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#WSIS

**WSIS** » Embracing Biodiversity – How the ICT sector can go beyond COP 15 “

ITU Geneva 22 May 2023

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## Embracing Biodiversity – How the ICT sector can go beyond COP 15

How can Industry implement solutions to reduce our impact on biodiversity to contribute to the COP 15 recommendations?

We need Standards for ICTs impacts on biodiversity using the ITU-T SG5 work

- GBS = Global Biodiversity Score
- Biodiversity footprint measurement tool
- Developed by CDC Biodiversité (France)
- **Objective:** provide a standardized biodiversity footprint score for a company or portfolio of companies
  - Includes key pressures on biodiversity
  - Covers the terrestrial and freshwater aquatic domains
- Uses MSA.km<sup>2</sup> (mean species abundance) as a unit of measurement
  - This measure takes into account the fact that biodiversity loss is related to the intensity of economic activity, and represents the impact as a notional area in which 100% of biodiversity is lost
- Can be used as a tool to set and track biodiversity targets over time



## Which impacts are measured in the GBS?

### Scope 1

Impacts generated in the company's area of influence and caused directly by the company's activities

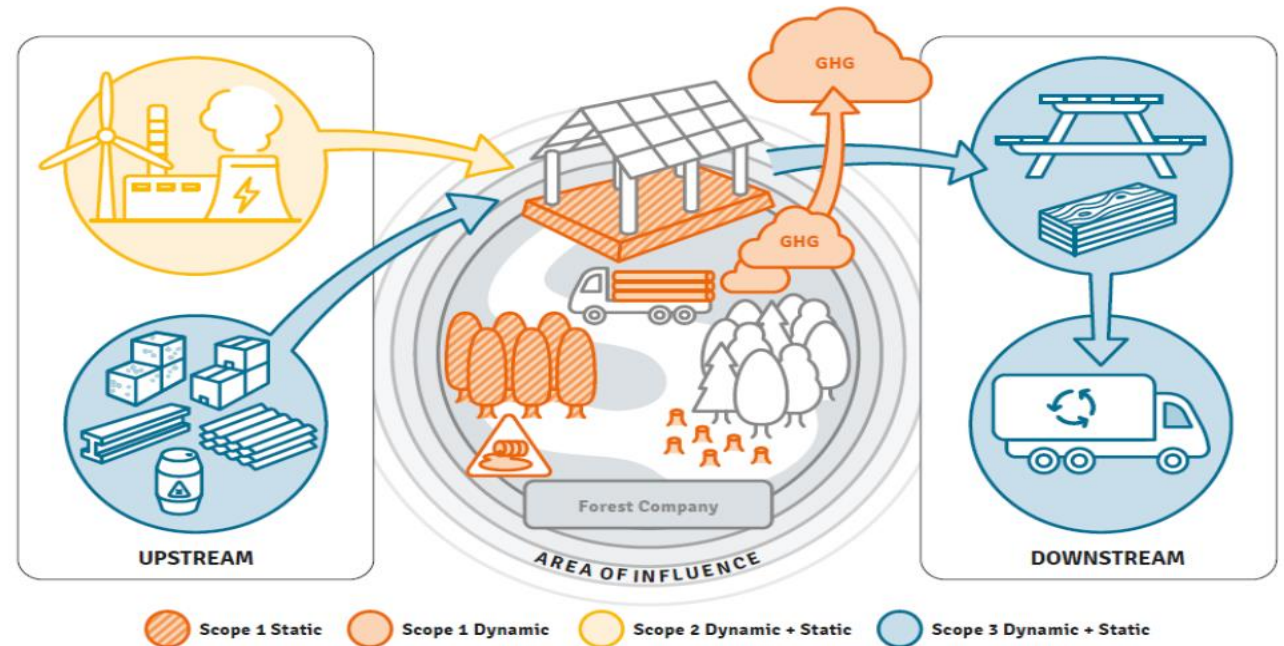
### Scope 2

Impacts resulting from the generation of non-fossil energy (electricity, heat, cold, etc.)

### Scope 3

Impacts of the company's value chain (upstream and downstream)

NB. Only the upstream impact is estimated in the GBS





## Estimated Orange biodiversity footprint: summary results - existing impacts based on data collected to date

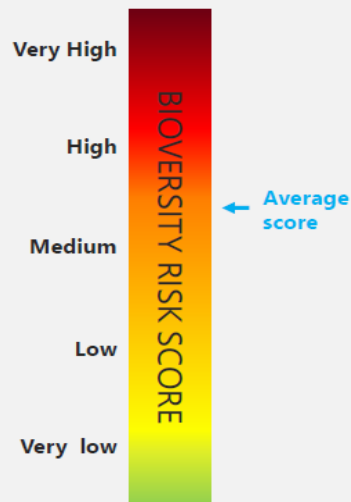
	Estimated relative impact (MSA.km <sup>2</sup> ) <sup>^</sup>		Footprint includes
	Terrestrial	Freshwater	
<b>Scope 1</b>	<b>12.4</b>	<b>0.1</b>	<ul style="list-style-type: none"> <li>Impacts linked to the physical footprint of head office buildings for each BU, datacentres, technical infrastructure and commercial buildings (Orange shops) up to and including 2019.</li> <li>Impacts linked to operation and maintenance (O&amp;M) of these facilities in 2019 only.</li> </ul>
<b>Scope 2</b>	<b>4</b>	<b>0.04</b>	<ul style="list-style-type: none"> <li>Impacts linked to electricity purchased in 2019 only.</li> </ul>
<b>Scope 3 Upstream:</b>	<b>2,404</b>	<b>83.5</b>	
Mobile phone	35	1.4	<ul style="list-style-type: none"> <li>Impacts linked to the number of phones <i>sold</i> in 2019 only.</li> </ul>
LiveBox	31	1.6	<ul style="list-style-type: none"> <li>Impacts linked to the number of LiveBoxes <i>sold</i> in 2019 only.</li> </ul>
Antennae and wooden poles	Up to 2,154*	46	<ul style="list-style-type: none"> <li>Impacts linked to the total number of wooden poles in the Orange network in 2019.</li> </ul>
Copper cables	71	12	<ul style="list-style-type: none"> <li>Impacts linked to the total quantity of copper cable in the Orange network in 2019.</li> </ul>
Fibre optic cables	3.5	19	<ul style="list-style-type: none"> <li>Impacts linked to the total quantity of fibre optic cable in the Orange network in 2019.</li> </ul>
Laptop	2	0.1	<ul style="list-style-type: none"> <li>Impacts linked to the number of laptops used in 2019 only (Number of laptops estimated based on the total number of salaried staff per BU in 2019).</li> </ul>
Server	0.8	0.02	<ul style="list-style-type: none"> <li>Impacts linked to the number of servers installed in 2020 (no data available for 2019).</li> </ul>
OBS	90	3.4	<ul style="list-style-type: none"> <li>Impacts linked to OBS services</li> </ul>
Others	16.7	0.48	<ul style="list-style-type: none"> <li>Impacts estimated by the GBS as upstream impacts of suppliers</li> </ul>
<b>TOTAL (all scopes)</b>	<b>Up to 2,420*</b>	<b>84</b>	

Scope 3 represents more than 99% of the impact

Results obtained with 4 key indicators : habitat value, habitat intactness, STAR and habitat loss

### Summary of Results

- 40 countries were identified as major producers of the 14 materials (90% of global supply).
- Mining occurs in countries with relatively high biodiversity risk (overall average score between medium and high risk).
- Mining occurs in countries with biodiversity risk higher than global average



<p><b>High (5)</b></p> <p>Copper Tin Rare Earths Lithium Gold</p>
<p><b>Medium (7)</b></p> <p>Silver Antimony Cobalt Bismuth Graphite Silicon Indium</p>
<p><b>Low (2)</b></p> <p>Gallium Germanium</p>

## Conclusion of the main impacts of the upstream chain

### Main findings

- Of the 14 materials, the biodiversity risk is *high* for 5 materials and *medium* for 7 materials, illustrating potential significant risk for biodiversity.
- Depending on the material and the extracting country, the nature and severity of the risk may change.
- Mineral extraction leads to several types on pressure to biodiversity.

### Implications

- Whilst there are significant risk, well-planned mining can avoid and minimise impacts on biodiversity: it is critical to ensure materials are sources from mines or companies adhering to best practices and regulatory standards that incorporate environmental criteria. Requesting certification scheme, like IRMA, can help to ensure application of best practices.
- Improving traceability is critical for making informed and actionable decisions in supply chain sourcing.



Orange has carried out a study to reduce its impact on biodiversity using the GBS methodology (Global Biodiversity Score) - Standardization on going with ITU and ICTs solutions , as for Climate , could monitor Biodiversity Impacts

**Implications of the results for developing coupled actions for climate and biodiversity.**

Examples of actions to be implemented and opportunities to develop joint climate-biodiversity compensation actions

Type of impact	Impact mitigation	Actions to compensate for impacts	Opportunity to couple with climate actions
<b>Direct impacts</b>			
Land use	Probably little room to reduce this impact	Any habitat restoration projects in the areas concerned	Yes, if the project includes habitat restoration
Ecotoxicity	Demonstrate the implementation of good practice to reduce pollution risks; Use of certified materials or application of good practice standards	Specific projects for the restoration of aquatic ecosystems	Yes, if the project includes the restoration of aquatic ecosystems
Carbon emission	Identify good practice in some units and extend to other units	Carbon project	Yes, if the project is in the impacted areas
<b>Value chain impacts</b>			
Land use	Use of certified materials or application of best practice standards	Projects in areas from which the materials originate	Yes, if the project is in the impacted areas and contributes to habitat restoration

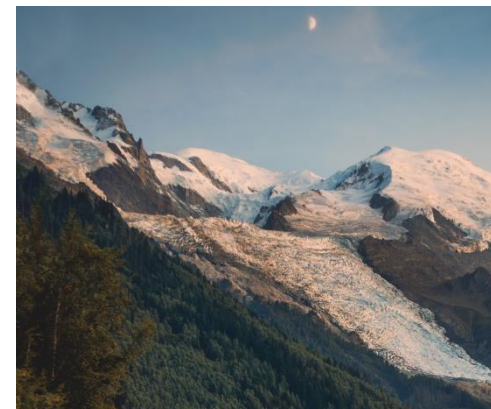
## ICT Part of the solution : Protecting biodiversity

### Orange – CREA UNFCCC Momentum for Change Prize at Bonn COP23

- The Mont-Blanc Research Centre for Alpine Ecosystems [studies the impacts of climate change on the Alps, particularly in terms of biodiversity](#)
- Since 2014, Orange has provided CREA with the means [to measure altitude snow level fauna and flora behaviours, data collection equipment and various support](#) so that data is made available to scientist networks
- [Joint creation of a 3D atlas of Mont Blanc](#)
- Orange employees volunteer to help CREA

### Orange Marine – Argo New project on climate and biodiversity in the Oceans

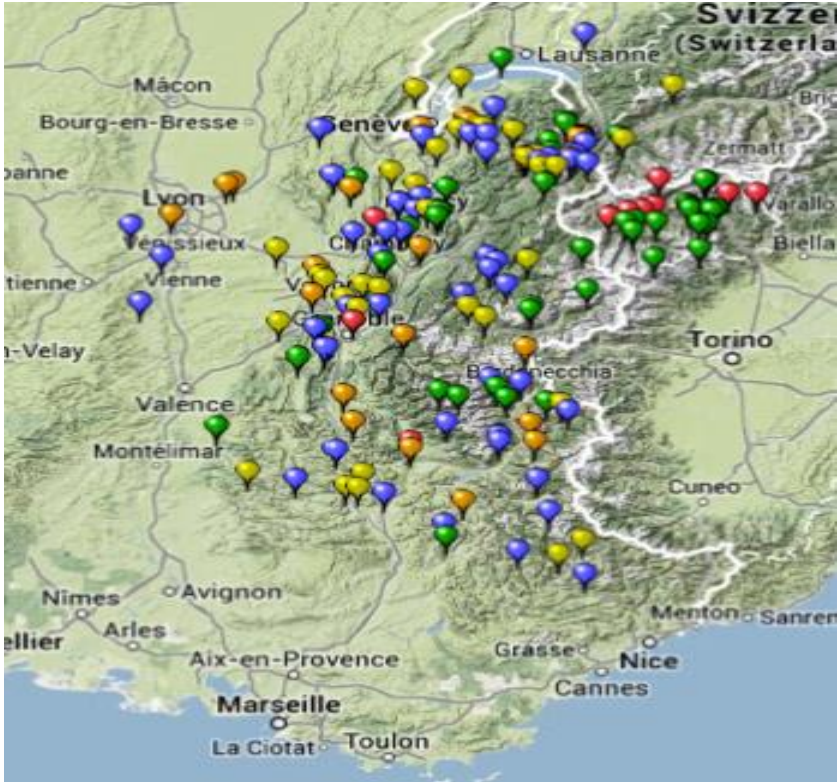
- Launched in 2000 by the UNESCO Intergovernmental Oceanographic Commission (IOC) and the World Meteorological Organisation (WMO), the Argo international programme is [an essential element of the global ocean observation system](#) put in place to track, [understand and forecast the role of the ocean in the planet's climate](#).
- As part of the Euro-Argo programme, our cable boats help [install standalone beacons to evaluate ocean condition in real time](#)





# ICT Part of the solution : Protecting biodiversity

Network of observers n=189



*Maintenance partially done by Orange*

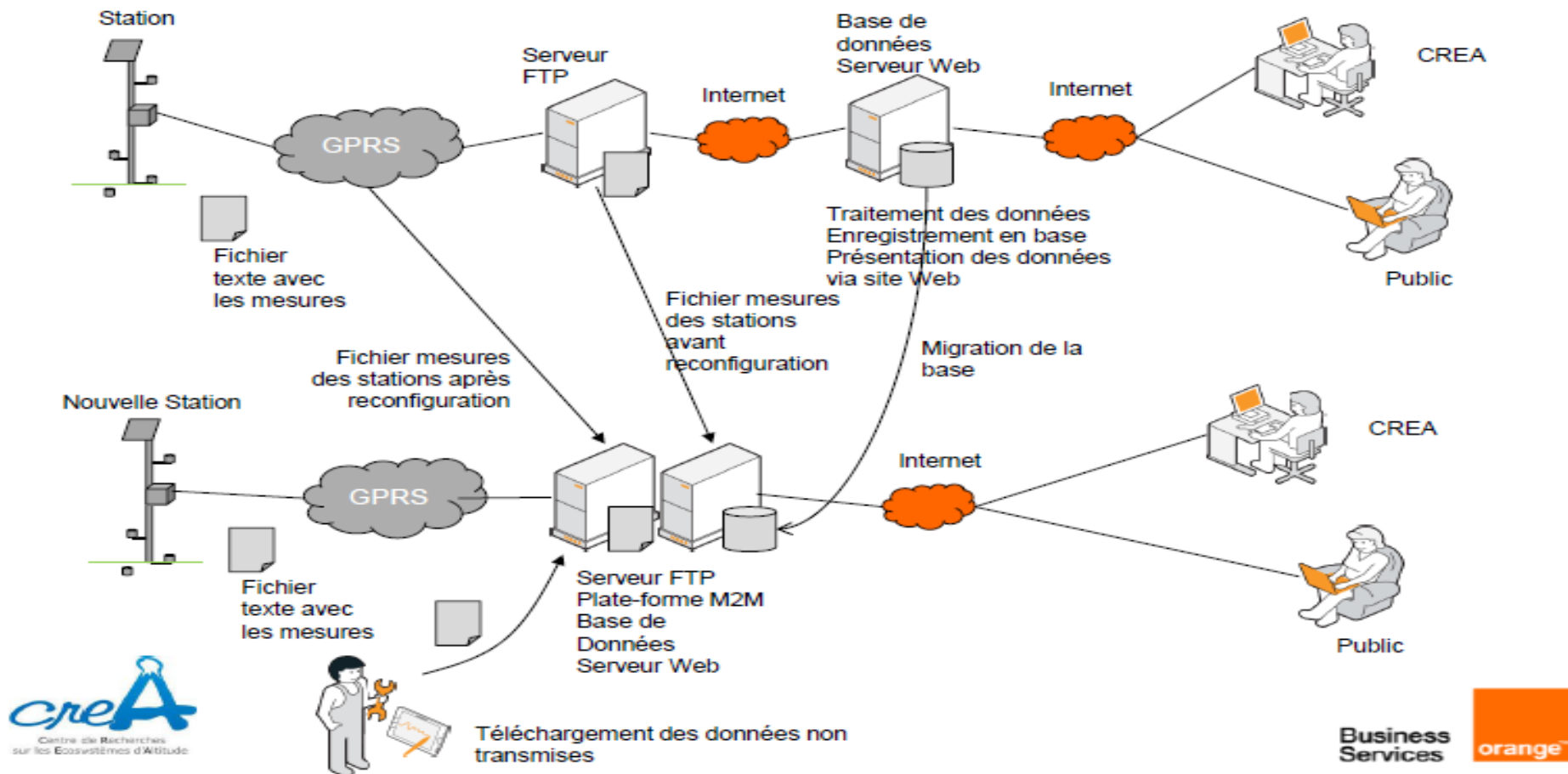


Network of stations n=65



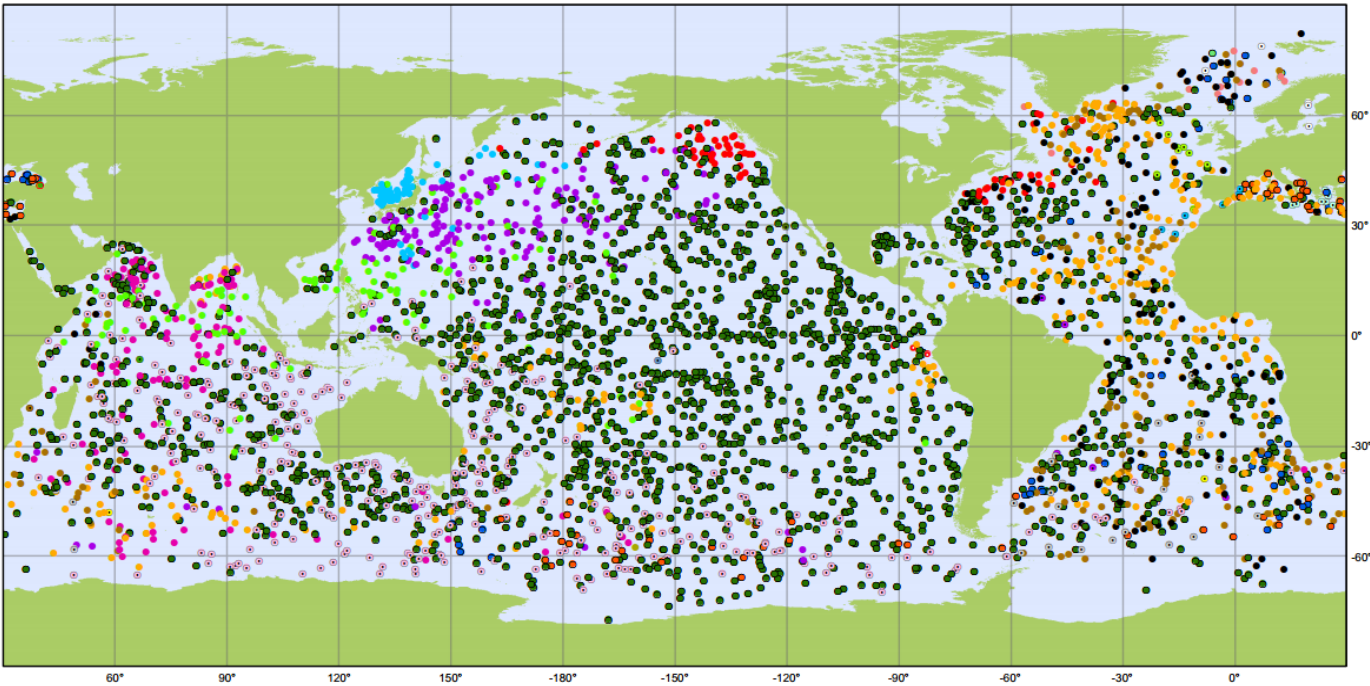
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## Data capture, consolidation and storage network





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**Argo** **April 2017**

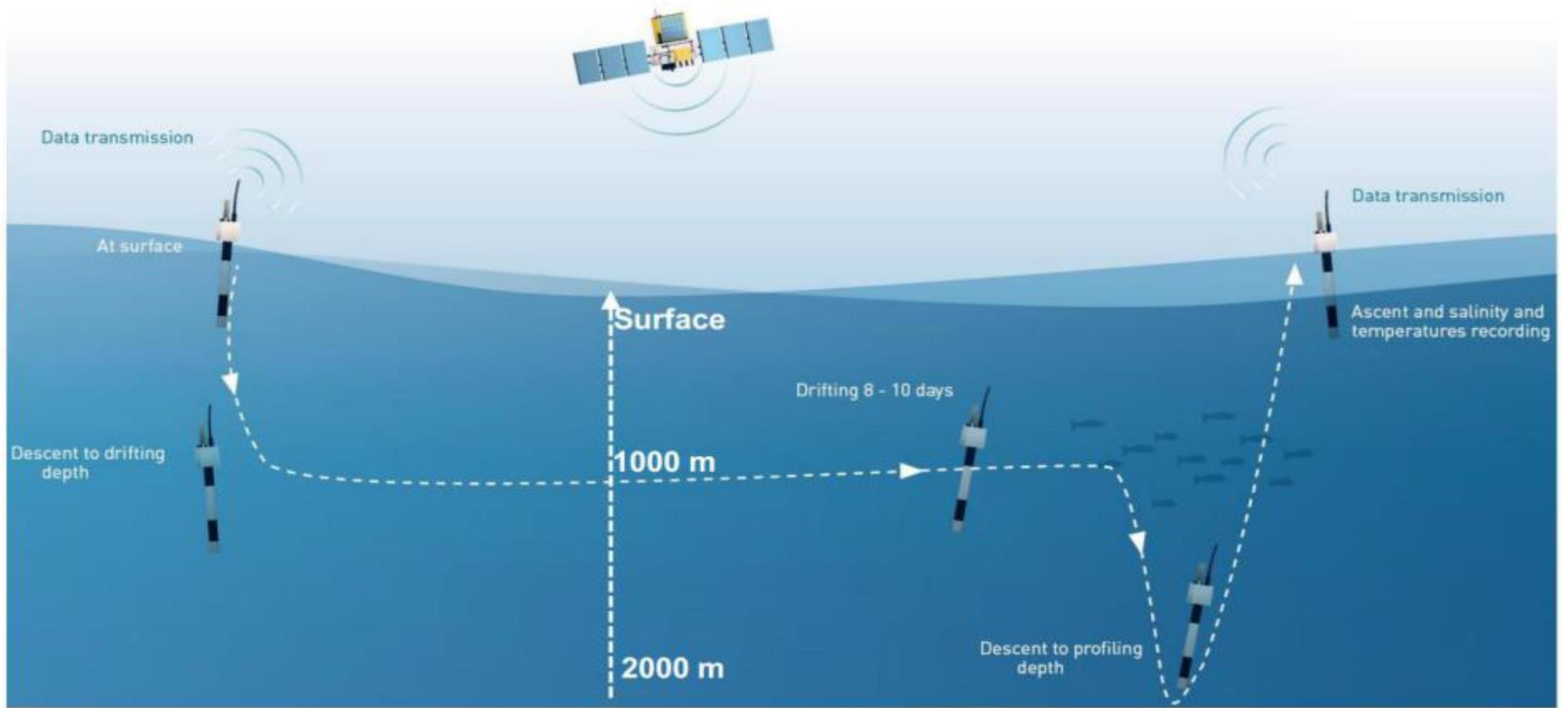
**National contributions - 3945 Operational Floats**  
 Latest location of operational floats (data distributed within the last 30 days)

● ARGENTINA (2)	● CHINA (116)	● GERMANY (141)	● JAPAN (167)	● NEW ZEALAND (7)	● SPAIN (7)
● AUSTRALIA (377)	● ECUADOR (1)	● GREECE (8)	● KENYA (1)	● NORWAY (10)	● UK (155)
● BRAZIL (6)	● EUROPE (57)	● INDIA (128)	● MAURITIUS (1)	● PERU (3)	● USA (2174)
● BULGARIA (1)	● FINLAND (6)	● IRELAND (11)	● MEXICO (2)	● POLAND (2)	
● CANADA (75)	● FRANCE (327)	● ITALY (73)	● NETHERLANDS (26)	● KOREA, REPUBLIC OF (61)	

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# ICT Part of the solution : Protecting biodiversity







Thank You

