

Editorial

What are our data and specimens worth?

For over a hundred years expeditions to Antarctica have been collecting specimens and data which provided the basis for many thousands of scientific papers. As science became more organized and co-operative World Data Centres began to provide data deposited for common use and specialized collections of specimens were accumulated by a wide variety of institutions.

Supporting Antarctic research has always been expensive and the costs continue to increase as the complexity of equipment and the demands for sophisticated logistics increase. Addressing the questions in the SCAR Horizon Scan will require close collaboration between many countries to pool both expertise and assets - and that includes data and specimens. But are we well placed locally to manage these data and specimens properly when some countries apparently see this as optional expenditure?

Politicians are often obsessed with leaving a legacy from their short tenure in office. Thus, capital projects that attract public attention are often easier to get funded than the annual running costs of the existing systems. Buying a new polar ship is both a public political statement by a government but also a more individual political achievement by a Minister. In the rush of enthusiasm for such iconic investment in aircraft, ships and stations the routine costs of maintenance can be easily overlooked or ignored. Yet protecting and managing existing data and specimens should be seen in the same light as maintaining a ship - both are capital assets.

Any business would consider the cost of acquiring its samples and data against the return from the expenditure. In these terms the costs of acquiring the existing Antarctic data and specimens runs into many billions of dollars yet the material is often not valued in these terms. Instead funding for data and sample centres is seen as a less important objective than new research and more data collection. SCAR has for many decades attempted to highlight the value of what we already have, encouraging the deposit of metadata in the Global Master Data Directory and the establishment of national data centres in all SCAR countries. One of the important legacy lessons from the last International Polar Year was to make data more accessible and more usable. And the increasing requirement from grant givers that grantees deposit their data in an open database all appears to be going in the right direction ... and yet a more significant cultural shift is needed to maximize our future potential. Getting individual scientists to complete data management plans and deposit properly organized and annotated datasets is hard enough, but for the full value to be extracted we need the data managers and specimen curators to be seen as key players in the scientific framework, not easy targets to be cut when times are hard. Eroding the quality of the data, or failing to preserve the integrity of specimens undermines any future returns on the original investment. How will we determine the frequency or direction of dynamic change without historical data? How can we repurpose old specimens with new analytical techniques if we have not correctly preserved them?

Our historical archives will provide us with so many more scientific opportunities in the future if we manage them correctly now. There are excellent examples of how to invest in data and specimen management from around the world - from ice core stores to benthic specimens from the Heroic Age. If only all the institutions with Antarctic data and specimens would try to aspire to their standards, staffing and expertise. Perhaps we should also be thinking of declaring them on the balance sheet as assets and thus of real lasting value?

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