

Deliverable D.1.4, Report on major underwater equipment... **Results from Survey**

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Outline

- Report Purpose & Related Deliverables
- Basic Information
- Sources
- Present Status:
 - AUVs, Gliders, HOVs, ROVs, Towed Sensors/Cameras
- Distribution per Country
- Perspectives (...Per will introduce...)



Report Purpose & Related Deliverables

- Purpose: reporting the current status of the major underwater research equipment used by European research vessel fleets, and describe perspectives for the upkeep/ expansion of this “exchangeable equipment pool”.
- Related WP1 deliverables:
 - D1.1 Report on existing fleets foreseeable evolution for the next 10 years
 - D1.3 Report on perspectives for Regional Research vessels new investment and on framework for the co-fund
 - D1.4 – Report on perspectives for major underwater equipment, new investment and on framework of co-fund**



Basic Information

- Only UWEs used for marine research purposes have been taken into account.
- Geological equipments not included.
- Only equipment operating beyond 1000m (except HOVs)
- Equipment categories
 1. Autonomous Underwater Vehicles (AUVs)
 2. Gliders
 3. Manned submersibles (HOVs)
 4. Remotely Operated vehicles (ROVs)
 5. Towed sensor and camera systems



Sources

- Input sources:
 1. Survey of information and direct contacts with key people;
 2. EurOcean_Lexi Infobase;
 3. European Research Institutes web sites;
 4. SeaSera Report: “Research vessels and their underwater vehicles”
 5. Int’l Marine and Sub-marine Infrastructures (MSI) Symp. (Nov. 2012);
 6. Ego site for gliders <http://www.mtsmuv.org/>
 7. MTS site for Manned Submersible <http://www.ego-network.org/>
- Some equipments may have not been covered (mostly because of the difficulties in getting direct, reliable, and updated information from the equipment owners)
- However, this extensive effort provides
the most accurate picture possible to date.

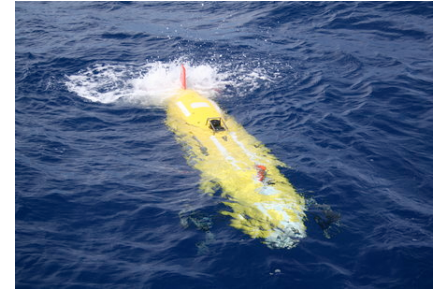


Present Status

- Sample table: 11 AUVs

AUV- Autonomous Underwater Vehicle

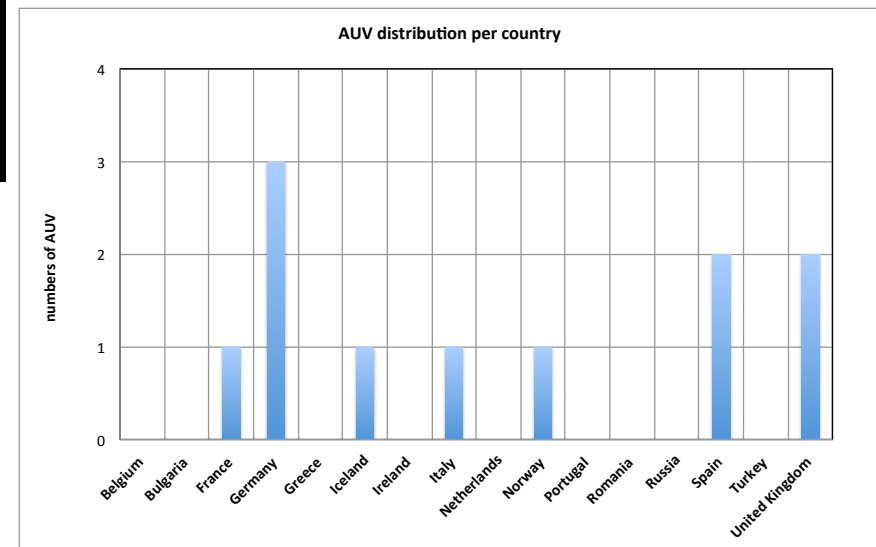
Name	Country	Depth
ASTERx	France	3000
ABYSS	Germany	6000
Bluefin 21	Germany	3000
SEAL	Germany	5000
Gavia	Iceland	2000
SARA	Italy	1000
Hugin 3000	Norway	3000
P101	Spain	1000
P102	Spain	1000
Autosub	United Kingdom	1600
Autosub6000	United Kingdom	6000



Abyss
AUV



Hugin
AUV

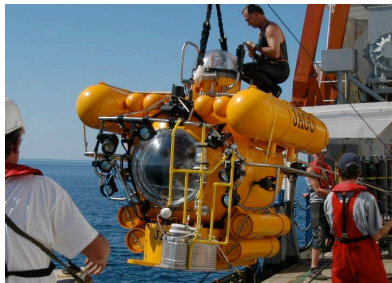


Present Status

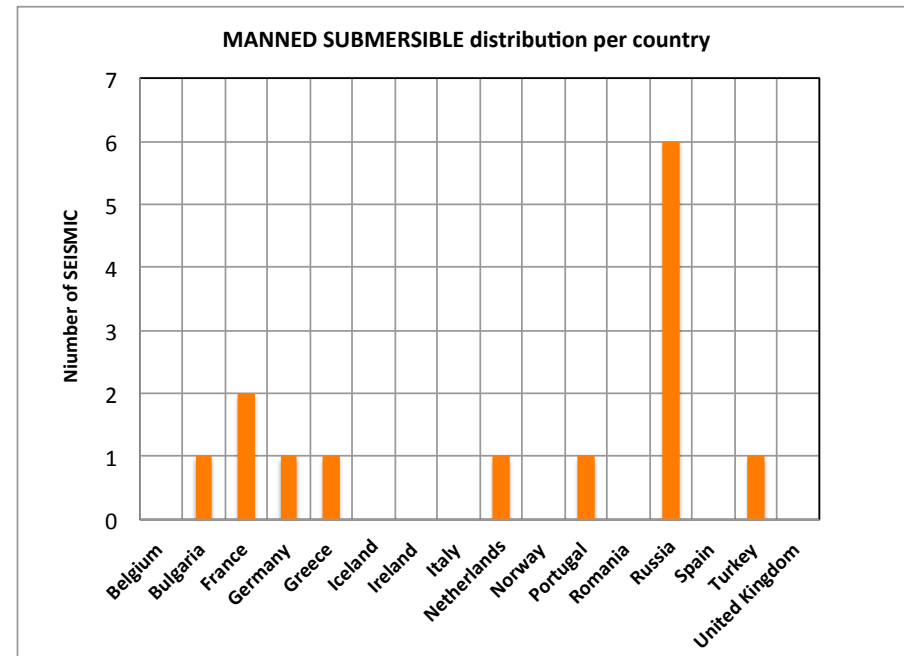
Sample table: 14 Man. Submersible

Name	Country	Depth
PC - 8	Bulgaria	250
Nautille	France	6000
Remora 2000	France	610
JAGO	Germany	400
Thetis	Greece	610
C-Explorer	Netherlands	100
LULA1000	Portugal	1000
Argus	Russia	600
MIR 1	Russia	6000
MIR 2	Russia	6000
Osmotr	Russia	200
Pisces IX	Russia	2000
Pisces VII	Russia	2000
CAROLYN	Turkey	50

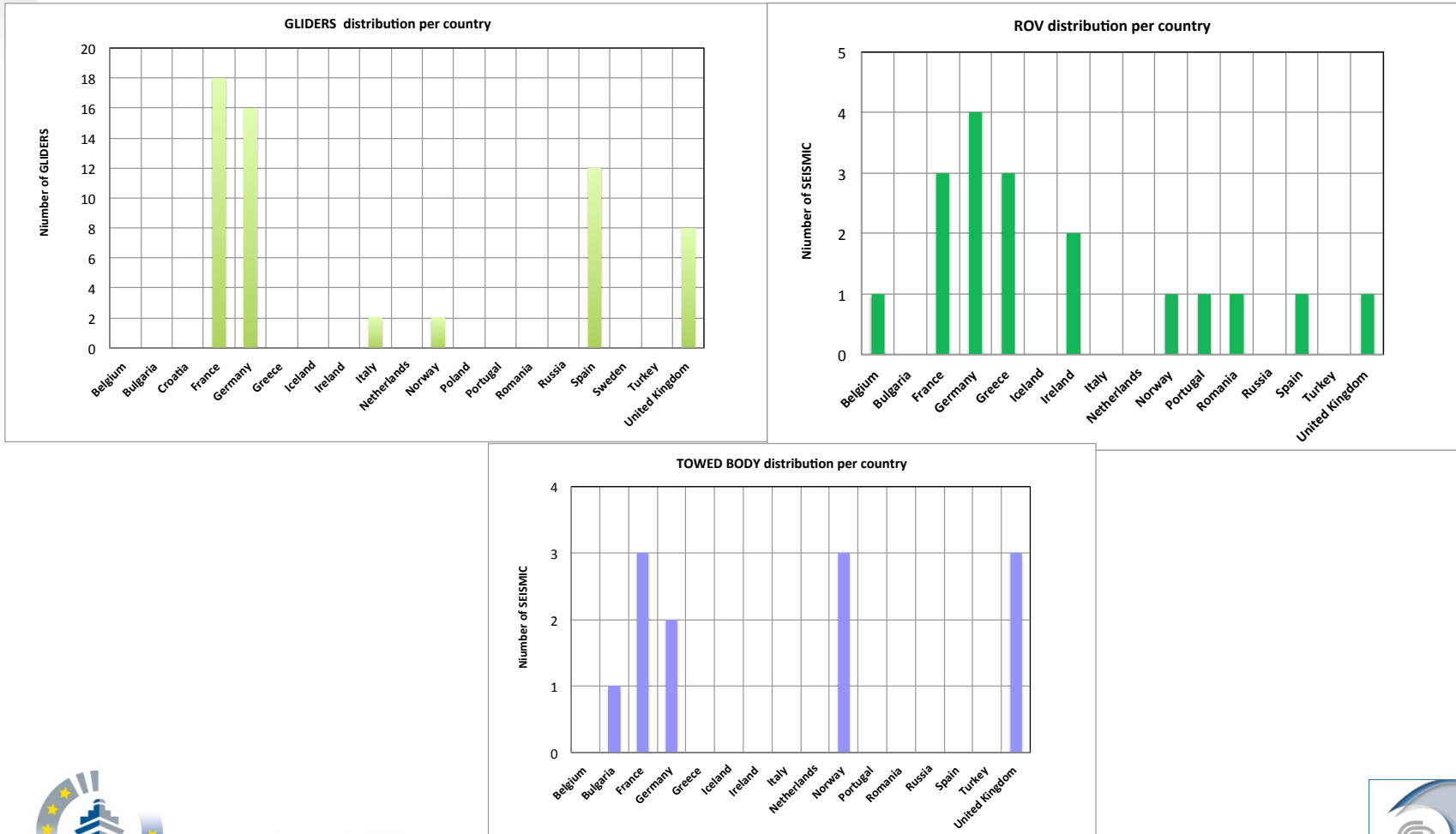
NAUTILLE
M. Sub.



JAGO
M. Sub.



Present Status



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Per-Country Distribution (I)

	<i>AUV</i>	<i>Glider</i>	<i>M.Sub.</i>	<i>ROV</i>	<i>T.Body</i>	TOTAL
<i>Belgium</i>				1		1
<i>Bulgaria</i>			1		1	2
<i>France</i>	1	18	2	3	3	27
<i>Germany</i>	3	16	1	4	2	26
<i>Greece</i>			1	3		4
<i>Iceland</i>	1					1
<i>Ireland</i>				2		2
<i>Italy</i>	1	2				3
<i>Netherlands</i>			1			1
<i>Norway</i>	1	2		1	3	7
<i>Portugal</i>			1	1		2
<i>Romania</i>				1		1
<i>Russia</i>			6			6
<i>Spain</i>	2	12		1		15
<i>Turkey</i>			1			1
<i>U. Kingdom</i>	2	8		1	3	14
TOTAL	11	58	14	18	12	113



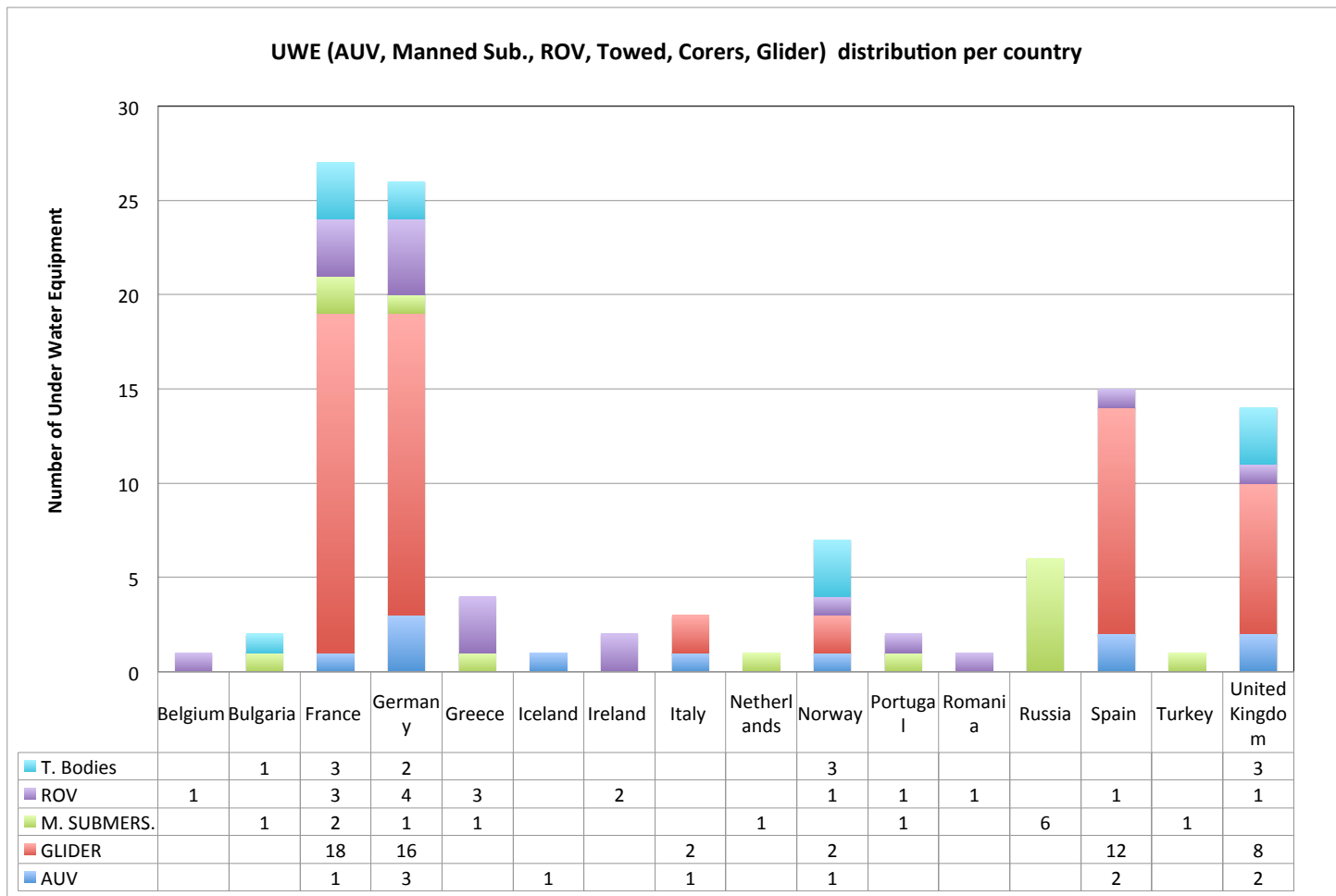
Per-Country Distribution (II)



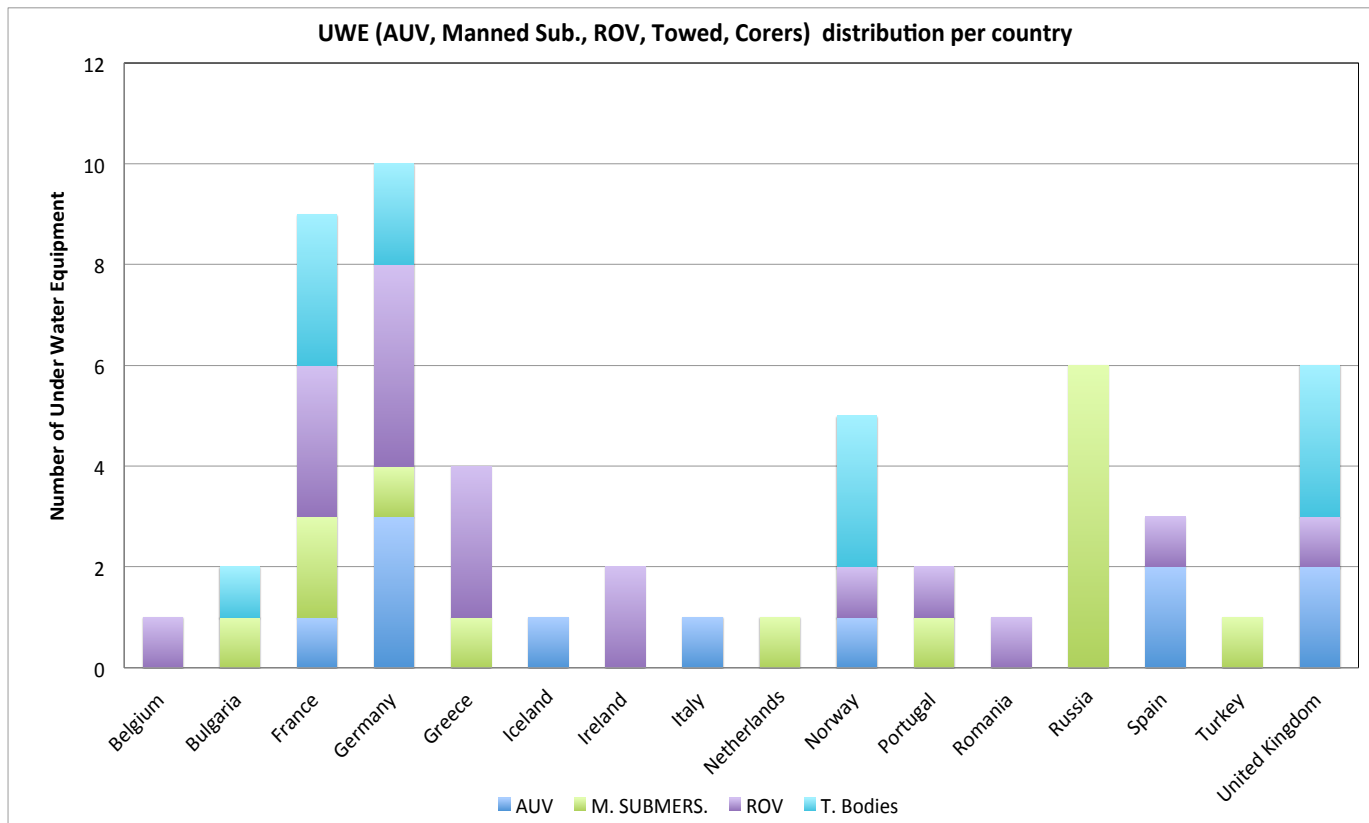
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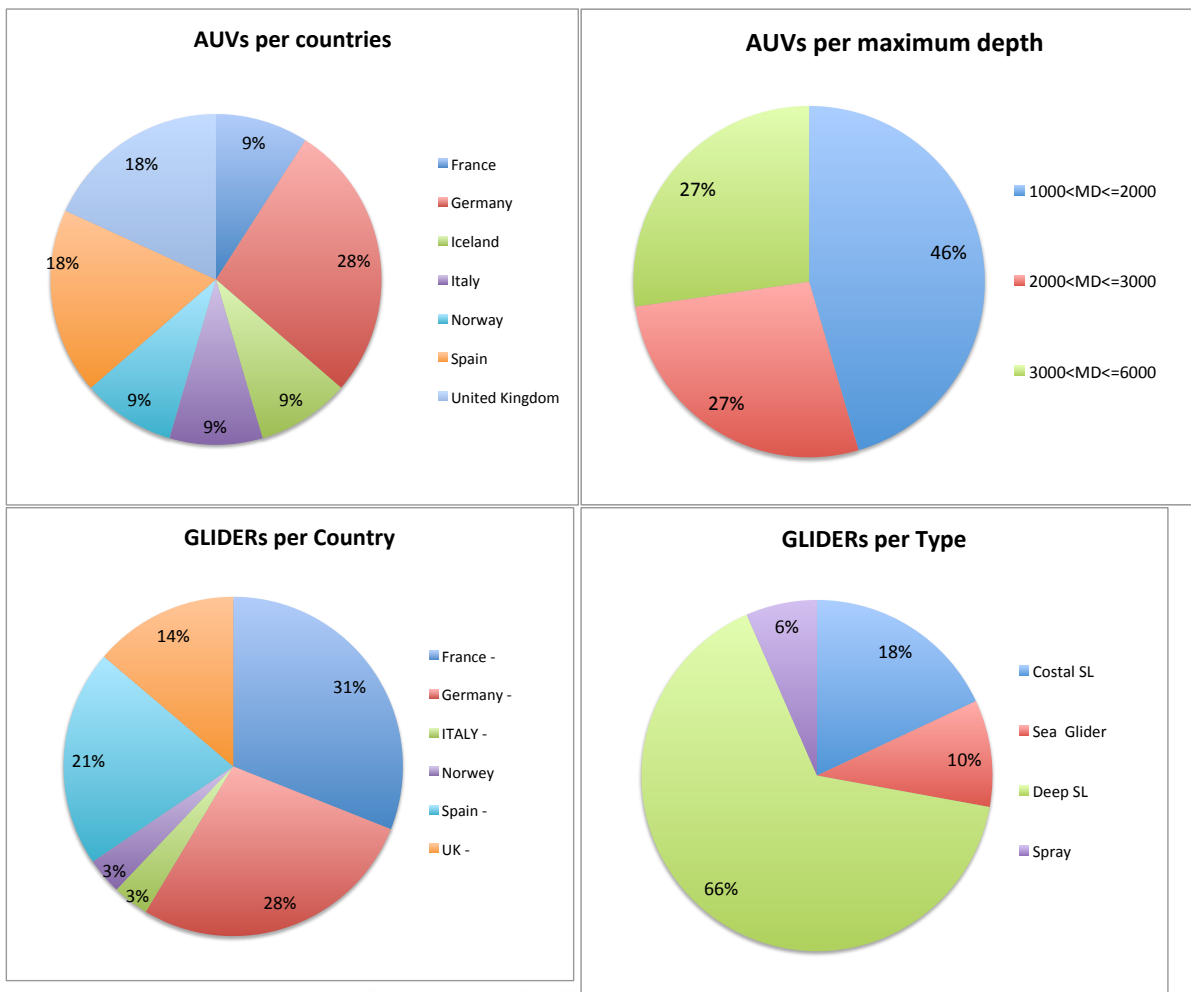
Per-Country Distribution (III)



Per-Country Distribution (IV)



Per-Country Distribution (V)



Perspectives

- Perspectives (...Per will introduce them...)





TOWED

TOBI – NERC (UK)



AUV

ASTERIX IFREMER



ROV

AGLANTA IMR -Norway



GLIDER

Deep SLOCUM-OGS



Manned Submersible

THETIS HCMR Greece



ROV

KIEL6000 Geomar

Thank you for your attention!

