IS42: COVID-19 breakdown Operation and Maintenance constrains in the Azores Islands

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P4.5-587
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The Azores Islands, as an outermost region of the EU, with a great territorial discontinuity and with important constraints in terms of accessibility and health resources.

Inhabitants (est. 2019)

Azores – 242,796

São Miguel - 137,307

Terceira – 55,124

Graciosa – 4,208

Portugal - 10,295,909
## Max. daily active cases (N/Day)

<table>
<thead>
<tr>
<th></th>
<th>N/Day</th>
<th>% (Population)</th>
<th>N/100k Inhabitants</th>
<th>Nº of notified Deaths</th>
<th>Lethality (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azores</td>
<td>916</td>
<td>0.38</td>
<td>377</td>
<td>33</td>
<td>0.57</td>
</tr>
<tr>
<td>São Miguel</td>
<td>882</td>
<td>0.64</td>
<td>642</td>
<td>28</td>
<td>0.55</td>
</tr>
<tr>
<td>Terceira</td>
<td>128</td>
<td>0.23</td>
<td>232</td>
<td>5</td>
<td>1.03</td>
</tr>
<tr>
<td>Graciosa</td>
<td>5</td>
<td>0.12</td>
<td>119</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Portugal</td>
<td>16,432</td>
<td>0.16</td>
<td>160</td>
<td>17,043</td>
<td>1.99</td>
</tr>
</tbody>
</table>

## Accumulated active cases (N)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>% (Population)</th>
<th>N/100k Inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azores</td>
<td>5,808</td>
<td>2.39</td>
<td>2,392</td>
</tr>
<tr>
<td>São Miguel</td>
<td>5,128</td>
<td>3.73</td>
<td>3,738</td>
</tr>
<tr>
<td>Terceira</td>
<td>487</td>
<td>0.88</td>
<td>883</td>
</tr>
<tr>
<td>Graciosa</td>
<td>11</td>
<td>0.26</td>
<td>261</td>
</tr>
<tr>
<td>Portugal</td>
<td>855,432</td>
<td>8.31</td>
<td>8,308</td>
</tr>
</tbody>
</table>
Ribeira Grande County

Inhabitants: 32,811
Accumulated active cases: 2,372
7,229 cases / 100k inhabitants

New risk determination method and consequent constraints
Access to the Lab

Disclaimer: The views expressed on this presentation are those of the author and do not necessarily reflect the view of the CTBTO.
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Visits to IS42

L.O. – every 15 days
S.O. – every 2 months

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Previous pending issues:
- Lorenzo Hurricane
- Rotten tree fell at I42H5
- Rotten tree fell at IS42H8
- FO infrastructure damages
- Europa T Digitizers no data
- COVID-19 outbreak.
- I42H2 authentication errors
- WS01/WS02 Data frame auth.

Major problems

Data outage H1
Charger issues
Replacement of GPS receivers
H8 GPS faulty cable
Batteries replacement

COVID-19 Further Restrictions
Thunderstorm H5 PT burned,

Data Transm. stop
Strong winds, tree branch H5
Tilted pole FO
Strong winds, tree branch H8 and CF

H6, H7, H8 and CF energy down
FO Internet access down

Batteries replacement
Strong winds, tree branch H8 and CF

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Final considerations

- IS42 is located in the Azores Islands, an outermost region of the EU, with a great territorial discontinuity and with important constraints in terms of accessibility and health resources;

- These limitations have been particularly experienced during the pandemic of COVID-19, forcing the authorities to take severe decisions of confinement and restriction of mobility, to face the risk of losing rapid control of the situation;

- The approaches made by the authorities allowed the occurrence of new cases to be concentrated in time and space. With the emergence of the alpha variant (from UK), the situation became dominated by communitarian transmission;

- The restrictions imposed by the response to COVID-19 on the O&M activities of the IS42 station can be divided into 2 levels: The limitation of access to the laboratory, working from home; and the limitation to travel to visit the station;
**Final considerations – Elements for discussion**

- Operators had to spend several intermittent months working from home and several bimonthly visits to the station were canceled or postponed. The canceled visits were substituted by partial tasks performed by the LO. Nevertheless, DA never went bellow 99.81% (from March 2020 to May 2021);

- We had to deal with several pending issues and new problems that occurred during this period. Some of them had a quick solution, but most of them are still pending. In 2021 occurred two serious (still pending) problems that may lead to a station Non-Mission capability state;

- Some delays and extra work team efforts were needed to overcome the problems due to the COVID-19 pandemic restrictions. All the processes were slower. From the PTS and as expected, we noted a slower response during this period, in particular from MFS in 2021.
Thank you for your attention!