University of BRISTOL

# Why the Global South should lead on SRM evaluation

**Andy Parker**
- Project Director: The SRM Governance Initiative
- Honorary Senior Research Fellow: University of Bristol

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SRMGI
Solar Radiation Management Governance Initiative

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*Solar geoengineering is fraught with risks and can never be an alternative to mitigation. But it's unclear whether the risks of solar geoengineering are greater than the risks of breaking the 1.5C warming target. As things stand, politicians will face this dismal dilemma within a couple of decades. It is right, politically and morally, for the global south to have a central role in solar-geoengineering research, discussion and evaluation*

**Rahman A, Artaxo P, Kassaye A, Parker A, Ghosh A, Moore J, Suleri A, Lefale P, Torto N, Lasco R, Dasgupta T. Nature 556, April 2018**

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The SRM Governance Initiative

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SRMGI Outreach Workshops
Around the Global South

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# SRMGI Outreach Workshops

**Kenya**, Nairobi
June 2017

**China,** Beijing
May 2017

**Philippines,** Manila
March 2017

**Thailand,** Bangkok
March 2017

**Bangladesh**, Dhaka
February 2017

**Pakistan**, Islamabad
December 2016

**India**, Delhi
November 2016

**Caribbean Academy of Sciences**
November 2016

**Brazil**, São José dos Campos
November 2016

**Jamaica**, Kingston
July 2016

**Ethiopia**, Addis Ababa
January 2013

**South Africa**, Johannesburg
November 2012

**Senegal**, Dakar
June 2012

**Pakistan**, Islamabad
November 2011

**China**, Tianjin
October 2011

**India**, Delhi
October 2011

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# Brazil workshop – INPE – 2016

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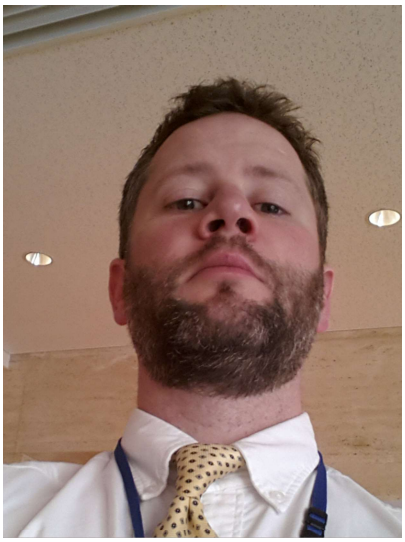

The unintended side effects of an SRM research programme

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# DECIMALS Fund grants: 2018


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# ARGENTINA

## Hydrological impacts of SRM in the La Plata river basin

Dr Ines Camilloni (PI), Dr Carla Gulizia, Dr Natalia, Montroull, Dr Ramiro Saurral

Background photo : Rio de La Plata estuary. Credit: Earth Science and Remote Sensing Unit, NASA Johnson Space Center (https://eol.jsc.nasa.gov)

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# BANGLADESH

## SRM impacts on the spread of malaria and cholera

Dr Md. Shafiul Alam (PI), Ms Sobiya Aziz Badat, Prof. Shweta Bansal, Dr Colin Carlson, Prof. Rita Colwell, Mr Md. Sharif Hossain, Mr Md. Mofizur Rahman, Dr Md. Feisal Rahman, Prof. Alan Robock, Dr Christopher Trisos

Background photo : Sundarbans, Bangladesh. Credit: contains modified Copernicus Sentinel data (2016), processed by ESA, CC BY-SA 3.0 IGO

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# BENIN

## Impacts of solar radiation management on the West African climate

Prof. Ezinvi Baloitcha (PI), Prof. Eric Adéchina Alamou (co-PI), Dr Mesmin Awo, Dr Elizer Iboukoun Biao, Dr Yelognisse Casimir Da-Allada, Dr Aubains Hounsou-Gbo, Dr Ezéchiel Obada, Dr Esdras Babadjide Josué Zandagba

Background photo : Wide-swath Advanced Synthetic Aperture Radar (ASAR) image centered on Togo, Benin and Nigeria. Credit: ESA, CC BY-SA 3.0 IGO

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# INDONESIA

## SRM impacts on extreme temperatures and precipitation in Indonesia

Dr Heri Kuswanto (PI), Ms Brina Miftahurrohmah, Mr Doni Setio Pambudi, Dr Ardhasena Sopaheluwakan

Background photo : Medium Resolution Imaging Spectrometer (MERIS) showing part of the Sumatra (left) and Java (right) islands in western Indonesia. Credit: ESA

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# IRAN

## Storm tracks, atmospheric blockings and severe dust storm events in the MENA region under SRM

Dr Khalil Karami (PI), Mr Seyed Vahid Mousavi, Dr Mohammad Saeed Najafi

Background photo : Envisat image of a sandstorm blowing across the Persian Gulf toward Iran. Credit: ESA. CC BY-SA 3.0 IGO.

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# IVORY COAST

## Temperature and precipitation extremes over West and Central Africa and implications for water resources

Dr Vami Hermann N'Guessan Bi (PI), Dr Arona Diedhiou, Ms Madina Doumbia, Mr Salomon Obahoundje, Dr N'Datchoh Evelyne Toure

Background photo : Landsat-8 image from July 2014 showing Lake Chad in West Africa's Sahel region. Credit: USGS/ESA.

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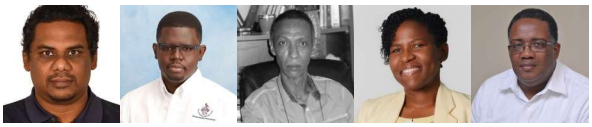
# JAMAICA

## Assessing the effects of SRM on future Caribbean climate

Dr Leonardo Clarke (PI), Mr Jayaka Campbell, Mr Abel Centella, Dr Tannecia Stephenson, Prof. Michael Taylor



Background photo : Jamaica seen from the ISS. Credit: Earth Science and Remote Sensing Unit, NASA Johnson Space Center (https://eol.jsc.nasa.gov)

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# SOUTH AFRICA

## Impact of SRM on drought and heat extremes in Southern Africa and associated influence on agriculture

**Hosting institution**: University of Cape Town (ACDI)

**Team**: Dr Romaric Odoulami (PI), Dr Christopher Lennard (co-PI), Prof. Babatunde Abiodun, Mr Temitope Egbebiyi, Prof. Mark New, Dr Izidine Pinto, Mr Sawadogo Windmanagda

Background photo : Photo-like image of South Africa. Credit: NASA (Jeff Schmaltz, MODIS Rapid Response Team)

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# DECIMALS research collaborators

- Olivier Boucher (Institut Pierre-Simon Laplace)
- Peter Irvine (Harvard)
- Ben Kravitz (Indiana)
- Doug MacMartin (Cornell)
- John Moore (Beijing Normal University)
- Helene Muri (Norwegian University of S&T)
- Simone Tilmes (NCAR)
- Lili Xia (Rutgers)

Plus Alan Robock (Rutgers) is working on the Bangladesh team

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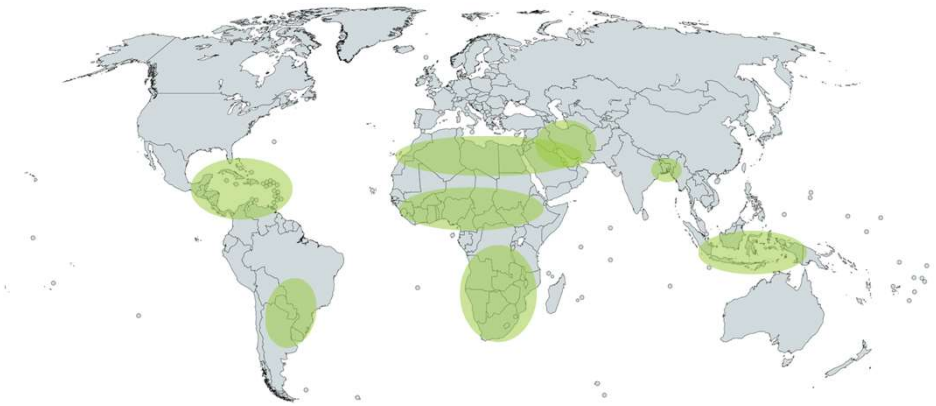
# DECIMALS modelling coverage



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## How does this relate to Latin America?

- 626M people
- A range of pecific climate threats
- Few SRM experts
- Little SRM discussion to date
- See modelling map on impacts
- More partnerships needed to expand the conversation

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# Thank you!

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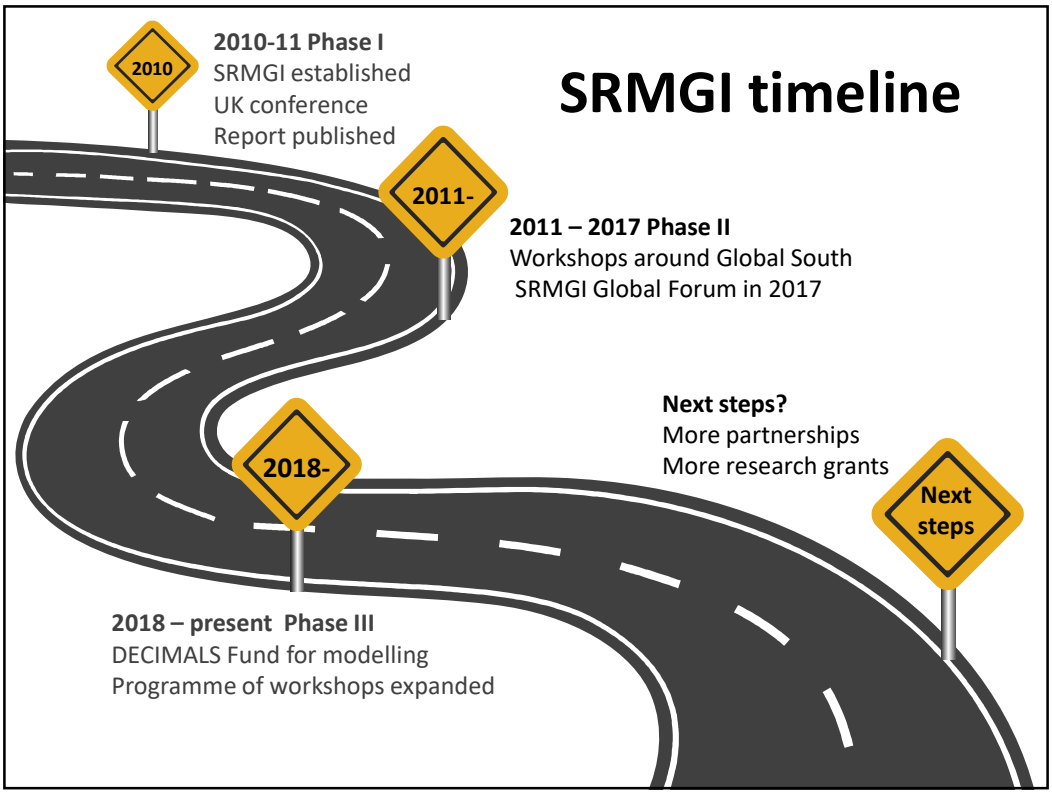
SRMGI timeline
2010
2010-11 Phase I
SRMGI established
UK conference
Report published
2011-
2011 – 2017 Phase II
Workshops around Global South
SRMGI Global Forum in 2017
2018-
2018 – present Phase III
DECIMALS Fund for modelling
Programme of workshops expanded
Next steps?
More partnerships
More research grants
Next steps

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