The Science of Disaster Science

From heat waves to droughts and record rainfall to flooding, natural disasters affect every part of our planet. In 2015, three major international agreements addressing these threats were adopted: the UN Sustainable Development Goals (SDGs), the Paris Agreement, adopted at the Paris Climate Change Conference (COP21), and the Sendai Framework for Disaster Risk and Reduction (SFDRR). Along with these agreements, research into disaster science not only advances our understanding of these often catastrophic events, it can illuminate paths towards better preparedness, recovery, and even prevention.

With Scopus® data from 2011-2015, we used SciVal to examine levels of scholarly output, research impact, trending topics, and more both globally and within Asia, home to 60% of the world’s global population (4.4 billion) and many of the most active institutions investigating disaster science.

Disaster Science: Top Global Countries by Research Output

SciVal keywords: "disaster science" OR "natural disaster(s)"

Globally, research is largely concentrated in the United States and China.

Disaster Science: Top Asian Countries by Research Output

Within Asia, China and Japan have the highest scholarly output, while India has the highest field-weighted citation impact.
A Closer Look at Natural Disasters: Top Asian Countries by Research Output

Exploring the research on specific natural disasters, we looked at the top countries based on number of publications:

- **EARTHQUAKE**
  - China 12,100
  - Japan 6,397
  - India 1,641
  - Iran 1,002
  - Turkey 1,381

- **DROUGHT**
  - China 5,321
  - India 1,662
  - Iran 1,030
  - South Korea 474

- **VOLCANO**
  - Japan 57
  - South Korea 57

- **CYCLONE**
  - China 263
  - Taiwan 246
  - Indonesia 159
  - India 117
  - South Korea 117

- **TSUNAMI**
  - Japan 840
  - India 99
  - Indonesia 88
  - China 65
  - Singapore 38

- **FLOOD**
  - China 803
  - Japan 289
  - India 191
  - Taiwan 130
  - Malaysia 111

- **LANDSLIDE**
  - Japan 673
  - China 667
  - Indonesia 168
  - South Korea 126
  - India 103

- **FOREST FIRE**
  - China 5,321
  - India 1,662
  - Iran 1,002
  - Japan 701
  - South Korea 474

- **HEAT/COLD WAVE**
  - China 263
  - Taiwan 246
  - Indonesia 159
  - India 117
  - South Korea 117

All data taken from SciVal – 11 October 2016 (Scopus® data up to 12 September 2016) and includes all publication types (articles, papers, surveys, reviews, editorials, etc.).

**About SciVal:** SciVal offers quick, easy access to the research performance of 7,500 research institutions and 220 countries worldwide.

**About Scopus:** Scopus® is the world’s leading abstract and citation database, and is used by institutions and governments, as well as for university rankings around the world.

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1 As defined by the United Nations Statistics Division: http://unstats.un.org/unsd/methods/m49/m49regin.htm
3 FWCI is a measure that normalizes for differences in citation activity by subject field, article type, and publication year. With a world average of FWCI = 1, articles with a FWCI of 1.46 are cited 46% more than the world average.

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