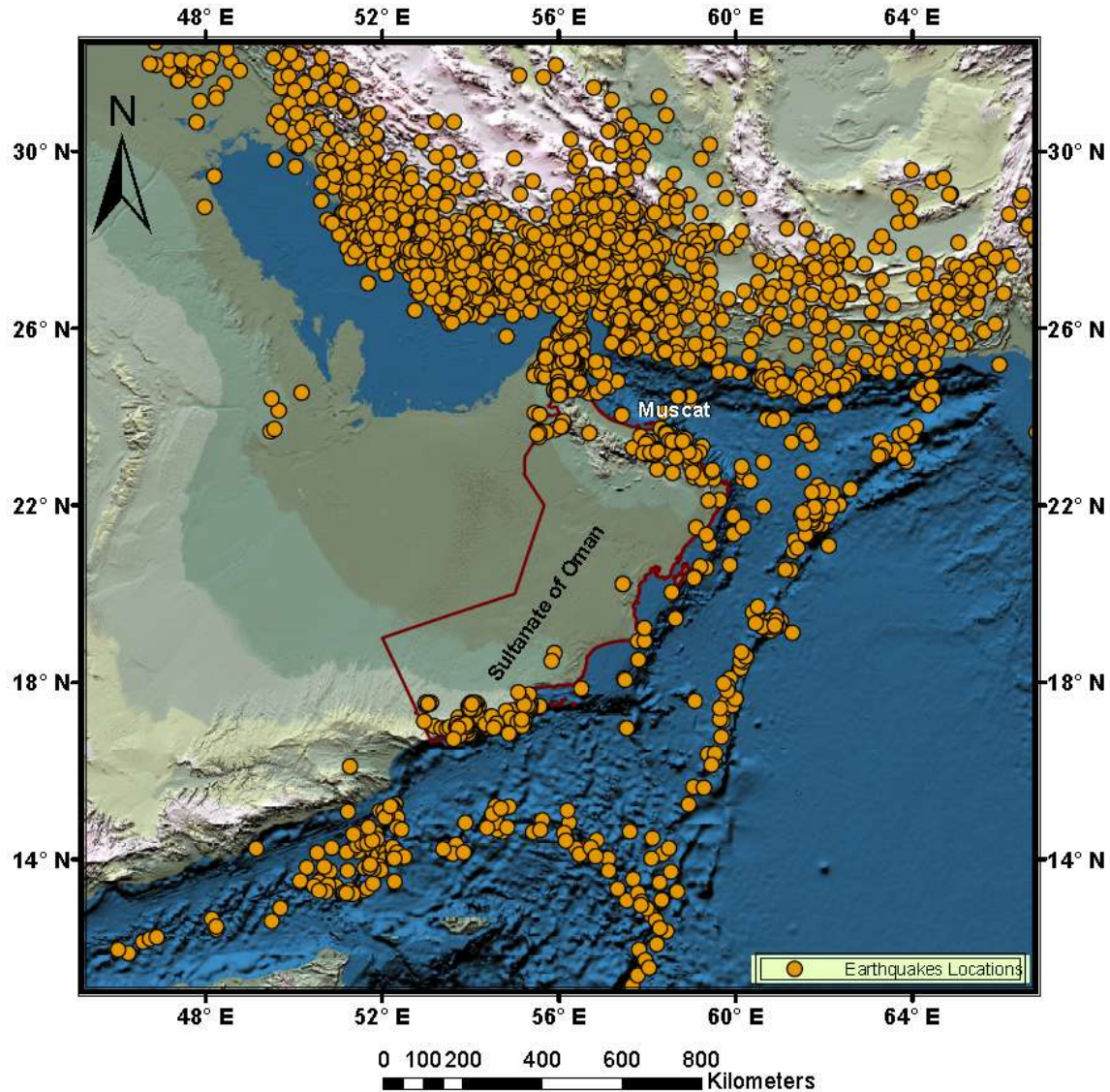


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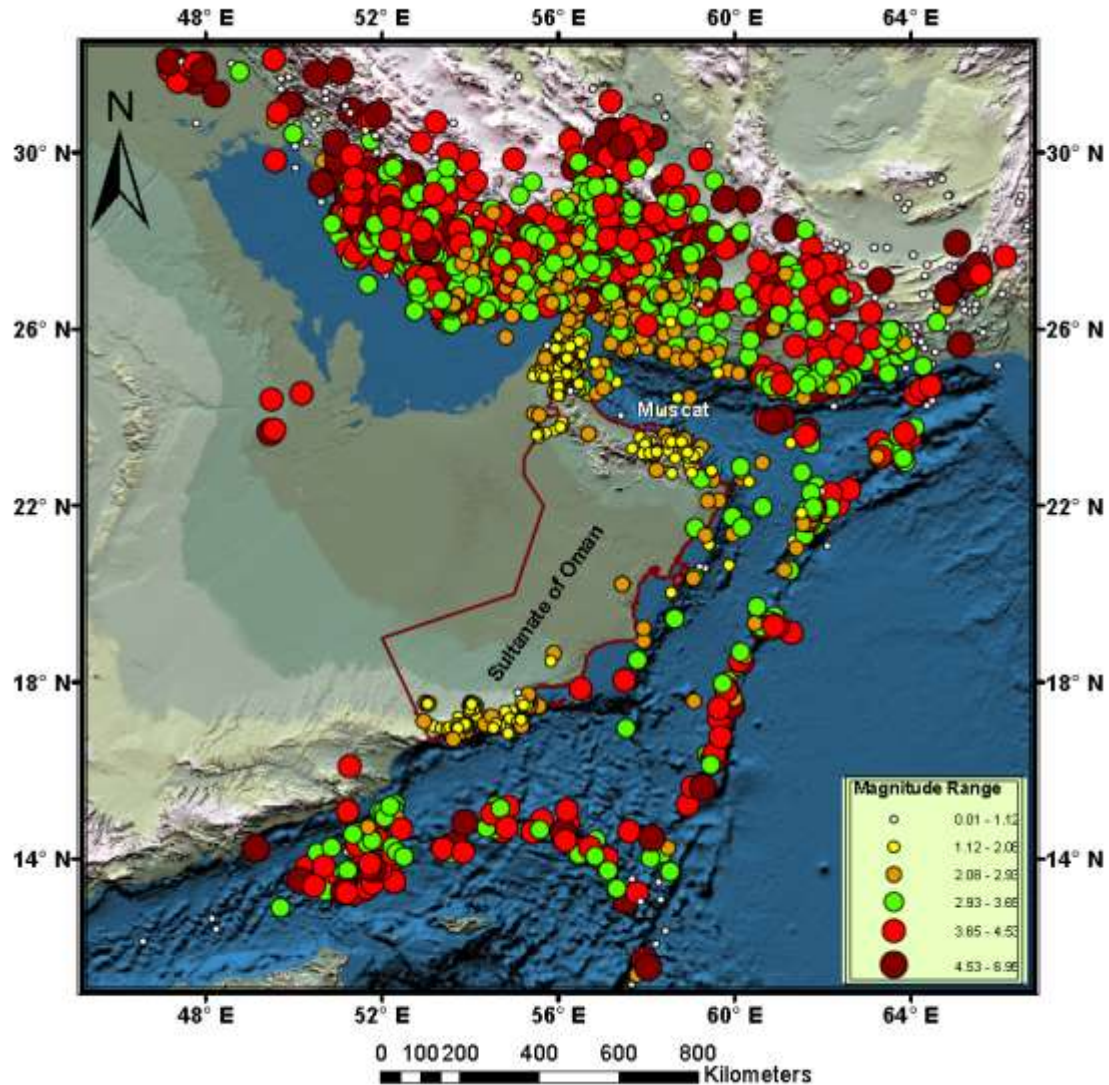
Antelope Real Time System Data Flow



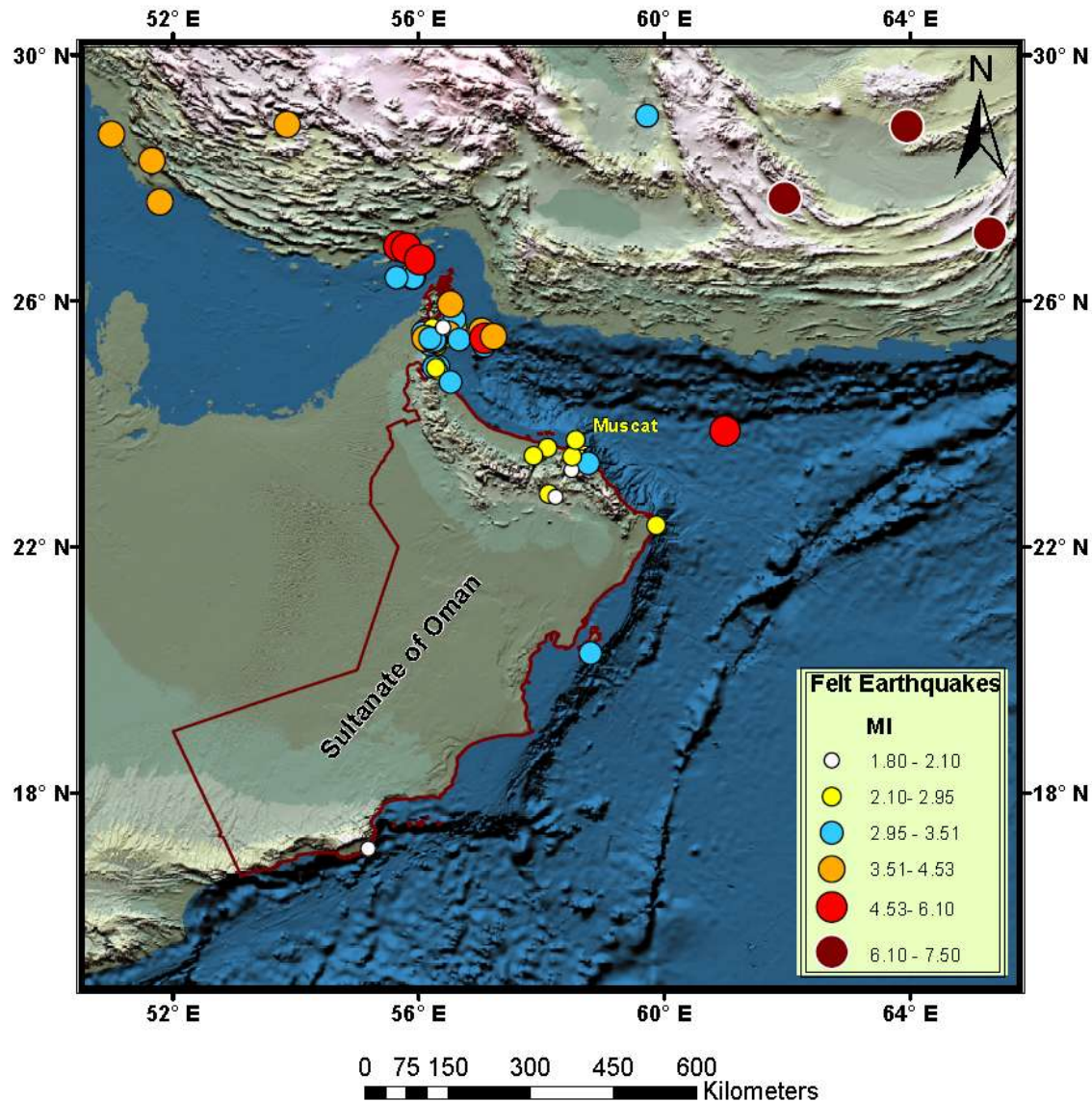
Seismicity 2011-2015



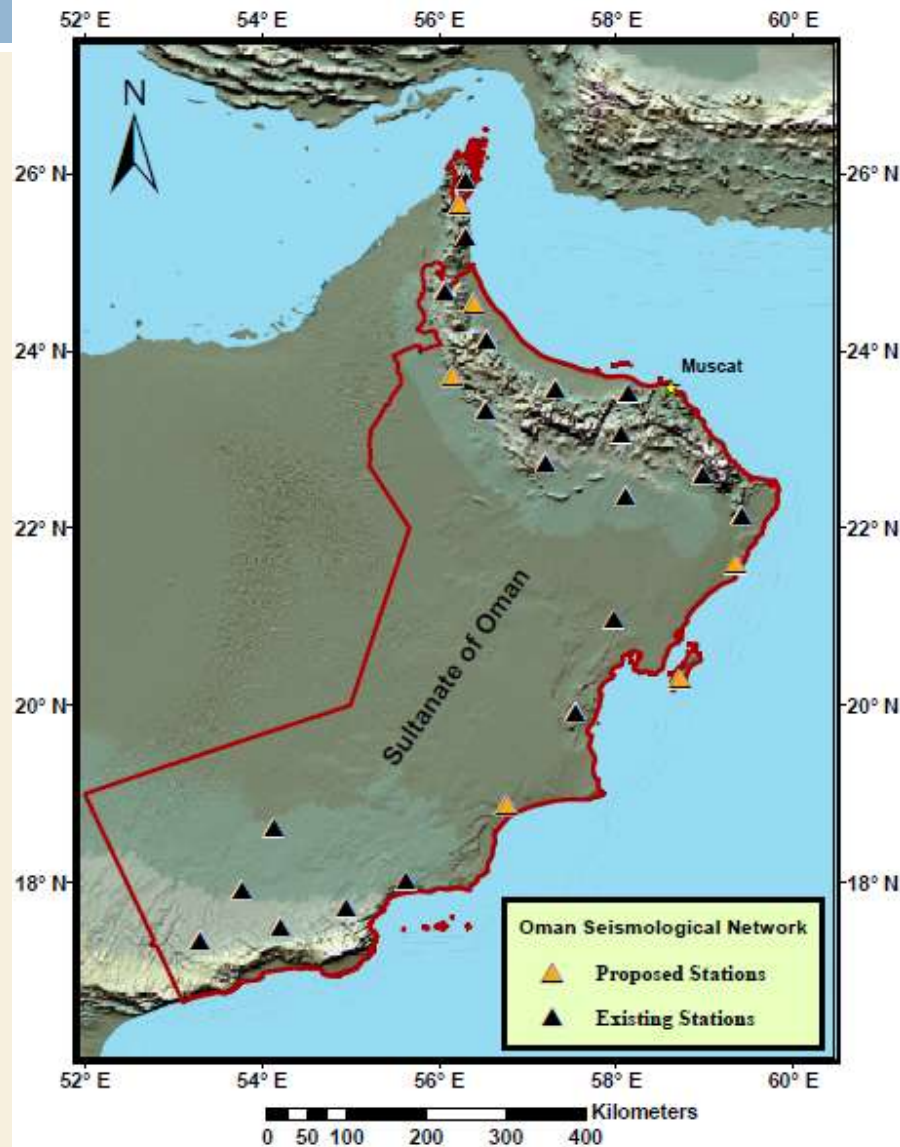
Seismicity 2011-2015 Illustrated according to Magnitude



Felt Earthquakes 2001-2015



Future Plans



Conclusions

- **Data collected to date indicates the presence of a relatively low seismicity in southern Oman and moderate seismicity in northern Oman.**
- **The seismicity map indicates that many earthquakes occurred along Masirah fault. Thus, it can be concluded that Masirah fault is potentially active.**
- **Six broadband stations will be established in the near future to enhance the network coverage.**

THANK YOU

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