UK Argo

AST#16, Brest, France, March 2015

© Crown copyright Met Office

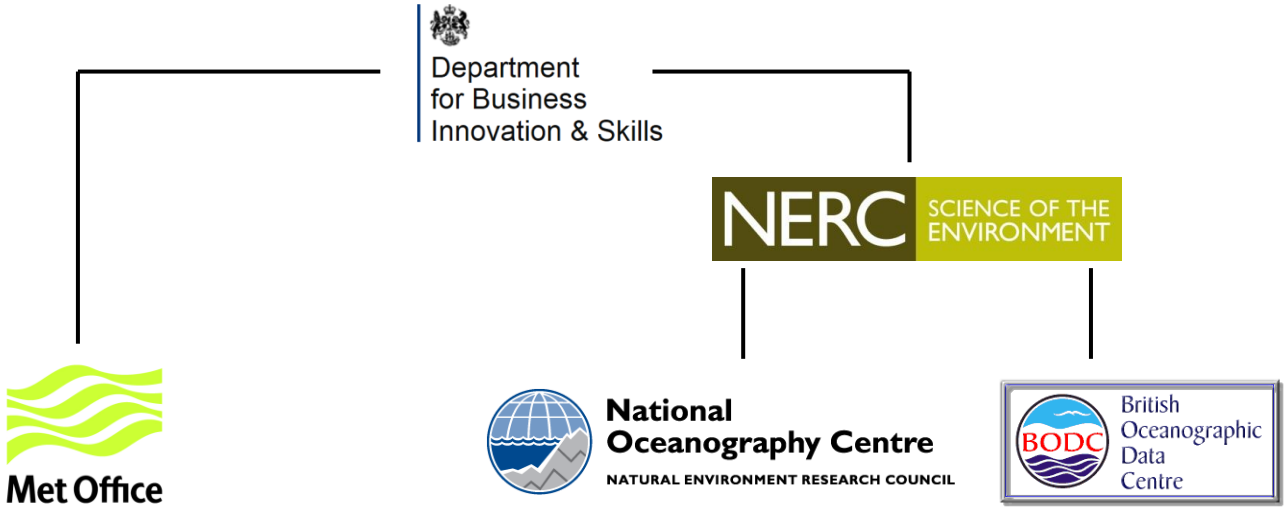
UK Argo – the beginning

- The original commitment made by Government CSA in 1999 was that the UK would contribute to Argo to at least a GNP-level based share at full deployment (around 3.6% of the global array), but expected it would be twice this
  - For a 3,000 float array this would imply UK deploys between 30 and 50 floats per year
- DETR (Department for Environment, Transport and the Regions), MoD (Ministry of Defence) and NERC (Natural Environment Research Council) were seen to have the key funding roles, and the Met Office would have responsibility for management and coordination of the activity which would be carried out jointly with NERC
- UK Argo was initiated in late 1999

© Crown copyright Met Office

UK Argo

- Is undertaken by a partnership involving the Met Office (who manage the programme), the National Oceanography Centre, Southampton (NOCS) and the British Oceanographic Data Centre (BODC)
- The Met Office is an Executive Agency under the Department for Business, Innovation and Skills (BIS)
- Both NOCS and BODC are NERC centres, where NERC is an executive non-departmental public body under BIS



UK Argo present funding

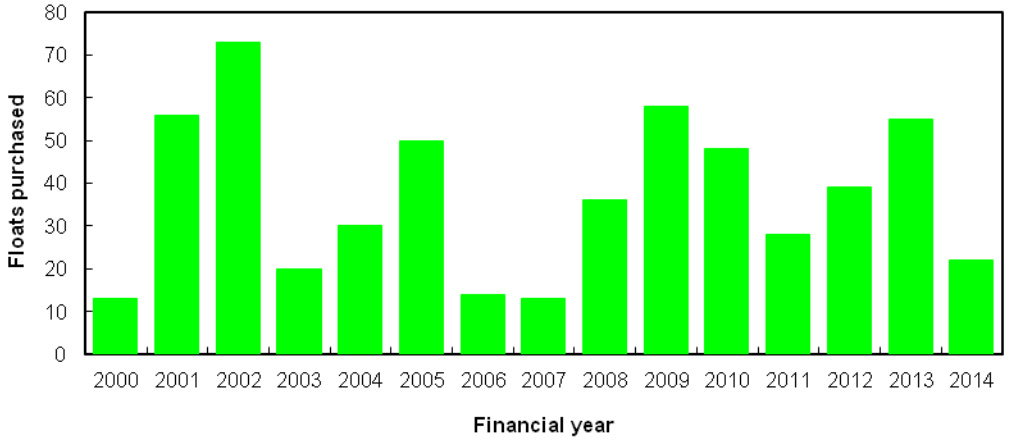
- The Met Office is funded by DECC (Department for Energy and Climate Change) with a contribution through the Met Office Public Weather Service (which is funded primarily by BIS)
- NOCS and BODC are funded through NERC
- In 2013 Plymouth Marine Laboratory secured funding for 11 bio-Argo floats and have become a partner in the UK programme
- Additional funding for Argo activities is also provided through various European activities under Euro-Argo (e.g. E-AIMS)

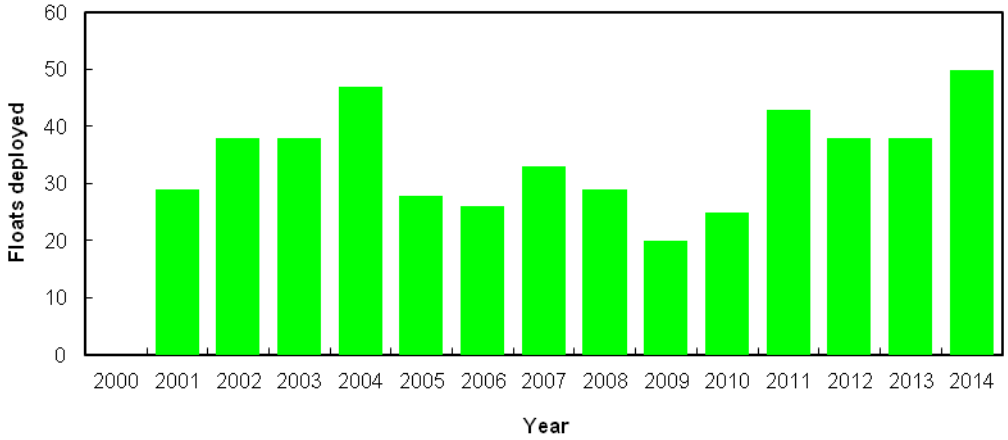
UK Argo responsibilities

- Met Office
  - Programme management and coordination, float procurement, preparation of floats for deployment, organisation of float deployments, satellite communications costs, international contributions and representation in AST and the Euro-Argo ERIC
  - Met Office marine systems team who provide technical support are based at NOCS
- NOCS and BODC
  - Argo science, Argo data management, float deployments from research cruises and representation in AST and ADMT
- Governance
  - UK Argo Sponsors Committee comprised of the funding parties DECC, Met Office and NERC (NOCS and BODC)

© Crown copyright Met Office

UK Argo funding & floats purchased





Funding for non-float costs has remained fairly steady

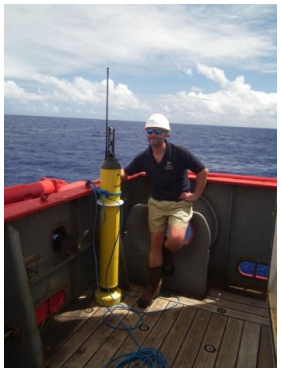
However funding for floats has been very variable and since 2005 has largely relied on the availability of end of year ‘underspend’ monies

Hence the number of floats deployed each year has also been variable

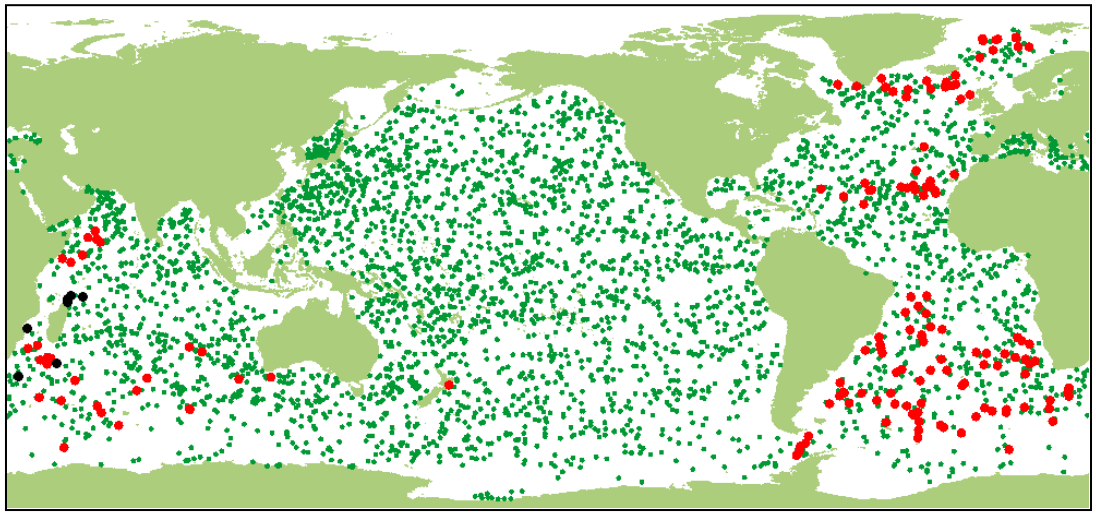
© Crown copyright Met Office

UK Argo present status

- Has deployed over 480 floats to date, with ~130 presently reporting data to the GDACs and GTS
- There are also 9 active bio-floats (NKE and Navis) for which the data processing has not yet been set up
- Since 2007 lithium batteries have been fitted in over 50% of Apex floats deployed
- Presently have over 60 floats available for deployment in 2015 and 2016



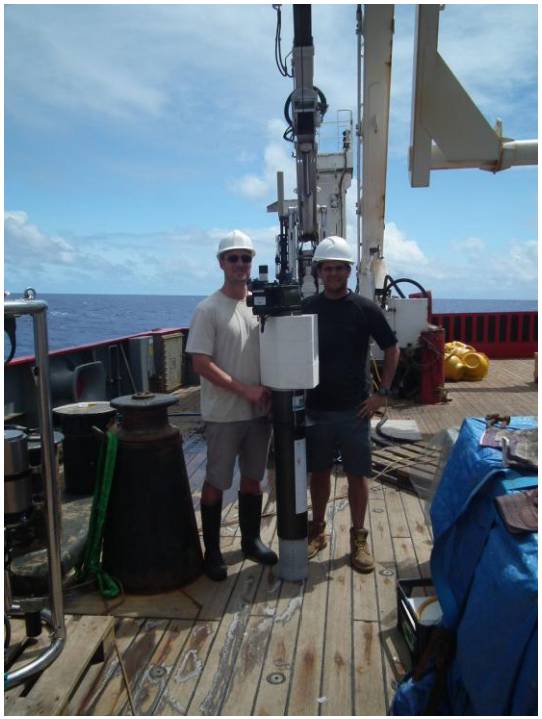
Float deployment from 2014 AMT cruise



© Crown copyright Met Office

Bio-Argo and Deep Argo

- Bio-Argo: we have deployed:
  - 4 Apex bgc floats (Nordic Seas)
  - 2 NKE (E-AIMS) floats in the North Atlantic
  - 3 SeaBird Navis bgci floats in the Nordic Seas
  - 5 PML-funded NKE bgc floats in the tropical Atlantic
  - with a further 6 PML NKE bgc floats and 1 SeaBird Navis bgci float available for deployment in 2015
- Deep Argo
  - 2 Apex Deep and 2 Deep Arvor floats available for deployment in 2015



BGC float deployment during 2014 AMT cruise

© Crown copyright Met Office

Sustained funding for UK Argo

- House of Commons Science and Technology Committee Report "Investigating the Oceans" in 2007 stated

> 185. During the course of this inquiry, we have heard frequent reference to the importance of the Argo programme and concern about the sustainability of its funding. **We recommend that funding be guaranteed for the Argo programme from centralised funds.**

- Present 3-year Met Office funding agreement with DECC will end April 2015; with the government Spending Review in 2016 it is expected only to be able to secure a new funding agreement with DECC for one year
- Expected that NERC will continue to fund its Argo activities at NOCS and BODC, through National Capability support
- A high-level Observations Committee, chaired by the Government's Chief Scientific Advisor, has been established to look at the issues surrounding the funding of long term observations

© Crown copyright Met Office

Uses of Argo data

- Operational ocean forecasting
- Seasonal-decadal prediction
- Climate monitoring
- Ocean science
- Validation of SST analyses

....over to Brian

© Crown copyright Met Office