

# **Report to the Tinker Foundation**

## **Martha T Muse Prize for Science and Policy in Antarctica**

### **(Becoming Tinker-Muse Prize from 2016)**

Submitted by the Scientific Committee on Antarctic Research  
By Dr Eoghan Griffin on 29th April 2016

#### **1. Brief Overview**

This narrative report summarises the activities and accomplishments of the Martha T. Muse Prize for Science and Policy in Antarctica in the year 2015, as administered by the Scientific Committee on Antarctic Research (SCAR) for the Tinker Foundation.

The Prize was established by the Tinker Foundation in honour of its long-time leader Ms. Martha Twitchell Muse, and as a lasting legacy of the International Polar Year 2007- 2008 (IPY). Each year over an initial five-year period (2009-2013) a Prize winner has been selected and awarded \$100,000 of unrestricted funds by the Tinker Foundation. A renewal for the next 5 year period (2013-2017) has subsequently been awarded by the Tinker Foundation. The Prize is to recognize an early to mid-career researcher, in any field of Antarctic science and/or policy, who has demonstrated exceptional capabilities and the potential for significant creativity and leadership in the future. The Prize-winner can be from any country and work in any field of Antarctic science and/or policy. The goal is to recognize outstanding and important work being done by the individual and to call attention to the importance of understanding Antarctica in the Earth system. The provision of this substantial, unrestricted financial prize will allow the recipient to pursue intellectual, scientific, and/or personal activities at a critical time in his or her career. The goal is to identify tomorrow's leaders of Antarctic science and policy and improve the chances of them realizing their potential.

#### **2. Project Activities**

The main activities undertaken in 2015 were:

- Maintenance of the Prize website ([www.museprize.org](http://www.museprize.org))
- Selection of the members of the Prize Selection Committee (two of whom rotate off each year), and Chair of the Selection Committee (once every three years)
- Promotion and publicity of the Prize by the use of traditional advertising (through the journals Nature, Science, Polar Record and Antarctic Science), mailing lists (National Academy of Sciences mailing list, SCAR mailing lists, listservers etc.) and e-mailings to individuals.
- Compilation and assignment of Nominations in advance of the Selection Committee Meeting, including the design of the evaluation

forms etc. required and the development of the procedures involved in selecting a Prize-winner.

- Conducting an External Review of the Martha T. Muse Prize, including a Review Committee meeting at the National Academy of Sciences, Washington D.C., February 2-3<sup>rd</sup>, 2015.
- Organisation and running of the Selection Committee Meeting – held at the Asara Estate, Stellenbosch, June 16-17<sup>th</sup> 2015.
- Organisation and running of the Prize and associated Ceremonies for 2015 – held at the Pallazo Franchetti, Venice, Italy.

### **3. Project Accomplishments of the Prize (2009-15)**

The major accomplishments of the first six years of the Prize was the establishment and continuation of the Prize and the infrastructure required (e.g. website, Selection Committee) that culminated in the selection of the Prize Winners:

2009: Professor Steven Chown from Stellenbosch University in South Africa,

2010: Associate Professor Helen Fricker, Scripps Institute of Oceanography, USA;

2011: Dr Jose Xavier, Institute of Marine Research, Coimbra, Portugal,

2012: Dr Steve Rintoul, CSIRO Fellow, CSIRO Marine and Atmospheric Research, Australia,

2013: Prof Martin Siebert, University of Bristol, UK,

2014: Prof Tim Naish, Victoria University of Wellington, New Zealand, and

2015: Dr Valerie Masson-Delmotte, Laboratoire des Sciences du Climat et l'Environnement, CEA, France.

### **4. Internal/External Factors Influencing Project and Problems Encountered**

SCAR has been coordinating Antarctic research and providing advice to policy makers since 1958. This provided a strong base of contacts and experience within the SCAR Secretariat that was essential in setting up the Prize. However, as recognized in an earlier report, SCAR had less experience in social sciences. Since 2010, the SCAR Social Sciences Action Group has been active, and one of its members (Daniela Liggett) was a member of the Martha Muse Selection Committee for 2010-12. SCAR has recommended a higher profile for Social Sciences within its sub-groups as a result of a Structural Review undertaken in 2015. Candidates from the Social sciences are also now considered eligible for the SCAR Fellowship scheme.

External partners (e.g. the US Polar Research Board, the Antarctic Treaty Secretariat, the Scott Polar Research Institute, the IPY, various National Antarctic Programs) were also engaged to reach out to the full extent of the Antarctic community for advertisement and dissemination of information

regarding the Prize.

A minor issue was that some of the Nominees for the Prize were too advanced in their careers to be contenders for the Prize. The text on the website was modified to make this clearer. In 2010, Committee members noted that the nominations still differed in their layout considerably. Hence, on advice of the Committee members, a template nomination package was provided for the 2011 cycle. In the 2012 cycle, one Committee member resigned a few days before the Selection Committee meeting due to personal health issues, however the Committee agreed that for the 2012 round, they would divide the extra nominees from the 6<sup>th</sup> member.

Other adjustments to the website were also made to improve efficiency based on feedback received from the Committee members, SCAR Executive Committee, and others.

The founding chair of the Prize Selection Committee, Diane McKnight, was involved in the initial committee that worked with the Tinker Foundation and the Polar Research Board to outline the details of the Prize. The 2014 Chair, Dr Ian Allison, was a member in the 2009 Selection Committee, which has helped to ensure the original aims of the Prize were realized. Both the incoming Chair, Prof Peter Barrett, and vice-Chair, Prof Mauricio Mata, have served on the 2013 and 2014 selection committees.

In 2014 one of the committee members (Dr Marinelli) participated via skype and another (Mr Jin) was unable to participate at all. The final selection round resulted in a 4-way tie, 5 times. As a result, all of the Selection Committee members were asked to rank each candidate according to the 4 categories in the initial marking sheet. The winner was then selected as the candidate with the highest total marks. This procedure has now been established for final round ties from 2015 onwards.

The 2014 Selection Committee also agreed that the original nominations list for the Horizon Scan meeting be used as the basis for potential selection committee members in the future. With over 500 nominees this list of Antarctic expertise will allow the Committee to reflect the necessary diversity in subject discipline, geographical base and gender to ensure its composition continues to be appropriate.

The Martha T. Muse Prize Review Meeting was held at the National Academy of Sciences, Washington D.C., on February 2nd-3rd 2015.

The meeting was held to ensure all relevant discussion and information was provided to the Review Committee to allow a thorough Review of the first 6 years of the Prize to be concluded. This was reflected in the Terms of Reference for the Review and included the Prize administration conducted by the Scientific Committee on Antarctic Research (SCAR).

Attending were Review Committee members Prof David Hik (Chair), Prof Diane McKnight, Prof Sanjay Chaturvedi and Prof Heinz Miller, together with Renate Rennie (Tinker Foundation, Chairman and President), Dr Eoghan Griffin (SCAR Executive Officer) and Dr Renuka Badhe (SCAR Executive Officer 2009-2014).

The outgoing Chair of the Muse Prize Selection Committee, Ian Allison, contributed via teleconference.

The 2015 winner asked for the Prize to be paid to her home institute rather than directly to herself, her intention being to support Climate Change related Outreach projects with the Prize funds. A letter from the home institute confirming that no administration fees would be taken from the Prize award was secured and is attached along with this report.

## **5. Unanticipated Results**

There were no unanticipated results in 2015.

## **6. Target Audience**

The target audience are the many researchers, policy makers and educators involved in Antarctic science and the conservation of Antarctica. By helping the careers of key individuals it is hoped that the Prize will also have an influence by increasing awareness of Antarctic matters to the general public and others.

## **7. Short-term Impact of the Project (2009 – 15)**

Since 2009, the Prize has gained esteem both within the Antarctic community and the general scientific community. This is underlined by the Prize ceremonies, which have been held at extremely prestigious conferences aimed at both the Antarctic and the non-Antarctic community. The 2010 Ceremony was held at the American Geophysical Union conference in San Francisco, attended by more than 18,400 people from around the world. Similarly, the 2011 Ceremony was held at the World Conference on Marine Biodiversity (WCMB), and the Martha Muse Prize Ceremony was held with the Opening Ceremony of the WCMB, sharing the platform with Jean-Michel Cousteau, amongst others. The 2012 Ceremony was held at the SCAR Open Science Conference, which is the biggest Antarctic Science and Policy Conference and regularly attracts participants from more than 40 countries. The 2013 ceremony was held at the AGU again, which had more than 20,000 registered participants.

For 2014 the Ceremony was held at the SCAR Open Science Conference in Auckland, New Zealand. Once again the nature of the meeting ensured the

Ceremony was well attended by the Antarctic Science and Policy communities and the recipient being a native of New Zealand ensured wide local media coverage.

The Prize has certainly had a positive effect on all the Prize Winners' careers. In particular since two of the winners, Professor Chown and Dr Xavier are from South Africa and Portugal respectively, rather than one of the traditional "big players" in Antarctic Research this has been seen in a very positive light by both scientists and the media.

Following the 2015 Prize Award Ceremony SCAR provided images and other materials relating to the Prize Award Ceremony to the group supporting Dr Masson-Delmotte's nomination as co-Chair of Working Group I, which assesses the physical scientific aspects of the climate system and climate change, of the next IPCC Assessment Report (AR6). In October 2015 Dr Masson-Delmotte was appointed to the position, which will be key in coordinating the global scientific input to this key document.

## **8. Longer-term Effects of the Project**

The Martha T Muse Prize is intended to be a lasting legacy of the IPY. The goal of the Prize is to provide recognition of the important work being done by key individuals and to call attention to the significance of understanding Antarctica in a time of change.

Following her passing in February 2014 it was fitting that the first Martha T Muse Fellows Colloquium was held in her honour, in conjunction with the Antarctic and Southern Ocean Horizon Scan, in April 2014 in New Zealand. The "1st Martha T. Muse Colloquium" addressed the topic "Beyond the Horizon – Antarctica and the Southern Ocean 2065" with 5 of the 6 Prize winners attending in person and the other participating via skype.

Video recordings of the Colloquium are available to view online through YouTube.

## **9. Project Publications (and other products)**

A short handout with details of the Prize, several pull-up type posters, etc have been prepared to be used at various relevant Conferences and meetings. For the 2012 SCAR Open Science Conference, volunteer T-shirts were partially sponsored, which included the name of the Prize and the website being widely displayed within the conference. Other merchandise is currently under review to further increase advertising.

A poster was presented at IPY 2012 and was also displayed at the SCAR meetings in Portland, which included a section highlighting the first three

winners. A paper was also presented at the SCAR Delegates meeting.

As a part of the project proposal for the Muse Prize renewal (2013 onwards) submitted to the Tinker Foundation, an internal review of the Prize activities was carried out in SCAR. This internal review invited present and past members of the Selection Committee, SCAR Chief officers of all standing groups, research programs. A visual summary of this review is available here: <https://docs.google.com/forms/d/1hxyxY2wCZRga1yU8NZaYHxyAbf32NgKp2GYow8IPteA/viewanalytics>

This review was updated in early 2015 as part of the input to the full External Review, detailed in section 14 of this report, and whose summary output is attached as Appendix 1.

## **10. Project's Value as a Model or Demonstration of New Techniques**

Even at this early stage some of the lessons learnt from this project have been utilized by SCAR, for example some of the procedures for rating the Martha T. Muse Prize Nominations are being used in the SCAR Medals and Awards schemes.

## **11. Project Personnel**

### *Administrative Organisation*

Since 2010, Dr Renuka Badhe and Mrs Rosemary Nash have been responsible for administering the Prize. In late 2014 Dr Badhe left SCAR and handed over to Dr Eoghan Griffin, the incoming SCAR Executive Officer, who has worked at SCAR on several projects since 2011. Their extensive hand-over period continued into 2015 as Dr Badhe attended the Review Meeting in Washington and also attended both the Selection Committee meeting in Stellenbosch, South Africa in June 2015 and the Prize Award Ceremony in Venice, Italy, September 2015.

The activities have included:

- Design and maintenance of the prize website ([www.museprize.org](http://www.museprize.org)), social networking sites like Facebook, LinkedIn, Twitter, Google+, etc.
- Promotion and publicity of the prize, including advertising in journals, mailings, announcements, etc.
- Creation and maintenance of the six-member Selection committee, development of evaluation forms, checklists, guidelines etc.
- Administrative support associated with the Selection Committee meetings, conference calls, associated meeting reports, financial management of the

project, etc.

On occasion, advice was also provided by the ex-SCAR President, Dr Mahlon “Chuck” Kennicutt, and Dr Mike Sparrow, ex-Executive Director, SCAR.

### *Selection Committee*

The Selection Committee for the Prize consists of six members of the Antarctic community representing as highly respected and diverse backgrounds (geopolitically, by discipline and by gender) as possible. For the year 2015, committee consisted of:

Prof Peter Barrett, New Zealand. Background includes geology, offshore drilling to study history of Antarctic climate and ice sheet behaviour. (2013, 2014, **Chair** 2015)

Prof Mauricio Mata, Brazil. Background includes physical oceanography, modelling and remote sensing of meso/large-scale oceanic processes in the Southern Ocean. (2013, 2014, 2015)

Mr Dongmin Jin, Korea. Background includes Antarctic policy and governance, International law, and Data management. (2013, 2014, 2015)

Prof Steven Chown, Australia. Engaged in biogeographic and macroecological studies, macrophysiology, spatial ecology, invasion biology and the integration of these fields, and maintains a strong interest and activity in the translation of science into policy, especially in the Antarctic. (2015 and previous Muse Prize winner)

Dr Vazira Martazinova, Ukraine. Studies focus on the changes of the large-scale atmospheric circulation in 20th-21st centuries and the development of physical-statistical models of the long-term forecast of weather. (2015)

Prof Kathleen Conlan, USA. Studies polar and deep-sea benthic community patterns and responses to change. (2015)

Renate Rennie, Chair, Tinker Foundation has also taken an active role in the proceedings, including attending the Selection Committee Meetings, the Review Committee meeting and the Prize Ceremonies as her schedule permits. In 2015 Ms Rennie participated in both the External Review in Washington in February as well as the Prize award ceremony in Venice, September.

## **12. Project Budget**

The original project budget proved to be a reasonable estimate of the costs involved, though as agreed with Renate Rennie, a modified budget was

approved for years 3-5 of the Prize in 2011. In summary the improvements to the original budget for the three years (2011-13) were:

- an increase in the advertising budget for high impact journals, and their websites to \$10k to allow the targeting of additional audiences.
- an increase in the travel budget for the committee meeting to \$21,000. Because of the location of some of the committee meetings, flight costs were more expensive than originally envisaged and it was suggested that the members of the committee should be allowed to travel premium economy rather than taking the cheapest economy seats. Two days rather than one are also required for the Selection Committee to make the final selection of the Prize Winner.
- An increase from two weeks to four weeks staff time to deal with evaluation forms, checklists, guidelines and dealings with the new selection committee (including conference calls and associated meeting reports), reviewing award expenditures, mainlining award records and assessing the performance of the system.
- Addition of a merchandise budget, \$5k for mugs, mousemats, etc to help in additional advertising of the Prize
- Addition of a merchandise and stationery budget (\$2k) for the Selection Committee members, as well as provision for one special meal for all Committee members and associated staff helping with the meeting admin (\$2k).
- Addition of a budget for award venue, food, and related costs of ceremony (\$10k) and a budget for an Award Commemoration Dinner (\$5k).

In 2014 the renewal of the Prize for the second five-year period (2013-2017) included detailed budget allocations building on the experience of the initial five year period.

### **13. Project Impact on the Administrative Organisation, SCAR**

SCAR's Mission is "to be the leading independent organisation for facilitating and coordinating Antarctic and Southern Ocean research, and for identifying issues emerging from greater scientific understanding of the region that should be brought to the attention of policy makers". As part of this mission, recognizing and encouraging the leaders in Antarctic science and policy of the future plays a strong part and thus the ideals behind the Martha T. Muse Prize (now Tinker-Muse Prize) resonate strongly with SCAR's aims.

### **14. Project Activities Beyond Grant Period**

In February 2015 the Muse Prize Review Committee met at the National Academies for Science in Washington, D.C., USA. Results of an online survey



targeted at active participants in the first 6 six years of the Muse Prize administration were used as part of the assessment. A series of questions were formulated and sent to previous Prize winners and their nominators to establish the impact of the Prize and possible improvements to its administration. Replies were collated by SCAR and made available to the Review Committee. A summary of the recommendations from the Review is attached as Appendix 1.

## *Appendix 1 - MUSE PRIZE REVIEW MEETING – BRIEF REPORT*

The Martha T. Muse Prize Review Meeting was held at the National Academy of Sciences, Washington D.C., on February 2nd-3<sup>rd</sup> 2015.

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Conclusions from the meeting:

- Overall the first 6 years was seen to be addressing the goals of the Prize well, as set out in the establishing document.
- The Prize has gained prominence and recognition within the Antarctic community and has also helped promote the relevance and importance of Antarctic research. Greater visibility to the policy community could however enhance this process.
- The annual review process is working well as method to continually develop details of the Prize administration.
- The Muse Prize Web page should be updated and its use expanded to make it easier for Prize winners to use, for instance to promote Outreach activities.
- Applications from the Policy community need to be actively encouraged through targeted advertising and mentoring where possible.
- A Questionnaire was devised to collect Prize winners reflections on impact and possible changes to Prize. All previous winners replied in full. The consensus was that the Prize had significant and continuing positive impact on their careers and that adding any restrictions to the award would detract from its effectiveness.

The SCAR Executive Officer together with the Chair of the Muse Prize Selection Committee, Prof Peter Barrett, will seek to implement all of the recommendations included in the Review conclusions.