

Snowmass2021 Letter of Interest : Societal Impacts of Science Projects

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Thematic Areas:

- CommF1: Applications & Industry
- CommF2: Career Pipeline & Development
- CommF3: Diversity & Inclusion
- CommF4: Physics Education
- CommF5: Public Education & Outreach
- CommF6: Public Policy & Government Engagement

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Abstract: This is a group-written contribution pertaining to the broader impacts that activities within particle physics have on the world and society. *It should be noted that an additional Community Engagement Frontier Topical Group is being created devoted to this topic.*

Elements of Interest :

- Environmental impact of in-person conferences ([Nearly Carbon Neutral Conference Guide](#))
- Harsh gases in experiments (e.g. ATLAS detector gas leaks)
- Effects of large projects on indigenous lands
- Ethical implications of algorithm development
- Guidance from astrophysics : 1908.02822

General Description :

Research activities in high energy physics can have considerable societal impacts—positive or negative. It is important for us to point out what is positive about high energy physics activities. The general public whose resources fund our research activities needs to be reminded of the positive returns of their investments. High energy physics must take that proactive approach to outreach, and this is best addressed with the topical group on “public education and outreach”. While we stress active community engagement as a way to educate the public and sustain support for our field, we also need to pay attention and work to reduce any negative impacts of our education and research activities. These negative impacts may come in various forms such as environmental, ethical, religious, economical and medical. Environmental or medical impacts may include long-term effects associated in-person conferences, and leakage of radioactive or harmful substances from research facilities. Religious or economical impacts may include effects on indigenous lands. Ethical impacts may be related to the developments of profiling algorithms.

In this LOI, we propose to study the potentially harmful impacts of our high energy physics activities on society and to develop concrete proposals to mitigate these risks.