

More than Samba : UK and Brazil as Partners in Science

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The story of UK-Brazilian formal collaboration in Science goes back to 1997, when the two countries signed a Memorandum of Understanding on Science and Technology. Since then, the relationship has been growing from strength to strength. The visit to Brazil by Sir David King in June 2005 and the identification of Brazil as a target for co-ordinated UK focus by the Global Science and Innovation Forum's strategy in 2006 are signals of the UK's renewed recognition of the importance of working with Brazil.

During the State Visit to the UK by President Lula in March 2006, the UK and Brazil established a Joint Action Plan in Science, Technology and Innovation. The purpose is to drive UK/Brazil R&D relationships to a new level. The initiative included a "UK-Brazil Year of Science & Innovation", which Sir David King formally launched in March 2007.

As of September 2007 the Year of Science has achieved notable success. A total of five Memoranda of Understanding have been signed between key stakeholders in Brazil and the UK involving the fields of space technology, agricultural sciences, chemistry and synchrotron technology. Meanwhile, the Brazilian Agricultural Sciences Research Agency (EMBRAPA, acronym in Portuguese) is considering setting up a laboratory at the Norwich Research Park. The UK Research Councils have proposed a major funding agreement to Brazilian research funding organisations: this would enable joint research projects to be funded by both countries on the basis of a common peer review system. Finally, collaborations in the areas of bioenergy, organic electronics and

fusion research are being designed and implemented with the full support of the UK Research Councils. All of this was possible thanks to a £300k OSIFCO funded program that enabled key UK researchers to showcase their activities to a wide audience of scientists in Brazil. That is the essence of the UK-Brazil Year of Science and Innovation.

One of the main objectives of the Year is to showcase the most innovative research coming out of the UK science base in recent years, and to foster collaboration between relevant academic communities on those bases. The themes for the Year are akin to the areas identified in the Joint Action Plan. The Year is being implemented by the Foreign and Commonwealth Office's Science and Innovation Network and DIUS' Government Office for Science, with the active collaboration of the UK Research Councils and the Brazilian Federal Government. The project's website – which records over 400 unique hits per month – contains all the details of the project: www.anodaciencia.com.br

The Brazilian Science Base

Brazil has one of the strongest science bases outside the OECD. Among developing countries, its scientists contribute more of the most-cited research papers than any other country except China and India. According to statistics regarding 10-year country rankings for papers and citations, Brazil occupies the 15th and 23rd positions respectively, and the trends indicate that the sector is expanding rapidly. For example, the number of science PhDs granted has grown by an average of 12% per year over the last decade.

Brazil is currently producing over 10,000 PhDs per annum. This increase has been exponential since approximately 1993, and does not seem to have been affected by strong variations that occurred in Brazilian Science and Technology budgets since 2000. The increased share in the percentage of world publications indicates that Brazil is not only producing more science and more scientists, but that such scientists are producing better science too.

Brazil is producing PhDs in sectors that are in crisis in the UK. The UK is experiencing a well-documented health of disciplines problem in key sectors involving science and engineering. For example, the UK produced 230 PhDs and 910 MAs in Agricultural Sciences in 2005/6. The 2001/2002 figures for Brazil stand at 4,027 PhDs and 5,504 MAs. In the case of Engineering and Technology, the UK 2006 figures stand at 2,205 for PhDs. Brazilian 2002 figures (that is, conservative figures) stand at 5,928. In some disciplines Brazil is producing comparatively more PhDs than much larger and expanding science bases, including India and China.

Agricultural sciences – which play a crucial role in bioenergy and biofuel research, for example – represent but one instance.

The UK is a partner of choice for Brazilian researchers when it comes to selecting collaborators for international publications. Indeed, 12.8% of all Brazilian-based publications involving international co-authors are done with UK researchers. This puts the UK third after the US and France (39% and 13.8% respectively).