



United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP



natural resources
*things that people find
in nature and use*



Earth Resources Theme (minerals, hydrocarbons, geothermal energy, and water)

Sobhi Nasir

**Director, Earth Sciences Research Centre, Sultan Qaboos University, Oman
IGCP Council meeting, UNESCO, Paris, 17-21 February 2019**



United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Short Biography: Sobhi Nasir

INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

- PhD in Mineralogy/Petrology at Wurzburg University-Germany (1986).
- Joined the Yarmouk University in Jordan in 1987,
- Moved to the UAE University in 1992,
- Qatar University in 1996 ,
- Sultan Qaboos University, Oman in 2004 - Director of Earth Sciences Research Centre, SQU
- UNESCO Chair for Ophiolite Studies ,
- An Adjunct –Professor at Western University
- Research: Exploration for Mineral Resources
- Arabian Plate Lithosphere, Ophiolite, Carbonatite-Kimberlite
- ~ 300 publications, 5 books, 7 awards, Many research funds



United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Objective of Earth Resources theme within the IGCP



INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

Importance: Earth Resources are the backbone of every economy.

- Resource use has impacts on the environment,
- The chances of future generations and the developing countries to have access to their fair share of resources are endangered.



Objectives:

- To enhance Innovation, management and Knowledge on natural resources
- To understand origin, occurrence and exploitation of Earth Resources in terms of environmental sustainability.
- To ensure availability of natural resource to future generation.



United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Earth Resources: Reviewers

INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

Mr Nasir, Sobhi Team Leader/IGCP Council Member	Oman/Canada
Mr Beaudoin, Georges	Canada
Mr Pasava, Jan	Czech Rep.
Mr Yigit, Ozcan	Turkey
Ms Baumgartner, Regina	Peru
Ms Olivo, Gema	Canada
Mr Molnar, Ferenc	Finland
Ms Castro, Liliana	Argentina
Mr Canet-Miquel, Carles	Mexico
Ms Munkhtsengel, Baatar	Mongolia



United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme

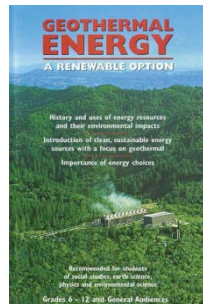


UNESCO
Global
Geoparks

Earth Resources: Active Projects

INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

Project Number	Project Title	Duration	First project leader
637	Heritage stone designation	2015-2019	Lola Pereira (Spain)
636	Characterization and sustainable exploitation of geothermal resources	2016-2018	Daniela Blessant (Columbia)
638	Paleoproterozoic Birimian geology for sustainable development	2016-2020	Moussa Dabo (Senegal)
665	Sustainable use of black soil critical zone	2018-2022	Daming WANG (China)





United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Current state of art and tangible achievements ; Examples

INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

Sustainable Use of Earth Resources

IGCP 665 : Sustainable use of black soil critical zone

70 participants from fourteen countries (China, US, Czech Republic, Russia, Greece, Canada, Ukraine, UK, Australia, Cyprus, Germany, Norway, Argentina, Mongolia).

57% of scientists are female, 43% are male; 57% is under 35 years old.

SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity





United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Current state of art and tangible achievements ; Examples

INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

This strategic project obtained many excellent achievements;

-Made a popular scientific media about global black soil research

-An atlas has been mapped to provide basic data for black soil protection and sustainable using.

-Signed the Initiative on Global Black Soil Critical Zone Geo-Ecological Survey (Shenyang Declaration).

-Comprehensive modeling of global black soil critical zone

-Carbon cycle research of global black soil critical zone

- Microbial research of global black soil critical zone





United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



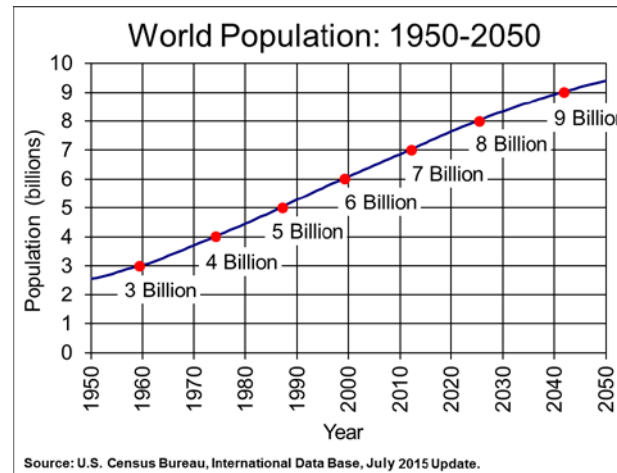
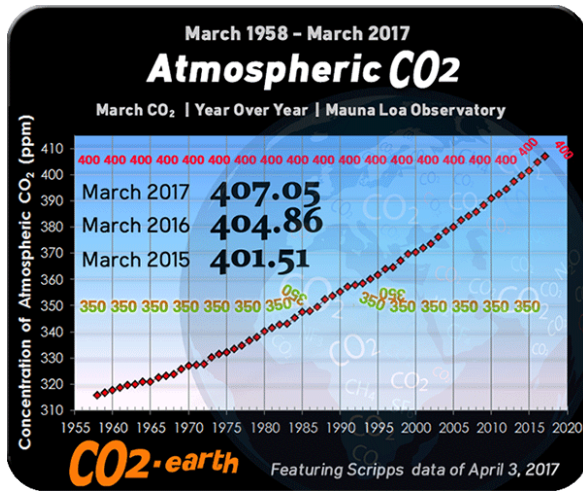
UNESCO
Global
Geoparks

Message : future of Earth Resources



INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

- The future of world earth resources is dominated by two large threats - **climate change** and **population**.
- Concerns over global warming present an existential threat to human being
- Resources increased from 22 billion tons in 1970 to 70 billion tons in 2010. Intern. (Res. Panel , IRP. UN),
- **Where will the resources come from to sustain that growth?**
- This will eventually cause a serious shortage of critical resources., risk of conflict, acidification of waters , eutrophication of soil and water, soil erosion and lead to more waste and pollution.





United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Message : future of Earth Resources



INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

-To continue to develop resources responsibly in the future, we must understand the Earth in all its complexity. The roles of all geoscientists are essential in this process.

-The theme of Earth Resources seeks a broad commitment to fully examine the distribution and discovery of resources and important sustainability issues related to resource extraction.

-To meet the needs of future generations, geoscientists must work with many others to find and develop responsibly the resources we need.





United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme

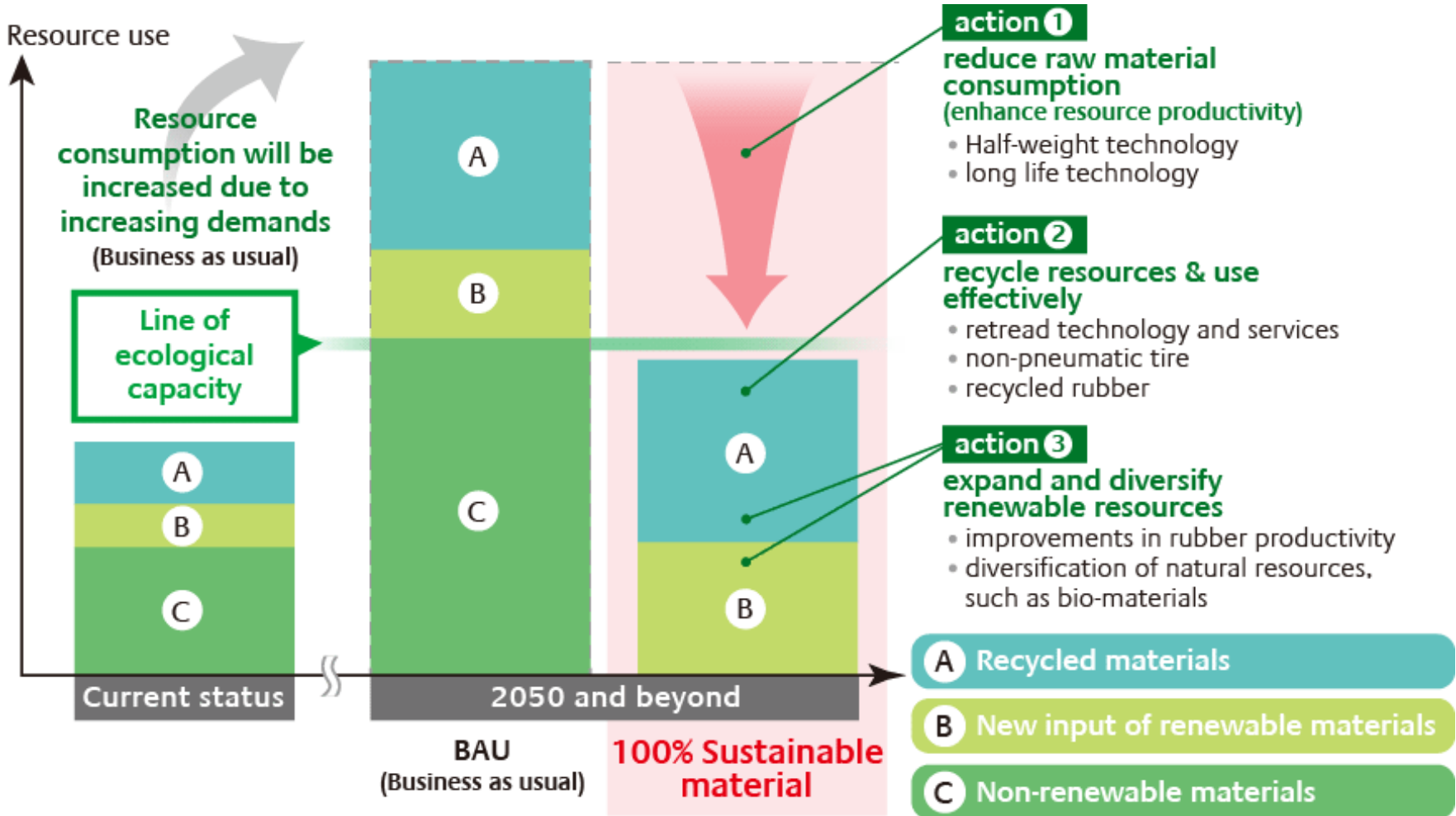


UNESCO
Global
Geoparks

Message : future of Earth Resources



INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP





United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme



UNESCO
Global
Geoparks

Message : future of Earth Resources



INTERNATIONAL GEOSCIENCES PROGRAMME-IGCP

THANK YOU

