RESULTS OF THE 2019 BEACON MANUFACTURERS SURVEY

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Results of the 2019 Survey of Beacon Manufacturers
2019 Survey - Participants

• conducted by the Cospas-Sarsat Secretariat since 1991, annually;

• 47 beacon manufacturers participated in the survey;

• geographical distribution of participating manufacturers:
  - Europe: 36%
  - USA and Canada: 32%
  - Asia and Australia: 32%
New in the 2019 Survey

• Better structured and more detailed survey form:
  – detailed beacon types and categories
    • ELT: (AF), (AD), (AP), (S), (DT)
    • EPIRB: FF, Non FF, VDR
  – questions about production of and plans for new beacon types:
    • SGBs, ELT(DT)s, RLS

• Additional Web-submission method
  – Higher efficiency for submission
  – Higher efficiency and reliability thanks to automation of data collection and processing
New in 2019 Survey – Web based forms

2019 Survey Submissions

Submission methods used in the 2019 survey:

- 40% - web submission
- 56% - email
- 2% - fax
- 2% provided responses over the phone
2019 Survey Highlights

47% of beacon manufacturers reported an increase in the annual production volumes in 2018 (42% in 2017).

In 2018-19, three new beacon manufacturers informed Cospas-Sarsat of their plans to develop and seek type approval for their new beacon models (5 new manufacturers in 2017-18).
2019 Survey Highlights

• 6 manufacturers (12.6 % of all respondents) reported ‘zero’ production in 2018,
• 19 manufacturers (40.4% of all respondents) produced in 2018 1-499 and less units;
• 21 manufacturers (47% of all respondents) had a 2018 production of 500 units and more;
• In 2018: \textbf{199,651} beacons were manufactured (8.4 % annual decrease from 2017 vs planned increase of ~ 17 %).
## 2019 Survey – Detailed Beacon Distribution

<table>
<thead>
<tr>
<th>Beacon type</th>
<th>2018</th>
<th>% of Total Beacon Type</th>
<th>% of Global Production Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global Production, units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total ELTs, Including:</td>
<td>24,863</td>
<td>100%</td>
<td>12.5%</td>
</tr>
<tr>
<td>- ELT(AF)</td>
<td>16,890</td>
<td>67.9%</td>
<td>8.5%</td>
</tr>
<tr>
<td>- ELT(AP)</td>
<td>868</td>
<td>3.5%</td>
<td>0.4%</td>
</tr>
<tr>
<td>- ELT(AD) and ELT(S)</td>
<td>7,105</td>
<td>28.6%</td>
<td>3.6%</td>
</tr>
<tr>
<td>- ELT(DT)</td>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total EPIRBs, including:</strong></td>
<td>95,434</td>
<td>100%</td>
<td>47.8%</td>
</tr>
<tr>
<td>- EPIRB Float Free and EPIRB VDR</td>
<td>46,513</td>
<td>48.7%</td>
<td>23.3%</td>
</tr>
<tr>
<td>- EPIRB Non-Float Free</td>
<td>48,921</td>
<td>51.3%</td>
<td>24.5%</td>
</tr>
<tr>
<td><strong>Total PLBs</strong></td>
<td>79,354</td>
<td>100%</td>
<td>39.7%</td>
</tr>
<tr>
<td>Total of Global Production for all beacon types</td>
<td>199,651</td>
<td>100%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Estimated Global Beacon Population at the end of 2018

- **About 1,892,000** beacons were in use at the end of **2018**
- Annual increase in global beacon population: ~ **1%**
Beacon population estimate as a function of Life-Cycle Assumption

<table>
<thead>
<tr>
<th>Beacon Type</th>
<th>Beacon life cycle (current CSS model), years</th>
<th>Median life cycle (surveys 2019/2018), years</th>
<th>Weighted* life cycle (surveys 2019/2018), years</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIRB</td>
<td>10</td>
<td>9/8</td>
<td>9/9</td>
</tr>
<tr>
<td>PLB</td>
<td>10</td>
<td>8/8</td>
<td>7/7</td>
</tr>
<tr>
<td>ELT</td>
<td>10</td>
<td>15/10</td>
<td>17/16</td>
</tr>
<tr>
<td>ALL beacon types</td>
<td>10</td>
<td>10</td>
<td>9/9</td>
</tr>
<tr>
<td>Estimated Global population</td>
<td>~1,985,000</td>
<td></td>
<td>~2,029,000</td>
</tr>
</tbody>
</table>

Note: Weighted life span was calculated with the formula: \( \sum (L_i \times W_i)/\sum W_i \), where:

- \( L_i \) is the life span for a beacon type stated by the \( i \)-th beacon manufacturer, and
- \( W_i \) (weighting factor) is the 2018 production of a beacon type, as reported by the \( i \)-th beacon manufacturer.

![Graph showing production trends of different beacon types from 2004 to 2018. The graph displays the production numbers for LP-ELT, LP-EPIRB, and LP-PLB, with a cumulative category for all LP-beacon types.]

<table>
<thead>
<tr>
<th>Beacon Type</th>
<th>Production of LP-beacons in 2018, units</th>
<th>Ratio of LP-beacons to all beacons produced in 2018, %</th>
<th>Ratio to all LP-beacons, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIRBs</td>
<td>79,094</td>
<td>83%</td>
<td>45.3%</td>
</tr>
<tr>
<td>PLBs</td>
<td>78,865</td>
<td>99%</td>
<td>45.2%</td>
</tr>
<tr>
<td>ELTs</td>
<td>16,463</td>
<td>66.21%</td>
<td>9.4%</td>
</tr>
<tr>
<td>All 406 MHz Beacon Types</td>
<td>174,422</td>
<td>87.36%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
# Location Protocol Beacons – end of 2018 estimated population

<table>
<thead>
<tr>
<th>Type</th>
<th>Estimated Population of all beacon</th>
<th>Estimated Population of LP-beacons</th>
<th>Ratio of LP-beacons to all beacons deployed globally</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIRBs</td>
<td>874,710</td>
<td>407,805</td>
<td>46.6%</td>
</tr>
<tr>
<td>PLBs</td>
<td>754,222</td>
<td>690,141</td>
<td>91.5%</td>
</tr>
<tr>
<td>ELTs</td>
<td>262,958</td>
<td>82,426</td>
<td>31.3%</td>
</tr>
<tr>
<td>All Beacon Types</td>
<td>1,891,890</td>
<td>1,099,633</td>
<td>58.1%</td>
</tr>
</tbody>
</table>
Manufacturers’ Plans for 2019

• Manufacturers plan to produce ~ **209,600 new** beacons in **2019** (+ 5 % over the 2018 production volume), including:
  
  - 82,000 new EPIRBs,
  - 26,000 new ELTs,
  - 102,000 PLBs.

• In **2019**, an estimated global population of 406 MHz (FGB) beacons: **1,873,000 units**
Beacon Manufacturers’ Forecasts and Actual Annual Production Trends

<table>
<thead>
<tr>
<th>Beacon Type</th>
<th>Manufacturers’ Forecast for 2018</th>
<th>Actual Production in 2018</th>
<th>Actual over Forecast Discrepancy, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>All beacon types</td>
<td>245,000</td>
<td>199,700</td>
<td>-18.5%</td>
</tr>
</tbody>
</table>
In 2018, the Secretariat performed 117 reviews of type-approval submissions, including:

- 28 full type approvals,
- 40 change notices (non-administrative),
- 11 administrative change notices,
- 38 pre-applications.
For more information...

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Thank you!