Argo in Marginal Seas

Outline:
- Marginal Seas in global maps
- Argo in:
  - Asian Seas
  - Gulf of Mexico, Caribbean
- Euro-Argo focus on:
  - Nordic Sea & Baltic Seas
  - Med & Black Seas
Marginal seas on global maps

3846 Floats
18-Mar-2015

~200 active floats in Marginal seas

AST-16, Brest, France, 18-20 March 2015
8 active floats in March 2014 to 15 active floats in March 2015 (US)

AST-16, Brest, France, 18-20 March 2015
10 active floats in March 2015 (US)

AST-16, Brest, France, 18-20 March 2015
~10 active floats in March 2014-2015 (US)
AST-16, Brest, France, 18-20 March 2015
~40 active floats in March 2014-2015 (Korea)
AST-16, Brest, France, 18-20 March 2015
8 active floats in March 2014 and 12 floats in March 2015 (US)

AST-16, Brest, France, 18-20 March 2015
~30 active floats in March 2014 to 47 floats in March 2015 (EU, US)
AST-16, Brest, France, 18-20 March 2015
>70 active floats (EU, US), was ~40 two years ago!

AST-16, Brest, France, 18-20 March 2015
### Euro-Argo in Mediterranean & Black Sea

#### Number of CTD Argo profiles per month in the Mediterranean and Black Sea

![Graph showing the number of CTD Argo profiles per month](image)

<table>
<thead>
<tr>
<th>Country</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>France</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Germany</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Greece</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Italy</td>
<td>2</td>
<td>2</td>
<td>17</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Europe</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>USA</td>
<td>0</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Turkey</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Lebanon</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>China</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>27</strong></td>
<td><strong>38</strong></td>
<td><strong>36</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>

**> 400 profiles per month**

**30-40 floats deployed per year**

AST-16, Brest, France, 18-20 March 2015
71 active floats (60 Med + 11 BS), including 21 bio floats, contributed by 9 countries
60% with Iridium telemetry
Implementation of Marginal Seas

Using a target of 2 floats in 3x3 boxes, most of the marginal seas are still under-sampled (except the Sea of Japan, Mediterranean and Black Sea).

<table>
<thead>
<tr>
<th>Marginal Sea</th>
<th>Floats alive in early 2014</th>
<th>Floats alive in early 2015</th>
<th>Target density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea of Japan</td>
<td>40</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>South China Sea</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Gulf of Mexico</td>
<td>8</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Caribbean</td>
<td>8</td>
<td>10</td>
<td>38</td>
</tr>
<tr>
<td>Red Sea/Gulf of Aden</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Persian Gulf/Gulf of Oman</td>
<td>8</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Nordic Sea*</td>
<td>30*</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Baltic Sea*</td>
<td>1*</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mediterranean</td>
<td>60</td>
<td>60</td>
<td>36</td>
</tr>
<tr>
<td>Black Sea</td>
<td>10</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Indonesian Seas</td>
<td>1</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Sea of Okhotsk</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>145 (176*)</td>
<td>177 (208*)</td>
<td>209</td>
</tr>
</tbody>
</table>

Task Team on Marginal Seas ??

AST-16, Brest, France, 18-20 March 2015