„FASTSAR - Efficient and Extremely Fast Transport including Search and Rescue Units Using Ground Effect”

Zbigniew PĄGOWSKI
Krzysztof SZAFRAN
Institute of Aviation
Warsaw, Poland
Comparison of transport mode on Baltic Sea (above)

<table>
<thead>
<tr>
<th>Type of transport</th>
<th>Car</th>
<th>Ship</th>
<th>Ekranoplane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (h.min)</td>
<td>5.30</td>
<td>2.45</td>
<td>.57</td>
</tr>
<tr>
<td>Cost (Euro)</td>
<td>103</td>
<td>36</td>
<td>21</td>
</tr>
</tbody>
</table>

Irregular migrants by Jan-Oct. 2016

<table>
<thead>
<tr>
<th>Mediterranean route</th>
<th>Number of persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western African</td>
<td>509</td>
</tr>
<tr>
<td>Western</td>
<td>7888</td>
</tr>
<tr>
<td>Central</td>
<td>173055</td>
</tr>
<tr>
<td>Apulia &amp; Calabria</td>
<td>5000 (?)</td>
</tr>
<tr>
<td>Eastern</td>
<td>180289</td>
</tr>
<tr>
<td>Model</td>
<td>Passengers capacity:</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>WIG/SAR-1</td>
<td>5 people (1 crew member)</td>
</tr>
<tr>
<td>WIG/SAR-2</td>
<td>50 people (2+1 crew member)</td>
</tr>
<tr>
<td>WIG/T-5</td>
<td></td>
</tr>
<tr>
<td>WIG/T-50</td>
<td></td>
</tr>
</tbody>
</table>
WP1. Analyzing gaps and problems limiting FASTSAR
- overview of current R&D efforts conducted
- potential demand for FASTSAR and its costs
- confirmed specifications and performance of currently produced “Ground effect” aircraft and amphibian aircraft
- To define a number of promising configurations

WP2. Mobility potential of market
- identification of actual and future needs including FASTSAR
- general characteristics and hierarchy list of seaports for intermodal transport & SAR
- general requirements for “Ground effect” sea airports
- passengers mobility in area of European seas (Baltic, North Sea, Mediterranean, Adriatic Sea, Black Sea, Arctic area)

WP3 Concepts and Vision
- definition of a set of requirements for aircraft sizes
- identification of ATM system
- identification of environmental and safety needs
- initial effectiveness analysis
- integration of transport and SAR mission

WP4 New technologies specification
- numerical simulation and identification of new aerodynamics needs (optimise a high lift system to take-off and landing)
- stability and control for manoeuvring – cockpit systems
- hybrid propulsion systems and future fuels
- identification of new type of materials for “Ground effect” aircrafts
- synthetic vision of technologies

WP5 Enhanced scenarios and recommendations
- enhanced vision of scenarios and proposals
- Transport and SAR roadmap
- workshops
- dissemination

WP6 Management
Waiting for FASTSAR Coordinator

thank you
for your attention!

The source of images to be obtained from authors of this PP

zbigniew.pagowski@ilot.edu.pl
krzysztof.szafran@ilot.edu.pl