

# Argo Data Users Survey










Argo TC, October 2006








## 1. Background

An on-line survey has been set up by the AIC in May 2006.  
 Survey will stay open for one year.  
 As of October 2006, **66** users replied to the survey.

Survey address: <http://www.surveymonkey.com/s.asp?u=460472024285>

## 2. Results

1. You are:			
		Response Percent	Response Total
An Argo Project Manager/Principal Investigator		10.6%	7
<b>An Oceanographer/Marine Scientist/Researcher</b>		<b>62.1%</b>	<b>41</b>
A Marine Meteorologist		1.5%	1
A Modeller		12.1%	8
A Float Technical Expert		4.5%	3
An Argo data user		37.9%	25
A student		12.1%	8
General Public		6.1%	4
<input type="button" value="View"/> Other (please specify)		6.1%	4
<b>Total Respondents</b>			<b>66</b>
(skipped this question)			0

2. Where are you located?			
		Response Percent	Response Total
Africa		1.5%	1
<b>Americas (Mexico &amp; North)</b>		<b>27.7%</b>	<b>18</b>
Americas (South of Mexico)		7.7%	5
Antarctica		0%	0
<b>Asia</b>		<b>27.7%</b>	<b>18</b>
Europe		21.5%	14
Oceania		6.2%	4
<input type="button" value="View"/> Other (please specify)		7.7%	5
<b>Total Respondents</b>			<b>65</b>
(skipped this question)			1

### Remark:

Most of answers come from oceanographers and data users which demonstrate that the target of the survey is almost reached.

**Others:** College faculty (physics), sensor manufacturer, Argo national management, JCOMM secretariat.

3. You work in a:			
		Response Percent	Response Total
<b>Government Research Laboratory</b>		41.5%	27
Operational Centre		10.8%	7
Data Centre		6.2%	4
University		32.3%	21
International/Intergovernmental Organization		3.1%	2
Commercial Company		6.2%	4
<input type="button" value="View"/> Other (please specify)		9.2%	6
<b>Total Respondents</b>			<b>65</b>
(skipped this question)			1

4. What is your main source of information on Argo?			
		Response Percent	Response Total
<a href="#">Argo Information Centre</a>		29.2%	19
<a href="#">Argo Project Office</a>		23.1%	15
Data Centres web sites		26.2%	17
National Argo web sites		10.8%	7
Documents		4.6%	3
<a href="#">Brochure</a>		1.5%	1
<input type="button" value="View"/> Other (please enter URL)		4.6%	3
<b>Total Respondents</b>			<b>65</b>
(skipped this question)			1

### Question 5: “What improvement to the Argo Project Office website?:”

- Speed
- section on who is using Argo data
- FAQ section: What is Argo? How are the floats located? Are the current datasets complete? What is the difference between the two GDACs and the DACs?
- Forum to answer and discuss questions/doubts about Argo data use
- Better bibliography
- More visibility for developing countries involvement
- Animation on the float mission
- “beginner’s guide to accessing Argo data” in HTML and on the AIC website
- More visibility to oxygen pilot project
- Look and feel consistency with AIC and argo.net

### Question 7: “What improvement to the Argo AIC website?:”

- speed
- web form to order WMO Ids
- Argo real time density coverage on interactive map
- Interactive map too slow
- Access to download publications
- Hard copies to developing countries

### Remarks:

Most of these proposals are interesting and will be taken into account.

Some have already been implemented on the new AIC website.

It is to be noted that most of the information required already exists on the websites.

This demonstrates the substantial improvements that have to be made on websites navigation.

The idea of an integration of both sites should be discussed.

Argo core mission is deep T/S profiling and not oxygen so the visibility to such projects will probably stay marginal. But a minimum effort can be done.

On the new AIC website it is possible to query the float database to gather all float measuring dissolved oxygen and some maps of new sensors will be regularly issued.

Substantial efforts have been made by the AIC to foster participation in Argo by developing countries and to give them an appropriate visibility. This will effort will be continued.

Hard copies of website content will be available on the Argo CDROM.

Access to download publications is closed to the public and requires subscription (not free) to papers. This is clearly a problem and particularly for developing countries.

6. How well are you satisfied of the Argo Information Centre services ?			
		Response Percent	Response Total
Excellent		18.6%	11
Very Good		25.4%	15
<b>Good</b>		<b>40.7%</b>	<b>24</b>
Average		13.6%	8
Bad		1.7%	1
Very Bad		0%	0
Poor		0%	0
<b>Total Respondents</b>			<b>59</b>
(skipped this question)			7








AIC users are pretty satisfied of the services proposed.

This survey was made before the release of the new AIC site; it is likely to have a better audience and feedback in the future.















### Question 8: “What improvement would you recommend for the Argo brochure?”

- Most of users skipped this question or replied the brochure was fine.
- regular updates
- more understandable for policy makers by reducing all technical terms







9. You plan to use Argo data for:

		Response Percent	Response Total
<b>Oceanographic Research</b>		82.3%	51
Operational Oceanography		30.6%	19
Climate Research		43.5%	27
Environment		9.7%	6
Ocean Analysis Products		33.9%	21
Technology Issues		8.1%	5
<a href="#">View</a> Other (please specify)		8.1%	5
<b>Total Respondents</b>			<b>62</b>
(skipped this question)			4

10. Your area of interest is:

		Response Percent	Response Total
<b>Global</b>		45.5%	30
Atlantic Ocean		9.1%	6
Atlantic - North		16.7%	11
Atlantic - Equatorial		7.6%	5
Atlantic - South		4.5%	3
Pacific Ocean		15.2%	10
Pacific - North		13.6%	9
Pacific - Equatorial		12.1%	8
Pacific - South		9.1%	6
Indian Ocean		21.2%	14
Arctic Ocean		4.5%	3
Southern Ocean		15.2%	10
Mediterranean Sea		4.5%	3
<a href="#">View</a> Other (please specify)		1.5%	1
<b>Total Respondents</b>			<b>66</b>
(skipped this question)			0

11. Where do you access Argo data?

		Response Percent	Response Total
Argo Global Data Centre - Coriolis (FR mirror)		46%	29
<b>Argo Global Data Centre - GODAE (USA mirror)</b>		52.4%	33
Global Telecommunication System of WMO		12.7%	8
Argo Regional Data Centres		22.2%	14
CDROM		3.2%	2
<a href="#">View</a> Elsewhere (please specify)		7.9%	5
<b>Total Respondents</b>			<b>63</b>
(skipped this question)			3

**Question 10: “You area of interest”**

There are no strong requirements for implementing Argo in marginal seas (Caribbean, Gulf of Mexico, etc).

**Question 11: Others data sources:**

- ASCII mirror program in Canada
- GTSP
- No access ...
- 

12. What data format do you prefer?			
		Response Percent	Response Total
	<b>netCDF</b>	67.8%	40
	ASCII	47.5%	28
	TESAC	3.4%	2
	BUFR	1.7%	1
<a href="#">View</a>	Other (please specify)	5.1%	3
<b>Total Respondents</b>			<b>59</b>
(skipped this question)			7

13. How often do you download Argo data?			
		Response Percent	Response Total
	Every hour	0%	0
	Every 3 hours	0%	0
	Every 6 hours	0%	0
	Bi-daily	0%	0
	Daily	14.3%	8
	Weekly	21.4%	12
	<b>Monthly</b>	<b>39.3%</b>	<b>22</b>
	Yearly	21.4%	12
<a href="#">View</a>	Other (please specify)	12.5%	7
<b>Total Respondents</b>			<b>56</b>
(skipped this question)			10

14. You access data at GDACS via:			
		Response Percent	Response Total
	http	45.5%	25
	<b>ftp</b>	<b>60%</b>	<b>33</b>
	Live Access Server	20%	11
	subscription	0%	0
<a href="#">View</a>	Other (please specify)	7.3%	4
<b>Total Respondents</b>			<b>55</b>
(skipped this question)			11

15. Which data files do you use at GDACs?

		Response Percent	Response Total
Individual Profiles		52.9%	27
<b>Multi Profiles</b>		<b>66.7%</b>	<b>34</b>
Trajectories		43.1%	22
Technical Data		19.6%	10
Metadata		33.3%	17
<b>Total Respondents</b>			<b>51</b>
(skipped this question)			15

16. Which additional data you would like to use? (This implies equipping the floats with new sensors)

		Response Percent	Response Total
<b>Sea Surface Temperature</b>		<b>61.5%</b>	<b>32</b>
Sea Surface Salinity		57.7%	30
Wind/Rain gauge (acoustic)		38.5%	20
Dissolved Oxygen		51.9%	27
Biological		38.5%	20
<input type="button" value="View"/> Other (please specify)		13.5%	7
<b>Total Respondents</b>			<b>52</b>
(skipped this question)			14

**Remark:**

An additional SST sensor is probably the only one that could be added to the floats on a global scale. First tests are being made by University of Washington Argo group.

All the other sensors will have prohibitive costs, energy or bandwidth needs and will clearly impact the lifetime of the floats and the Argo core mission.

But they should be taken into account for the implementation of other elements of the Global Ocean Observing System.

17. How well are you satisfied with the data access at GDACs ?						
FR GDAC						
	Very Good	Good	Average	Bad	Very Bad	Response Total
General data access	30% (8)	<b>52% (14)</b>	11% (3)	0% (0)	7% (2)	<b>27</b>
Web Interface	17% (4)	<b>57% (13)</b>	22% (5)	0% (0)	4% (1)	<b>23</b>
FTP server	30% (7)	<b>43% (10)</b>	26% (6)	0% (0)	0% (0)	<b>23</b>
Live Access Server	7% (1)	<b>50% (7)</b>	29% (4)	14% (2)	0% (0)	<b>14</b>
Subscription	21% (3)	<b>43% (6)</b>	29% (4)	7% (1)	0% (0)	<b>14</b>
Data quality	20% (5)	<b>56% (14)</b>	24% (6)	0% (0)	0% (0)	<b>25</b>
Data timeliness	22% (5)	<b>43% (10)</b>	35% (8)	0% (0)	0% (0)	<b>23</b>
Data quantity	29% (6)	<b>57% (12)</b>	14% (3)	0% (0)	0% (0)	<b>21</b>
Data accuracy	19% (4)	<b>52% (11)</b>	24% (5)	0% (0)	5% (1)	<b>21</b>
USA GDAC						
	Very Good	Good	Average	Bad	Very Bad	Response Total
General data access	<b>55% (11)</b>	35% (7)	10% (2)	0% (0)	0% (0)	<b>20</b>
Web Interface	41% (7)	<b>47% (8)</b>	12% (2)	0% (0)	0% (0)	<b>17</b>
FTP server	<b>52% (11)</b>	33% (7)	14% (3)	0% (0)	0% (0)	<b>21</b>
Live Access Server	21% (3)	<b>50% (7)</b>	29% (4)	0% (0)	0% (0)	<b>14</b>
Subscription	20% (2)	<b>60% (6)</b>	20% (2)	0% (0)	0% (0)	<b>10</b>
Data quality	35% (7)	<b>55% (11)</b>	10% (2)	0% (0)	0% (0)	<b>20</b>
Data timeliness	<b>55% (11)</b>	35% (7)	10% (2)	0% (0)	0% (0)	<b>20</b>
Data quantity	28% (5)	<b>56% (10)</b>	17% (3)	0% (0)	0% (0)	<b>18</b>
Data accuracy	29% (5)	<b>41% (7)</b>	18% (3)	0% (0)	12% (2)	<b>17</b>
<b>Total Respondents</b>						<b>43</b>
(skipped this question)						23

**Remarks:**

- good load balance between the two GDACs
- no access in http for the ftp server files at FR GDAC
- good general feedback for both GDACs

18. How well are you satisfied with the data access on the GTS of WMO?						
	Very Good	Good	Average	Bad	Very Bad	Response Total
General data access	22% (5)	<b>70% (16)</b>	4% (1)	0% (0)	4% (1)	<b>23</b>
Data quality	23% (5)	<b>45% (10)</b>	23% (5)	5% (1)	5% (1)	<b>22</b>
Data timeliness	23% (5)	<b>55% (12)</b>	14% (3)	5% (1)	5% (1)	<b>22</b>
Data quantity	25% (5)	<b>55% (11)</b>	15% (3)	0% (0)	5% (1)	<b>20</b>
Data accuracy	23% (5)	<b>41% (9)</b>	27% (6)	5% (1)	5% (1)	<b>22</b>
<b>Total Respondents</b>						<b>23</b>
(skipped this question)						43

19. What do you think of the Argo data support ?						
	Very Good	Good	Average	Bad	Very Bad	Response Total
Documentation	27% (13)	<b>49% (24)</b>	22% (11)	2% (1)	0% (0)	<b>49</b>
Response to queries	29% (12)	<b>48% (20)</b>	19% (8)	5% (2)	0% (0)	<b>42</b>
<b>Total Respondents</b>						<b>50</b>
(skipped this question)						16

### **Question 20: suggestions regarding the Argo data system:**

- Better documentation on QC procedures (too general)
- Need for high quality delayed mode data
- netCDF files too heavy. ASCII easier to use.
- Unify the trajectory data format
- Regular access problems on Coriolis map selection tool (nice tool but overloaded?)

About 30 users provided their email address to be informed of future changes and improvements of the Argo data service.

## **3. Conclusion**

Some general remarks:

- good general feedback
- interesting proposals to improve websites
- no feedback from Africa
- ASCII format preferred by 50% of users

These first results are quite interesting but we should invite more users to fill the survey. I hope there are more than 66 users of Argo data in the reality ... That would be particularly helpful to get more feedback from the modellers' community.

So I invite all DACs (global, national, regional, long-term) to really promote this on-line survey on their websites and eventually propose additional questions.

