



The importance of open science principles for expanding and diversifying the user base of marine satellite data

Hayley Evers-King and Ben Loveday
PML Applications Ltd with EUMETSAT
@HayleyEversKing, hek@pml.ac.uk

+ many people who we've worked with over the last few years!



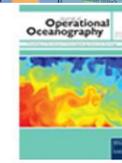
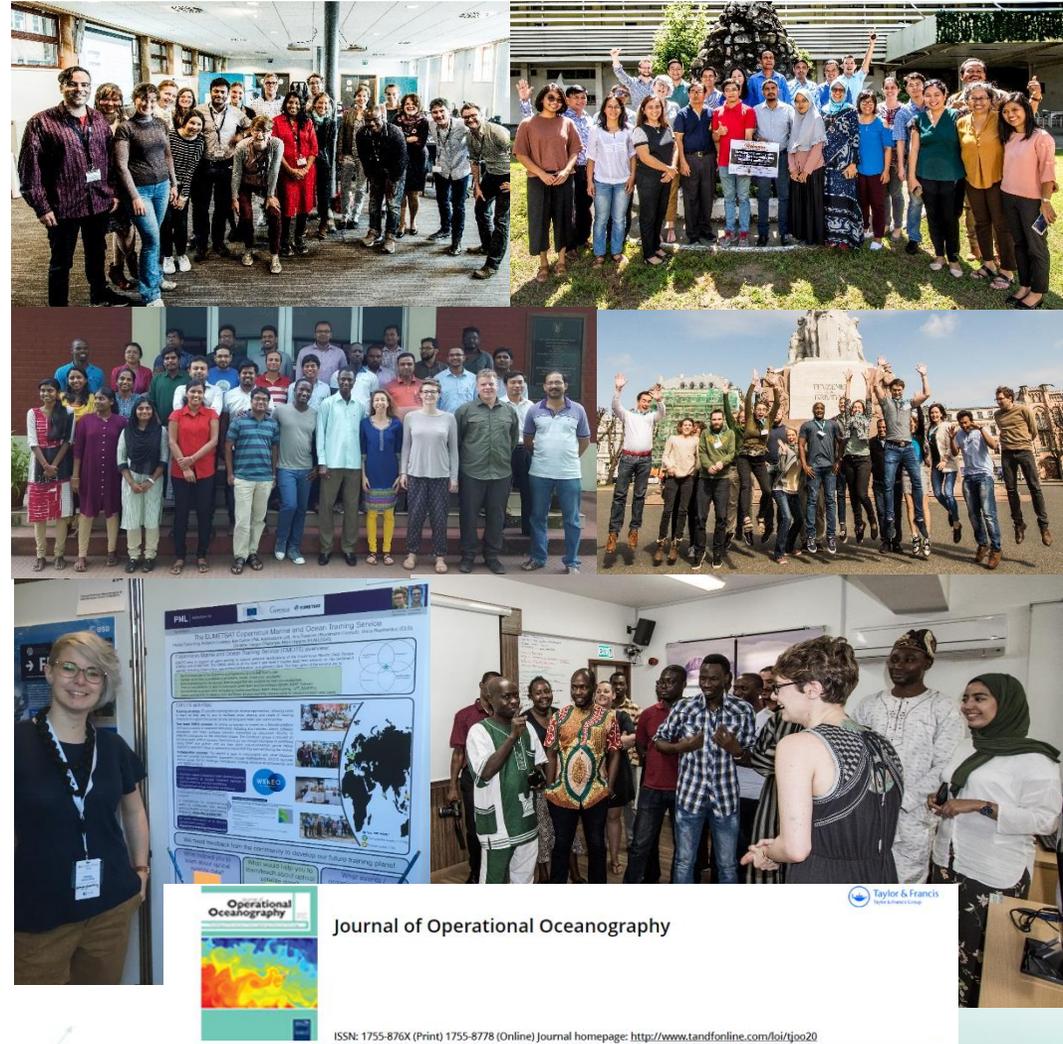
Open Science in EO and it's benefits

- Copernicus (open data policy)
 - But data being 'open' as in 'free/not limited in usage' is not enough.
 - Other principles (<https://opendatacharter.net>):
 - Timely/comprehensive
 - Accessible
 - Comparable
 - Improved governance and engagement
 - Inclusive
- = DEMOCRATISATION OF DATA**

Why? Ethically commendable but also means greatest impact and scope for continuity of work.

What has this looked like for us in practice?

- Improvement in metadata and documentation
- MOOCs
- Hackathons
- Training (400 in 2 years)
 - Participant led (we teach them what they decide they need)
 - Exclusively in open source software: SNAP, Python, Git
 - Hosted processing – Linux VMs
 - Vital skills for next generation (requirements), inherent shareability for training.
- Sharing experience of open science formally
 - Credit, value to others.



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Challenges for global ocean observation: the need for increased human capacity

Patricia Miloslavich, Sophie Seeyave, Frank Muller-Karger, Nicholas Bax, Elham Ali, Claudia Delgado, Hayley Evers-King, Benjamin Loveday, Vivian Lutz, Jan Newton, Glenn Nolan, Ana C. Peralta Brichtova, Christine Traeger-Chatterjee & Edward Urban

A code base for training (but possibly more)

- Aims of code:
 - Teach about the data and its uses
 - Don't terrify people (but don't limit them)!
 - Provide common workflows
 - Use transferable packages
 - Offer skills growth applicable to (increasingly) diverse user community
- https://gitlab.com/ben.loveday/EUMETSAT_training_jupyter_notebooks
 - Will soon be ported to EUMETSAT GitHub.
 - Continuous expansion based on requests

What could we do to be more 'principled' in our work?

- Thoughts for discussion:
 - **Continue and expand great work of deriving community standards for protocols**
 - **Raising use of community repositories**
 - Great history of doing this with data
 - Share useful snippets
 - Standards to be discussed! Licencing and attribution.
 - What are 'common workflows' for Ocean Colour (and beyond?)
 - **Diversify those we work with (data science communities)**
 - Lots for us to learn
 - Potential for greater impact
 - More discussion of this in R2O workshop!