

Deep-time Digital Earth

IUGS Big Science Program

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Digital Earth**
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DDE

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MISSION AND VISION

■ MISSION

Harmonise global Deep-time Digital Earth data, and share global geoscience knowledge.

■ VISION

Transform Earth science.

WHAT IS DDE ?

Modern Earth systems science requires harmonised global Deep-time Earth data. This harmonisation is now possible through the digital revolution, but new protocols, platforms and programs are needed to secure compatible and interoperable databases, so that the vast amounts of existing (and new) geoscience data can be linked for the benefit of global society. Big Data analytics, internet cloud computing, data mining, machine learning and artificial intelligence, will lead to innovation in understanding the Earth's evolution and applications including the Sustainable Development Goals.

FOCUS

The program will be conducted through a system of linked networks designed to encourage broad collaboration among experts in branches of the geosciences with other experts including engineers, social scientists and economists.

RESEARCH WILL FOCUS ON:

- 1 Life — global biodiversity patterns.
- 2 Materials — investigation of spatial and temporal distribution.
- 3 Geography — palaeogeographic reconstructions.
- 4 Climate adaptation — geoscience solutions.

PARTNERSHIP

DDE is an international consortium open to international organizations, geological surveys, research institutes, and industry. The initiative has been approved by the International Union of Geological Sciences as its first "Big Science Program".