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Building Engineering Capacity to Progress Sustainable Development Goals

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CAST, International Forum on Engineering Capacity,

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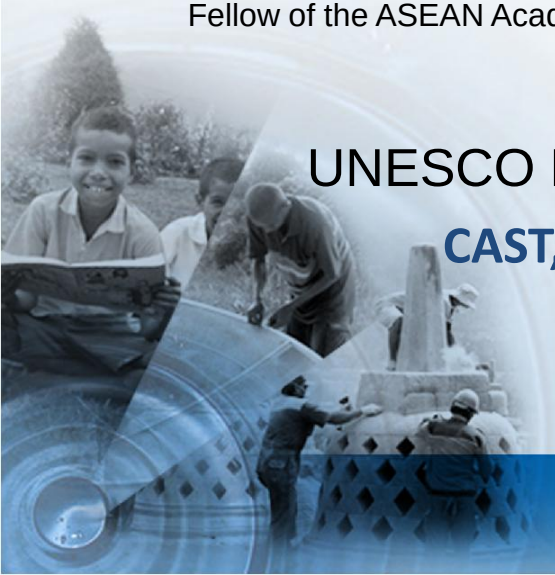

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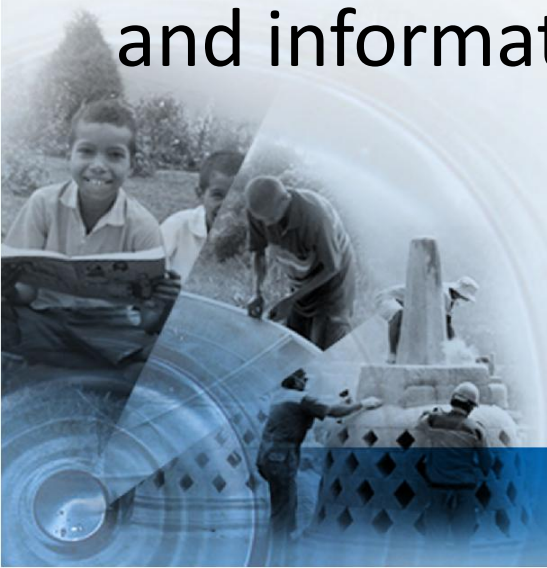
The United Nations Educational, Scientific and Cultural Organization

As a specialized agency of the United Nations, UNESCO contributes to the construction of peace, human development, and intercultural dialogue in an era of globalization through education, the sciences, culture, communication and information.



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10 Key Global Challenges

- Poverty eradication
- Pollution
- Population growth and urbanization
- Food security and sustainable production
- Old and New diseases
- Energy
- Disasters
- Water and environmental resources
- Climate change
- Peace and security

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Global Space for Engineering

Sendai Framework
for Disaster Risk Reduction
2015 - 2030

UNITED NATIONS
PARIS CLIMATE
AGREEMENT
SIGNING CEREMONY
22 APRIL 2016

SUSTAINABLE
DEVELOPMENT
GOALS

ISLAND
VOICES
GLOBAL
CHOICES

UN Conference on
Small Island
Developing States
Apia, Samoa | 2014

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Top Five Trends Asia-Pacific

- **The New Partnerships for Science and Development**
  - How will changes in ODA affect your funding?
  - What do you have to offer to foundations and corporates?
  - Where are Asia's Top 100 Billionaires?
  - How can we partner with the Chinese Government?
- **Urbanization and Sustainable Development**
  - Where is urbanization happening?
  - What are the most vulnerable cities?
  - Can cross-agency solutions be crafted to address complex problems?
- **Climate Change**
  - What are the most vulnerable areas?
  - Is there a role for advocacy to influence the private sector?
- **Rising Inequalities**
  - How will the poor of tomorrow differ from poor of today?
  - What vulnerable groups should we focus on, in a world of limited resources?
- **The Fourth Industrial Revolution**
  - How will the economic landscape in Asia-Pacific region?
  - How will I4.0 affect the communities you serve?
  - Do you have a dialogue with national governments on the issue?
  - What is your value proposition?

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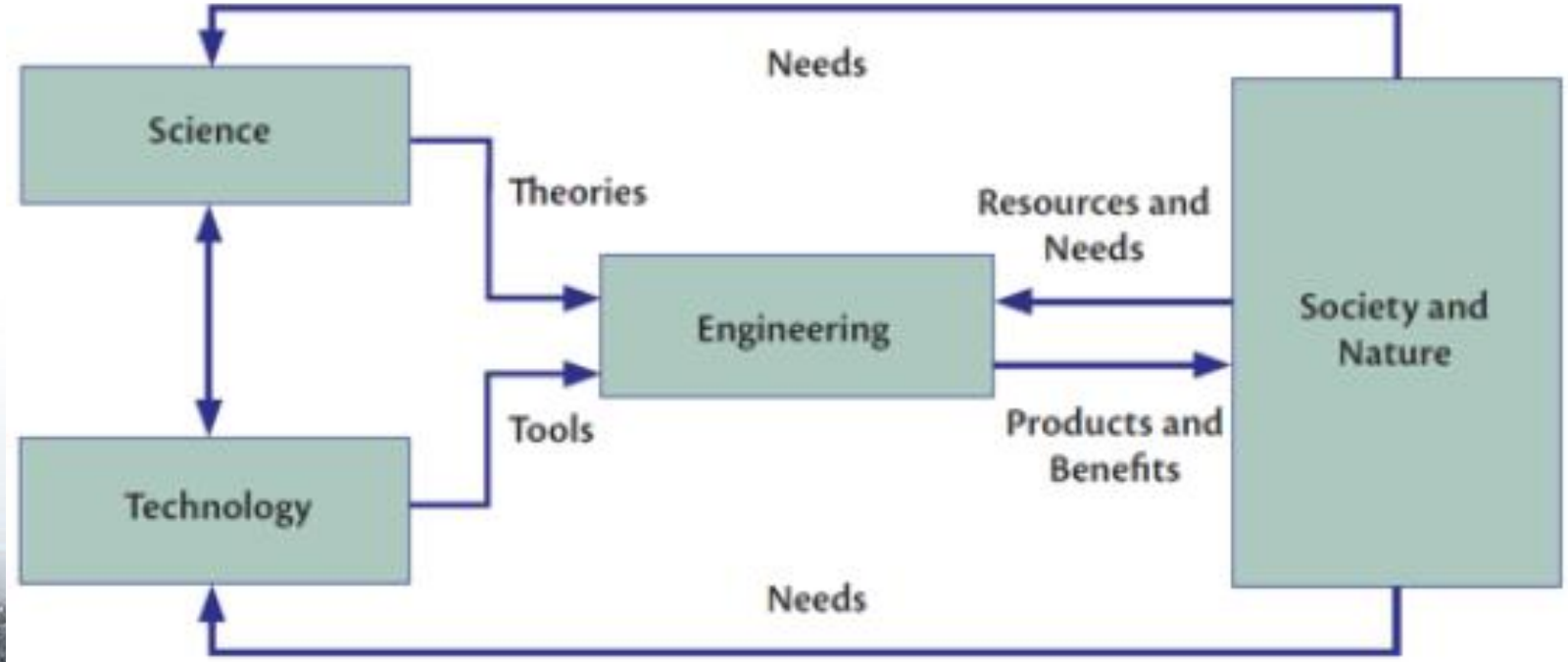
Engineering, major driver for social, economic and human development



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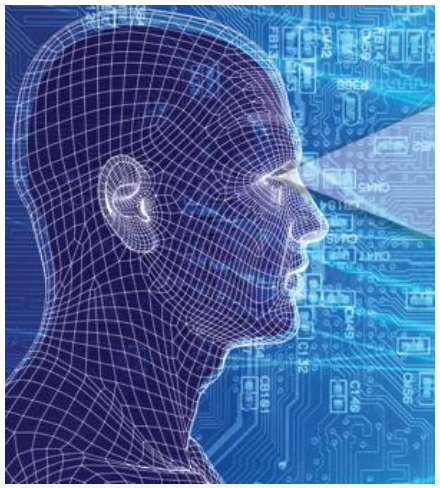
Convergence of Engineering in the Development Agendas



- Energy Efficiency
- Reduction in usage of high quality drinking water
- Selection of material based on environmental performance
- Contribute to sustainable urban environment
- Contribute in reducing world hunger and poverty alleviation
- Contribute to the improvement of quality of life
- Contributing to healthy and safe working environment
- Contribute in preparations for disasters (Human and Natural)

Innovation - clean technologies for sustainable development; robotics, nano-engineering, life-cycle analysis

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UN Agenda 2030 SDGs

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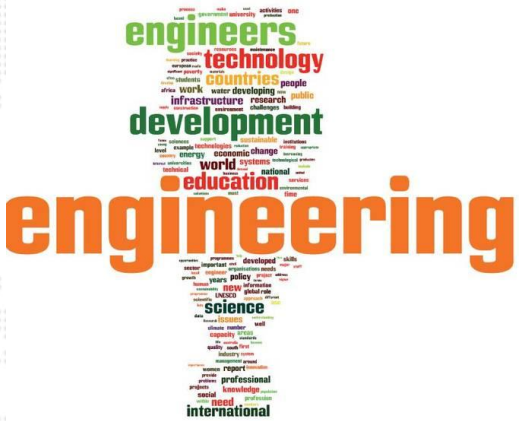
UNESCO and Engineering

UNESCO's Engineering initiative (UEI)



- Aims at strengthening education, capacity-building, and research in the field of engineering
- A cross-cutting thematic initiative to draw on engineering-related strengths across all Sectors
- Draws on UNESCO 's diverse expertise in Culture, Education, Communication and Information as well as Science
- To promote human and institutional capacity-building, particularly in developing countries, to reflect on the UN Agenda 2030 on SDGs and UNESCO priorities
- Concentrate on sustainable development and poverty eradication
- Innovation - clean technologies for sustainable development; robotics, nano-engineering, life-cycle analysis

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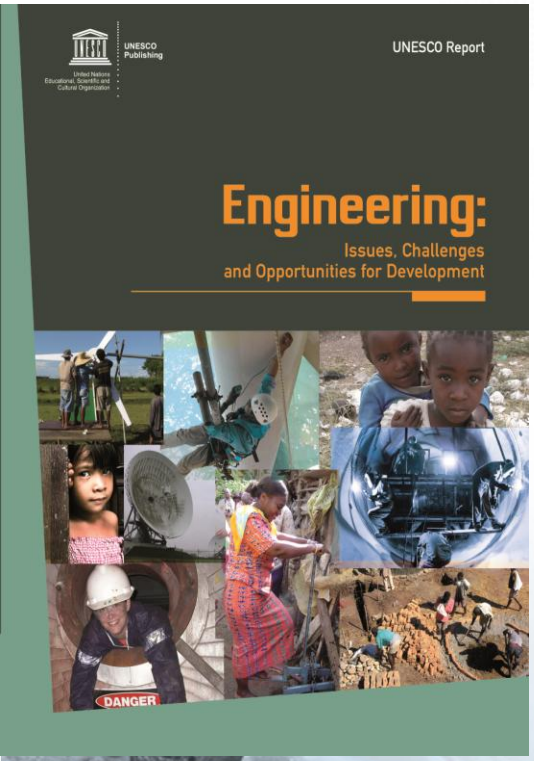
UNESCO and Engineering



- **Promote engineering enrolment by young people, particularly young women,**
- **Promote the importance of engineering as a key driver of sustainable development, and to include more interdisciplinary and sustainability topics in engineering curricula worldwide.**
- **ER II being prepared**

UNESCO Science for Sustainable Development

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Mobility of Engineering Academics and Consultants in Asia and the Pacific through UNESCO-FEIAP Guidelines

Supporting South-South Cooperation on Accreditation of Engineering Education Qualifications and Mobility of Engineers in Asia Pacific and Africa

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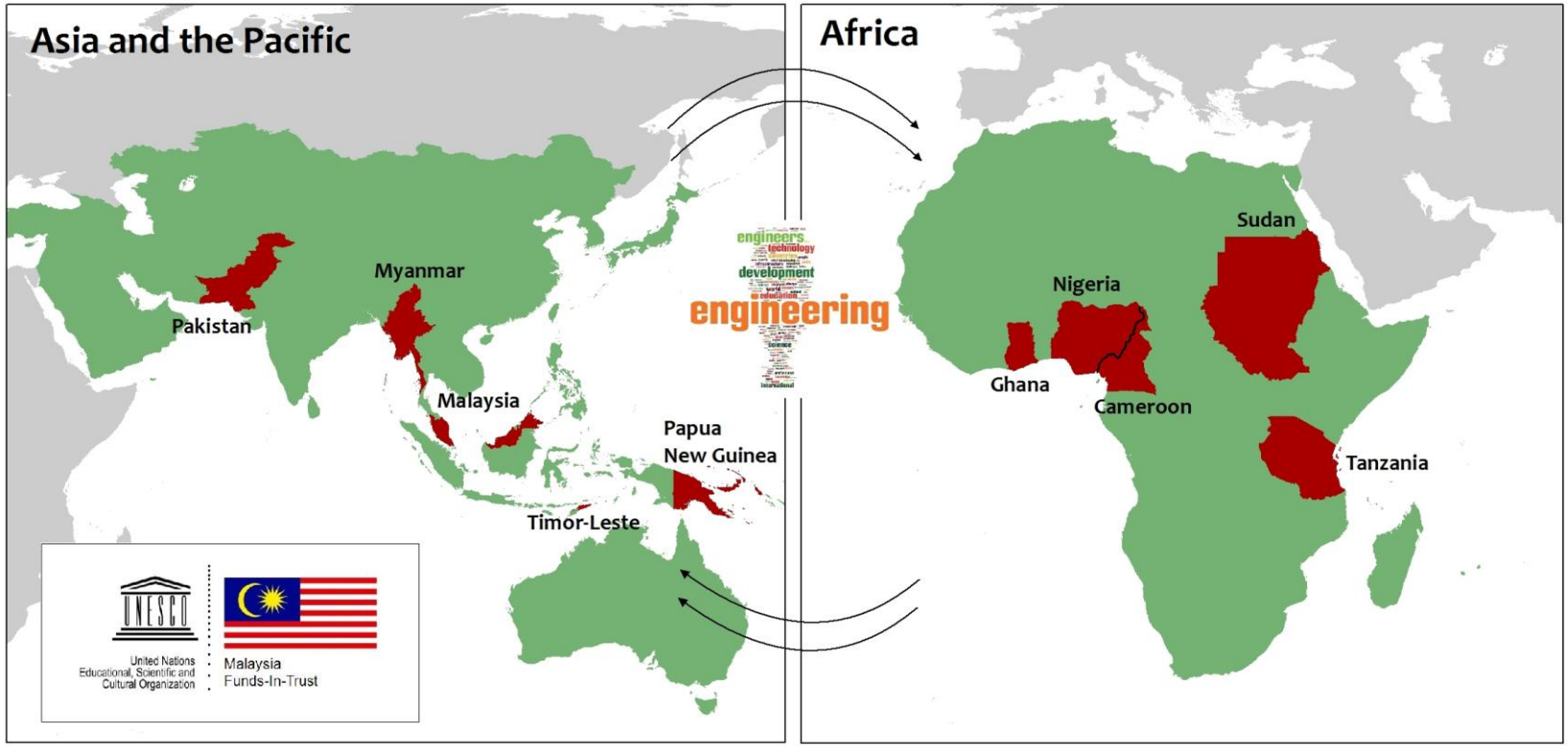
South-South Cooperation for Raising Engineering Standards with FEIAP



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UNESCO Centres and Chairs
SETI for Peace and SuS Dev Focus

- Ensure that **all countries benefit from scientific and technological progress and innovation** to achieve the SDGs and address global challenges, such as poverty eradication, water and food security, climate change, biodiversity loss, sustainable management of our ocean, disaster risk reduction, building sustainable cities
- Support countries in developing comprehensive SETI systems and monitoring STI for sustainable development
- Increase resilience to climate change
- Improve water security
- Use global network of UNESCO sites to support countries in protecting and sustainably managing their cultural and natural resources