

Dear Prof. Reed.

Here is the letter. I have taken into consideration the last year's letter sent to the Argentina's Government. I sent it to the Brazilian Society of Physics President, Prof. Rogerio Rosenfeld, and he agreed with the terms of this letter. Also he asked me a report from this meeting here and a copy of the letter approved to publish in the next BSP Newsletter. Best regards, Roberto Nardi. C14 Commission.

International Union of Pure and Applied Physics

October 3, 2019

To,
THE PRESIDENT OF BRAZIL, **JAIR MESSIAS BOLSONARO**
THE MINISTER OF SCIENCE, TECHNOLOGY, INNOVATIONS AND COMMUNICATIONS OF
BRAZIL, **MARCOS PONTES**

AND

THE BRAZILIAN AUTHORITIES IN SCIENCE AND TECHNOLOGY

The Executive Council of the International Union of Pure and Applied Physics (IUPAP) took place in LONDON, U.K., from 30 of September to 3rd October 2019 to 2nd November 2018. The Executive Council meets with the Chairs of our **20 Commissions and 4 Affiliated Commissions** to continue the work of the Union between the meetings of our General Assembly.

We learned from physicists working in Brazil, as well as from the President of the Brazilian Physics Society, that Brazil is suffering significant cuts to its science budget, and that this is happening after a fifteen-years period of an expanding scientific research effort. Many of our **64** member countries have experienced economic developments that pushed their governments to make significant cuts to the science budget of their countries. We have learned that the difficulties faced by the scientific community are greater when the cuts occur after a period when the government has been building up scientific capability and attracting talented scientists to their institutions. It takes a significant period of time to create excellent scientific institutions - the time involved is decades, not years. But the time it takes to disrupt these institutions is much shorter - perhaps one year - when they are hit by dramatic budget cuts. As a result people, and the knowledge and experience they have, depart the country. The skills which have been developed are lost, and the flow of innovation from scientific research to industry is cut off. Young scientists who had hoped to make a scientific career in their home country will go elsewhere, because the market for their talent is world-wide. After this disruption to their careers they will be very reluctant to return to their home country, fearing that it will happen again.

After the 2000-2018 expansion of the scientific research effort, that was responsible to bring Brazil as the 13rd place of scientific production in the world, the more productive science support in Brazil has now contracted to the extent that many research and academic institutions are having difficulty paying for their basic services and maintenance. The dismantling of internationally renowned research groups and a brain drain involving some of Brazilian best scientists will occur. Scientific research will suffer, and as all economies are ultimately built on the talents of its people, the wider economy will also suffer.

The Executive Council appreciates the serious economic difficulties faced by Brazil. However, it respectfully points out that the severity of the budget cuts, personnel reductions, breach of assumed commitments in research grants, international cooperation and serious restrictions imposed by the current government will inhibit recovery from those difficulties, and pleads that you reverse these decisions before even more damage is done, and while there is still a chance of recovery. That will avoid squandering the investment that Brazil has made over many years in its scientific capability.

The Executive Council resolved to write to you to explain the effects that these policies will have on the scientific community in Brazil, and how they will seriously jeopardize the economic future of the country, and to publish that letter on its website. This letter is the implementation of that resolution. It will be published, together with your reply, on the IUPAP website, www.iupap.org.

Kennedy Reed

President
International Union of Pure and Applied Physics (IUPAP)

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