Oman Met Office

Current Status and Future Planning and Expectations

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Tokyo International Exchange Center/Plaza Heisei Meeting Facilities
Location of Oman

S E Part of Arabian Peninsula
The National Multi-Hazard Warning Center

- Established: March 2015
- Deals with:
  - Weather Hazards
  - Tsunami Threats
7th WMO Center of Excellence for RA II
Established 2006
Three Main Hazards

1. Tropical Cyclones:
   In Recent years they became more Frequent.

Tropical Cyclone Gonu, Jun 2007
Around 50 people lost their lives.

Huge destruction in the infrastructure and properties of people.
• Tropical cyclone Phet in 2010
  - it made a real landfall
  With huge amount of Rainfall

• TC Chapala Sep 2015:
Second Hazard

2. Torrential Rain:
Troughs coming from Mediterranean sea can result in heavy vigorous rain associated with hail storm.
3. Third Hazard: Dust storms

(December 2002) strong continuous surface to 850 northeasterly winds from Iranian and Pakistani desert.
Main dust storm sources

1. Local dust storms.

2. Tigris and Euphrates rivers basin.

3. Sistan Basin & Balouchistan
Dust RGB
## Expectations of new series of satellites for hazard monitoring

<table>
<thead>
<tr>
<th>Major hazard</th>
<th>Features of new generation GEO met. satellite</th>
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</thead>
<tbody>
<tr>
<td>Hazard 1: tropical cyclones</td>
<td><strong>Multi-spectral bands, Rapid Scaning etc.:</strong> Can help in better monitoring the systems in terms of intensity, position and estimation of winds speed.</td>
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<tr>
<td>Hazard 2: Torrential rain</td>
<td><strong>Rapid scanning, Multi-spectral, advance sounding instruments:</strong> Better monitoring the convection (meso scale), now casting, sounding observation, expectation of flash floods.</td>
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<tr>
<td>Hazard 3: Dust storms:</td>
<td><strong>Multi spectral bands, rapid scanning, etc:</strong> Better observation of dust storm development and movements, thickness and Vis, tracking movements.</td>
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New Sat generation can improve observation in this region: Desert / Sea
For better **NWP** performance.
Requirements to get desired benefits from the new generation of satellites

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| Hazard 1: tropical cyclones | **Availability of products +Training in imagery analysis:**  
  Allow our forecasters and expert to better evaluate tropical cyclone with which will help forecasting track and intensity. |
| Hazard 2: torrential rain | **Availability of products +Training in imagery analysis:**  
  The ability to analyze products in different ways will help better predicting the hazard of heavy rainfall and flash floods. |
| Hazard 3: Dust storm | **Availability of products +Training in imagery analysis:**  
  Help in monitoring and forecasting the dust storm as well as get involvement in researches related dust predictions and observations. |
Future Plan

• Better qualifying our Staff especially in the main hazard areas.
• Increase number and quality of observation.
• Working in well defined standard operating procedures (SOP) during hazards such as TC.
• Involvement in researches especially over our areas.
• Local data assimilation and improving NWP utilizing Satellite products.
Thank you ............ شكرا

HOW MANY ANIMALS CAN YOU SEE?