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MEDIA RELEASE

UP scientist joins call to protect Southern Ocean

PRETORIA – The Southern Ocean around Antarctica needs urgent protection – for the sake of the rest of the world. This marine wilderness is threatened by climate change and commercial fisheries, says University of Pretoria (UP) macro-ecologist Dr Luis Pertierra, an expert on the natural value of the Antarctic.

He has added his voice to that of other leading international researchers who want formal marine-protected areas and fishing bans for Earth’s most southern waters. He is also urging other scientists and conservation practitioners to add their voices to the call by signing a petition under the banner “Scientists uniting to protect Antarctica’s ocean”.

Dr Pertierra, of UP’s Department of Plant and Soil Sciences, has co-authored a newly released policy forum titled ‘Protect global values of the Southern Ocean ecosystem’ in the leading Science journal. In addition to being a macro-ecologist, Dr Pertierra is also a bio-geographer who studies how changes in the polar regions affect the world at large, especially the biodiversity found on land.

UP alumnus Prof Steven Chown of Monash University in Australia was another co-author of the paper. He is Director of the Securing Antarctica’s Environmental Future project and former president of the international Scientific Committee on Antarctic Research.

The policy is being put forward to coincide with high-level conservation-related policy discussions currently taking place in Hobart, Australia, at the 41st meeting of the Commission for the Conservation of Antarctic Marine Living Resources. The commission is an arm of the Antarctic Treaty system, which is responsible for managing marine living resources in the Southern Ocean.

The Southern Ocean contains about 10% of the world’s sea water. It is of global importance because, among others, it has immense wilderness and ecological value within the planet’s system at large, and plays a critical role in climate regulation and carbon storage.

“People do not appreciate how important it is to us,” says Dr Pertierra, who recently led a global assessment of the state of ecosystem services in Antarctica, their value for the world and how these services can be managed into the future.

Antarctic waters affect Earth’s climate, moderate sea level, and play a strong role in global ocean circulation and nutrient cycling. The waters disproportionately absorb or capture carbon dioxide and heat being produced elsewhere in the world. The Southern Ocean therefore helps to regulate temperatures and climates. It buffers the rest of the world from the impacts of climate change, such as rising sea levels, which can influence the livelihood of people living in coastal areas.

The Southern Ocean also plays an important role in oxygen production, while its food web supports iconic animals such as whales and penguins.

“Allowing fishing to continue in its current form is increasingly unsustainable, with benefits captured by a few wealthy nations and little contribution being made to food security,” the authors of the Science paper say.

“Fishing jeopardises the Southern Ocean ecosystem and its globally significant services. Stronger management action is required, including managing for ecological and climate resilience, implementing marine-protected areas, and considering the full suite of values for future generations as well as a potential moratorium on Southern Ocean fishing.”

“We should impose more restrictions on the few companies that benefit from fishing and hunting activities in the region, because these are increasingly impacting the other intangible benefits that the region holds for the rest of the world,” Dr Pertierra adds.

** The international sovereignty of Antarctica and the Southern Ocean (also known as the Antarctic Ocean) is suspended under the Antarctic Treaty.*

Photo captions:

Dr Luis Pertierra.jpg

Dr Luis Pertierra of the Department of Plant and Soil Sciences at the University of Pretoria, during a recent trip to the Antarctic region. PHOTO: LUIS PERTIERRA

Penguins Icebergs.jpg or Penguings.jpg or whale.jpg

Adélie penguins (*Pygoscelis adeliae*) are a near-threatened species of penguin found only along the Antarctic coast. PHOTO: LUIS PERTIERRA

Whales

Humpback whales (*Megaptera novaeangliae*) are among the many whale species that use the Southern Ocean as a feeding ground.

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