

## Promoting the Study of Science in Indonesia: Total Solar Eclipse 2016

## Background

According to the 2012 Programme for International Student Assessment (PISA) results, quality standards at secondary and tertiary level are well below global standards in which 15-year-olds in Indonesia were rated 64<sup>th</sup> out of 65 countries in mathematics, science, and reading.

Additionally, the controversial 2013 national curriculum has cut the number of compulsory hours devoted to the study of natural sciences in favour of religious studies, Indonesian language and nationalism classes. For example, natural sciences have been dropped altogether from the primary curriculum.

Yet young Indonesians fare well in international science competitions, mirrored by an increasing number of science competitions held by government agencies. However, access to the study of sciences is often limited to the more elite schools and most Indonesians have limited access to well-equipped school labs.

Moreover, according to the OECD's 2014 Measuring Innovation in Education report on Indonesia found significant increases in pedagogic innovation in the classroom, particularly in the sciences.

The conditions outlined above call for interventions that raise the standard of and increase access to science education in Indonesia. However, activities that harness young people's enthusiasm for the sciences in their day to day lives are also important for encouraging their interest in the study of sciences.

## Promoting Science: the scientific use of eclipses and importance of amateur astronomers

On 9 March 2016 a large area of the Pacific, covering Indonesia, Malaysia, but also large parts of South-East Asia and Australia will witness a partial solar eclipse. It will be total in Indonesia and the central Pacific, starting at sunrise over Sumatra and ending at sunset north of Hawaii.

Indonesia's leading daily, *Kompas*, approached British Council and proposed that the occurrence of the 2016 total solar eclipse in Indonesia be used to promote interest in the natural sciences and demonstrate the increasingly relevant and important role of 'citizen scientists' in innovation. Amateur astronomers in particular have a long history of making significant contributions to the advancement of astronomy.

## **Itinerary:**

- Friday 4<sup>th</sup> March: scientific seminar/lecture to students and academics at the Bandung Technology Institute (ITB) with Dr Premana W Premadi, Cosmologist from ITB
- **Saturday 5<sup>th</sup> March**: a public lecture with Dr Premana on the scientific uses of a total solar eclipse and the importance of amateur astronomers/citizen scientists, possibly co-hosted with an amateur astronomer network
- 4<sup>th</sup> or 5<sup>th</sup> March: Visit Bosscha Observatory in Lembang, about 15 Km from Bandung:
- **7<sup>th</sup> March:** Possible meetings with relevant government agencies (e.g. LAPAN Space Agency)
- **8-9 March:** Possible travel to eclipse sighting location (Palembang)

**Speaker profile:** academic/astronomer based in a UK institution with an interest in communicating science to young people as well as giving an academic lecture to students and lecturers along the theme of scientific uses of eclipses and an interest in amateur astronomy networks/citizen scientists.

**Costs covered:** Return flights, accommodation and internal travel will be covered by British Council

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