Independent Review of SFC's Research Pooling Initiative

Background:

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History:

2014	Lecturer in marine biology at the Centre Universitaire de Formation et de Recherche (CUFR) de Mayotte, France.
2012 - 2014	Early career researcher collaborator on the Coastal Biodiversity and Ecosystem Service Sustainability Consortium, led by Prof. D M Paterson, University of St Andrews (BESS, NERC funded project from May 2012 to May 2016)
2012	Project Officer for the Coastal Biodiversity and Ecosystem Service Sustainability Consortium, led by Prof. D M Paterson, University of St Andrews (BESS, NERC funded project from May 2012 to May 2016)
2011 – 2012	Lab manager of the Sediment Ecology Research Group, University of St Andrews, UK
2011-2014	Post-doctoral research fellow in coastal ecology, Marine Alliance for Science and Technology for Scotland (MASTS) University of St Andrews, UK
2010-2011	Post-doctoral Researcher, Science Foundation Ireland, Research Frontiers Programme award to Dr Tasman Crowe, University College Dublin, Ireland
2005-2008	PhD in Biological Oceanography and Marine Environment, UPMC – Paris 6, Station Biologique de Roscoff, France
2004-2005	Master in Sciences of the Universe, Environment, and Ecology - Specialty in Oceanography and Marine Environment: Costal Oceanography, UPMC – Paris 6, France
2002-2004	Bachelor of Science in Marine Biology, College of Charleston, South Carolina, USA

As a benthic ecologist, my principal research interest is to identify and quantify the role of biodiversity in the functioning of coastal ecosystems characterised by macrophyte foundation species. Following a PhD at the University Paris Sorbonne (then UPMC – Paris 6) on the metabolism and food web of sheltered rocky shores (Golléty 2008), I went on to study the metabolism of rocky shore biofilms as a postdoctoral researcher at the University College Dublin (2010-2011). My most influential post-doctoral position, however, has been a MASTS post-doctoral fellowship at the University of St Andrews (2011-2014), in the Sediment Ecology Research Group (SERG) of the Scottish Ocean Institute. My work there was to test the effect of salt marsh restoration on the functional diversity and the carbon fluxes of the systems. I left this position one year before the end of my contract only because I was recruited as a tenured lecturer in marine ecology at the French university of Mayotte (CUFR de Mayotte) in September 2014. Since then, I have turned to pursue my research interests through the study of Biodiversity and Ecosystem Functioning (BEF) relationships and the delivery of ecosystem service sustainability of mangrove ecosystems.

Section 1: Initial research pooling initiative

Q1a. What has been the impact of the initial research pooling initiative?

Although always designed towards answering fundamental BEF questions, my research experiments and surveys also aim to improve coastal management of resources and habitats. I had started to carry out this approach during my PhD but it is truly during the MASTS post-doctoral fellowship that I was able to further develop such approach as part of the interactions with government bodies (SEPA, SNH, Marine Scotland) within the MASTS Coastal Forum. This goal is now an integral part of my research interests and I am thus regularly requested to contribute with expertise on the ecosystem functioning of coastal habitats on the island of Mayotte (France).

The UK funding system is such that, as a researcher on a fixed term contract, there were few grants I could apply to as the lead researcher. Yet, being able to gain access to additional funding was not only necessary in order to carry my research but also an important step towards becoming an independent researcher. During my post-doctoral fellowship, I was successfully awarded the following grants:

- MASTS 2012 Small Grant: Funding of equipment (£332) to help with transport of fieldwork equipment.
- MASTS 2014 THEMES & FORUMS Small Grant: Funding from the Marine Biodiversity, Function and Services Theme (£999) towards consumables and analytical costs for the study of an estuarine food web.
- MASTS 2014 Studentship: 'Restoration of saltmarsh areas subsidised by a blue carbon market', co-financed by Scottish Natural Heritage and the University of St Andrews.

The interdisciplinary dimension of the initiative was also a crucial element of my experience. I first benefited from the interdisciplinary framework by being involved in co-supervising a MASTS interdisciplinary PhD student combining ecology and economy in her study of saltmarsh restoration (Wade 2018). My experience through the MASTS initiative thus contributed in shaping my interdisciplinary approach to research, in particular in collaborating with social sciences (economy, human geography). This approach helped me further collaborate with social scientists during my contribution to the NERC call on Biodiversity and Ecosystem Service Sustainability as part of the CBESS project (Golléty et al 2012). Secondly, and more importantly, I have since then been able to implement this interdisciplinary approach at the heart of my current research interest in mangrove ecology. Implementing this approach has been key in enabling me to secure a 3-year research grant of 251,744 € through an annual call of the 'Fondation de France' : Putting together the ARESMA project on the resilience of socio-ecological mangrove systems (Golléty et al 2017) is a major accomplishment in the young university of Mayotte (21 lecturers spread over 7 programmes) that puts interdisciplinary research at the heart of its agenda.

The MASTS postdoctoral fellowship was also a decisive experience that contributed to being recruited as a lecturer. Indeed, the position gave me the flexibility and time needed to build collaborations, acquire teaching experience and develop transferable skills while performing research. For example, without the MASTS initiative, funding would not have been available for me to cover the lab manager for SERG. The management skills I acquired

while dealing with diverse activities such as organise meetings, source consumables, deal with finances, and reformat the group's website were highly influential in increasing my employability.

Although the Sediment Ecology Research Group is a small unit, it is through the MASTS initiative that I was able to interact with researchers from around Scotland. Still today, while collaborating in the South West Indian ocean region (Kenya, Tanzania), I am in contact with researchers having connections with peers first met during MASTS meetings. This has been very revealing to me of the extent of the network of researchers from the MASTS community.

References:

Golléty C, Longépée E, Rasoamanana L, Anselme B, Bertrand F, Salone J-J (2017) Project ARESMA: Acting on the resilience of socio-ecological mangrove systems of Mayotte. **10th Western Indian Ocean Marine Science Association (WIOMSA) Scientific Symposium**, Dar es Salaam, Tanzania

Golléty C, Skov M, Solan M, Spencer T, Underwood G J C and Paterson D M (2012) A hierarchical approach to the examination of the relationship between biodiversity and ecosystem service flows across coastal margins. **MASTS Annual Science Meeting**, Herriott Watt University, UK.

Golléty C (2008) Functioning (metabolism and trophic web) of a sheltered rocky shore, the *Ascophyllum nodosum* zone, relation with algal and animal biodiversity. **UPMC - Paris 6**, France.

Wade K S 2017. The biodiversity, ecosystem functioning and value of restored salt marshes in the Eden Estuary, Scotland. **University of St Andrews**, Scotland.

Q1b. What lessons can be learnt from the research pooling initiative?

Interdisciplinary research, especially when involving collaborators from different institutions, is rewarding but also challenging. Having regular meetings, for example through the Coastal Zone Forum, was essential in establishing interactive collaborations.

As a French national, I found it a unique experience to be included in a community with a common goal and spirit towards researching and managing marine systems. It was stimulating to be confronted to healthy competition while exposed to researchers from a variety of backgrounds and approaches. Likewise, the MASTS Graduate school provided the cohort of PhD students the opportunity to interact across institutions and disciplines, thus reinforcing the community feeling and fostering collaborations that might not have taken place otherwise.