

COMMENT ON SERRA ET AL. (2018)

Serra et al. (2018) raise important issues regarding the provision of—and access to—observational data; in particular, they comment, sometimes negatively, on the role of private-sector data service providers. Recognition of the existing roles of both the public and private sectors is a prerequisite in discussion of these issues. Here we note that virtually all weather observations are made using instruments coming from the private sector and have done so for many decades. The science and technology research that leads to the design of these instruments is carried out in the public, private, and academic sectors.

As mentioned by Serra et al. (2018), the importance of the data having high quality is fundamental. Private sector companies have for decades focused on providing high quality data—by building world-class instruments and either selling those instruments or selling the data from those instruments. Implications that private sector data has lower quality contradicts the fact that nearly all existing Global Observing System data (passing the stringent quality control criteria for numerical weather prediction) come via instruments from the private sector.

A new development is the emergence of private companies selling a data service from satellites, rather than the satellites themselves. Without supporting evidence, it is sometimes said that this will either increase the cost or diminish access to data. On the other hand, access to certain data via the alternative approach of purchasing a satellite or satellite system is sometimes fraught with cost and time overruns. Technical problems with a deployed satellite purchased with public funds leading to any interruption in data quality are first and foremost the responsibility of the public sector, which carries virtually all of the risk and cost for the restoration of the service. On the other hand, companies providing a data service have strict service level agreements with regards to their data quality, reliability, and stability. They should only get paid if they fulfill these strict requirements.

The distribution of risk between the private and public sectors in providing affordable, high-quality weather data is critical. Currently, where infrastructure is purchased with public funds, the public sector carries virtually all of the cost and schedule risk. Once an asset (e.g., a satellite) has been fully paid for, launched, and put into operation, the public sector continues to carry virtually all of the risk of any subsequent failures. Instead, payment made for a data service encompasses a fairer risk-sharing model.

Data has to be paid for, whether buying it from a data service provider or via buying instruments from an

instrument provider. In practice, there is a variety of approaches to choose from on a case-by-case basis. Costs can be paid by individual users, organisations (e.g., weather services, research funders), governments, or consortia of governments. The cost level for a data service would depend on whether a license to redistribute the data to other users is required. The fact that there is a menu of choices is a strength; increasing flexibility and transparency typically lowers costs and broadens access.

The issues discussed here and by Serra et al. (2018) on observational data ownership, access, and exchange are among those considered by Thorpe and Rogers (2018) in which a range of opportunities and risks for the future of the global weather enterprise (GWE) are considered. The point is made there that the roles and responsibilities—and indeed the ways of working—of the public, private, and academic sector contributors to the GWE are undergoing significant change. For example, the capabilities of the private sector are increasing such that they are now involved in virtually all aspects of the GWE value chain. The World Meteorological Organisation has recognised these changes and is one of several international organisations supporting a new and independent GWE forum that brings together leaders in the public, private, and academic sectors to examine the challenges and indeed opportunities for continued growth of the GWE. It is our contention that now is the time to increase cooperation and engagement across the three sectors to solve issues and exploit opportunities. Increased dialogue leading to a greater understanding of how the GWE operates will build trust and respect, which is so essential if the highly integrated GWE is to thrive.

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REFERENCES

- Thorpe, A., and D. Rogers, 2018: The future of the global weather enterprise: Opportunities and risks. *Bull. Amer. Meteor. Soc.*, **99**, 2003–2008, <https://doi.org/10.1175/BAMS-D-18-0034.1>.
- Serra, Y. L., and Coauthors, 2018: The risks of contracting the acquisition and processing of the nation's weather and climate data to the private sector. *Bull. Amer. Meteor. Soc.*, **99**, 869–870, <https://doi.org/10.1175/BAMS-D-18-0034.1>.