



# INTERNATIONAL ASSOCIATION FOR PROMOTING GEOETHICS NIGERIA



**SUSTAINABLE  
DEVELOPMENT**

**GOALS**



**24TH OCTOBER 2016**

## PROGRAMME & BOOK OF *Abstracts*

### **THEME:**

**THE IMPORTANCE OF GEOETHICS IN  
ACHIEVING SUSTAINABLE DEVELOPMENT  
GOALS (SDGs) IN NIGERIA.**

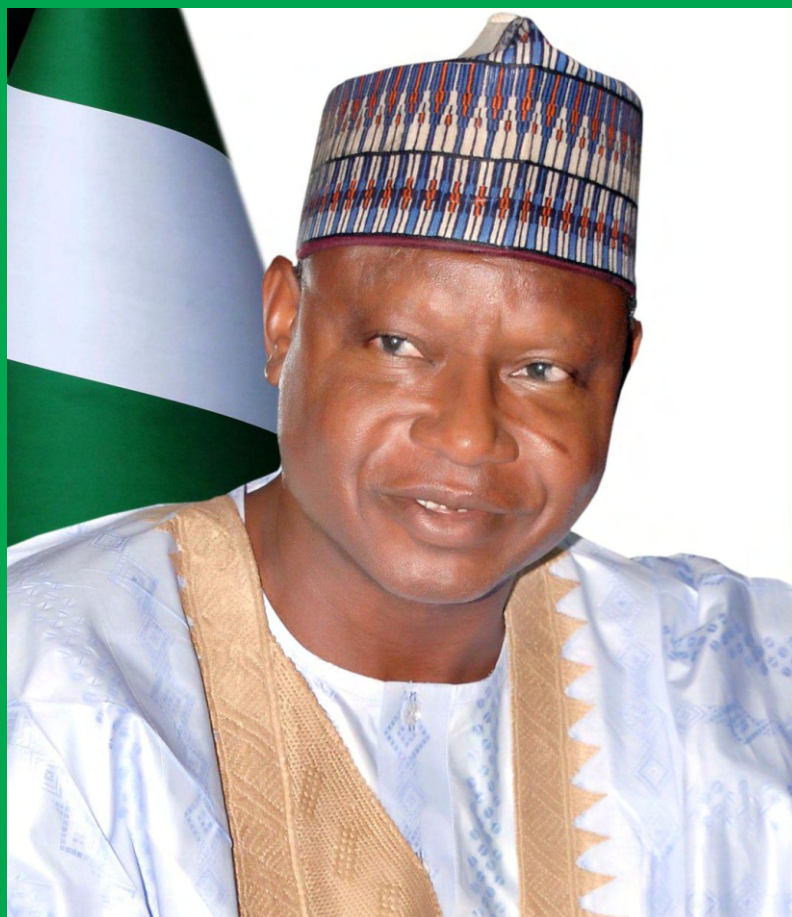
### **SUB-THEMES:**

- GEOETHICS AND SUSTAINABLE DEVELOPMENT
- GEOETHICS IN OUR DAILY LIFE'S
- GEOETHICS AND GEOSCIENCE PROFESSION
- FOSTERING RELATIONSHIP BETWEEN THE SCIENTIFIC COMMUNITY, MASS MEDIA AND GENERAL PUBLIC



*IAPG builds bridges, not walls!*

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FED. REPUBLIC OF NIGERIA

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NATIONAL ASSEMBLY



# HOST/CONVENER



**ARINZE HARRISON I.**

NATIONAL CO-ORDINATOR  
IAPG-NIGERIA





## TABLE OF CONTENTS

Acknowledgement

Foreword

Executive Summary

Mission & Vision statement

IAPG activities

IAPG young scientist club

**Article:** Geoscience at the service of society by Antonio Stoppani

Memorandum of Understanding between AAWG and IAPG

## PART ONE

**1.0** Programme of events

## PART TWO

**2.0** Abstracts

**2.1** List of Abstract and Authors

APENDIX 1 Member of (L.O.C)

## EDITORIAL TEAM

Engr. Obadiah Simon Nkom	-	Chairman
Engr. Ettu Obassi	-	Member
Aishatu Adamu Ahmed	-	Member
Uchechukwu Nzekwe	-	Member
Aigbovo Osaze Jason	-	Member
Jimoh Sheriffdeen	-	Member
Felix O.Odunze	-	Secretary

## 1.0 Programme of Event

### Opening Ceremony

<b>Chairman</b>	-	Alh. Ibrahim Usman Jibril
<b>Co-Chairman</b>	-	Hon. O. Kinsley Chinda
<b>National coordinator</b>	-	Arinze Harrison Ikwumelezech
<b>Rapporteur:</b>		Aduagba Olarongbe
<b>9:00am</b>		Registration of Participants
<b>9:15am</b>		Arrival of IAPG Nigeria board members
<b>9:30am</b>		Arrival of Dignitaries
		Arrival of Minister of state, federal ministry of environment
		Arrival of Member house of representatives, National Assembly
<b>10:00am</b>		National Anthem
<b>10:15am</b>		Welcome Address by National coordinator of IAPG-Nigeria (Arinze Harrison Ikwumelezech)
<b>10:30am</b>		Goodwill message by President AAWG-Nigeria/Trustee IAPG- Nigeria (Aishatu Adamu Ahmed)
<b>10:50</b>		keynote Address by the Chairman (Alhaji Ibrahim Usman Jibril)
<b>11:10</b>		Keynote Address by the co-Chairman (Hon. O.K. Chinda)
<b>11:30</b>		Inauguration of National section (IAPG) Board of Trustee
<b>11:40</b>		Vote of thanks by Mr Uchechukwu Nzekwe (Trustee member)
<b>11:50</b>		National Anthem/Departure of special guest of honour



## SPEAKERS AND SUB-THEMES

**Rapporteurs:**      **Aduagba Olarongbe**

**12:00pm**              Video presentation on GEOETHICS by Silva Peppoloni  
(IAPG- Secretary General)

**12:40pm**              **Sub-Theme 1:** Geoethics and Sustainable Development  
(**Prof. Charles O. Ofoegbu**) KSM, FGS, FNMGS, FINP, SEG (LM)

**1:00pm**              **LUNCH BREAK**

### Afternoon Session

**1:20pm**              **Sub-Theme 2:** Geoethics in our daily life's  
(Prof. Uriah Alexander Lar)  
Chair-holder Petroleum Tech. Development  
Fund (PTDF) Professorial chair in Geology  
University of Jos

**1:40pm**              **Sub-Theme 3:** Geoethics and Geoscience Profession  
(Dr. Ngharbu k"tso) Medical Geologist Dept. of Geology &  
Mining Nasarawa State University

**2:00pm**              **Sub-Theme 4:** Fostering relationship between the scientific  
community, mass media and general public  
(Mr. Abbas Abdulrafiu) Head of Conservation NESREA



## PAPER PRESENTATION

**Chairman:** **Dr. Oluwole A. Oyedeji**

**2:20pm** Paper presentation by **Engr. Ettu Obassi**

**Title:** Application of Geoethics in raw material resource exploitation as a means of averting tragic and ugly mining mishaps in mining and mineral processing activities in Nigeria. (Raw material research and development council, RMRDC/ Board of Trustee IAPG-Nigeria)

**2:40pm** Paper presentation by **Mrs. Lawrenta Funke Popoola**

**Title:** Impact of mining activities on women: A case study of the mining activities in Jos plateau state, Nigeria. (Federal ministry of water resources/Vice-President AAWG-Nigeria)

**2:50pm** Paper presentation by **Mrs R. Mundi (Ph. D) and Oguiche Christopher J.**

**Title** The implication of unplanned settlements on environmental quality in Gwagwalada town, F.C.T Abuja, Nigeria. (University of Abuja, department Geography and environmental sciences).

**3:10pm** Paper presentation by **Dagaci Aliyu Manbe (Ph.D.).**

Department of Sociology University of Abuja.

And **Oguiche Christopher J.**, Department of Geography and Environmental Management, University of Abuja.

**Title:** The Quagmire of Boko Haram insurgency and the precipatory criminal topography of Sambisa Geosphere in Nigeria.

## List of L.O.C Members

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## ACKNOWLEDGEMENT

The immense contribution of the editorial team and Authors are hereby acknowledged by the L.O.C.

We thank the following for their contributions to the successful hosting of this workshop.

1. IAPG – International Association for Promoting Geoethics wishes to thank Raw Material Research and Development Council to have permitted to use its conference hall for organizing the 1st sensitization Workshop in Nigeria. We say a big thanks to the Director General/CEO of (RMRDC).
2. The management of Nigerian Mining and Geoscience Society for their professional contributions.
3. The CEO of Checkers Integrated Concept for their financial support.
4. Stake holders for the zeal, enthusiasm and immense support rendered in planning this great event on GEOETHICS.
5. The International Association for Promoting Geoethics – IAPG our very own for their encouragement and selfless effort at promoting the discussion on ethical and social implications of geoscience education, research and practice in order to contribute to serve society and the environment in Nigeria, and by creating opportunities for improving life conditions of population.

Finally, the board members of the IAPG-Nigeria section/ editorial team are thankful to all those who contributed in a way or the other in the compilation of this work and whose names are too numerous to be mentioned.





## FOREWORD

**G**eosciences have evident repercussions on society. Geoscientists have knowledge and skills to investigate, manage and intervene on the Earth system. This implies ethical obligations. The adoption of ethical principles is essential if geoscientists want to serve the public good in the best manner possible.

Geoethics is an emerging field, which promotes a new way of thinking and practicing geosciences within the perspective of developing a new role for geoscientists in the interaction with oneself, colleagues, society and the planet.

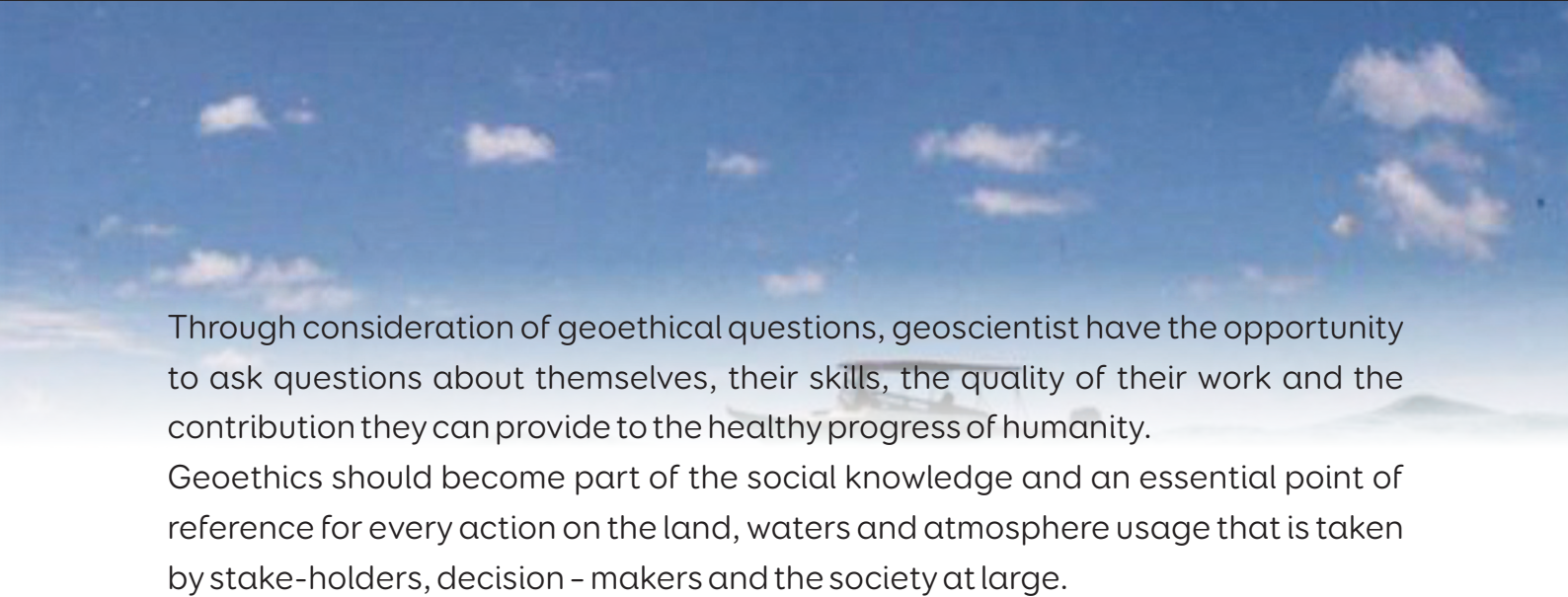
Only by guaranteeing the freedom of researchers and practitioners is it possible to have geoscientists who follow ethical approaches in their work, and only by increasing the awareness of researchers and practitioners on their ethical duties is it possible to develop excellent (geo)science to serve society.

## DEFINITION OF GEOETHICS

“Geoethics consists of research and reflection on the values which underpin appropriate behaviours and practices, wherever human activities interact with the Earth system”.

IAPG has taken a leading role at an international level, by organizing successful events worldwide and publishing books of a high scientific level. The concept of Geoethics are not rapidly appealing to many scientific journals, and this severely restricts the dissemination of their content and the development of a critical stance regarding the ethical, social and cultural implications of geosciences in the scientific community which we as a united team must enforce.

It is increasingly urgent to give greater strength visibility to Geoethics themes so that they are recognized and appreciated by all geoscientists. Geoethics breaks from narrow areas of discussion and provides a point of reflection for geoscientists.



Through consideration of geoethical questions, geoscientist have the opportunity to ask questions about themselves, their skills, the quality of their work and the contribution they can provide to the healthy progress of humanity.

Geoethics should become part of the social knowledge and an essential point of reference for every action on the land, waters and atmosphere usage that is taken by stake-holders, decision - makers and the society at large.

Geoethics can therefore bring about a successful sustainable development agenda that requires partnership between governments, the private sector and civil society. These inclusive partnerships built upon principles and values, a shared vision, and shared goals that people and the planet at the centre, are needed at the global, regional, national and local level.

Urgent action is needed to mobilize, redirect and unlock the transformative power of trillions of dollars of private resources to deliver on sustainable development objectives. Long-term investments, including foreign direct investment, technology transfer are needed in critical sectors, especially in developing countries.

These includes sustainable energy, infrastructure and transport, as well as information and communication technology. The public sector will need to set a clear direction, review and monitoring frameworks, create regulations and incentive structures that enable such investments be retooled to attract investments and reinforce sustainable development.

National oversight mechanisms such as supreme audit institutions and oversight function by legislative should be strengthened.

We therefore commend all partners and relevant institutions for further collaboration to achieve the IAPG goals aimed at promoting the discussion on ethical and social implication of geoscience education, research and practice in order to contribute to serve society and the environment in Nigeria, and by creating opportunities for improving life conditions of population.

**Arinze Harrison Ikwumeleze**  
**National Coordinator IAPG-Nigeria**



## **EXECUTIVE SUMMARY**

The International Association for Promoting Geoethics – IAPG was founded in 2012 during the 34th International Geological Congress (IGC) in Brisbane (Australia), from an idea conceived on April 2012 during the European Geoscience union (EGU) – General Assembly in Vienna. This was initiated to provide a reference and guideline for behaviour in addressing concrete problems of human life by trying to find socio-economic solution compatible with a respect for the environment and the protection of Nature and land.

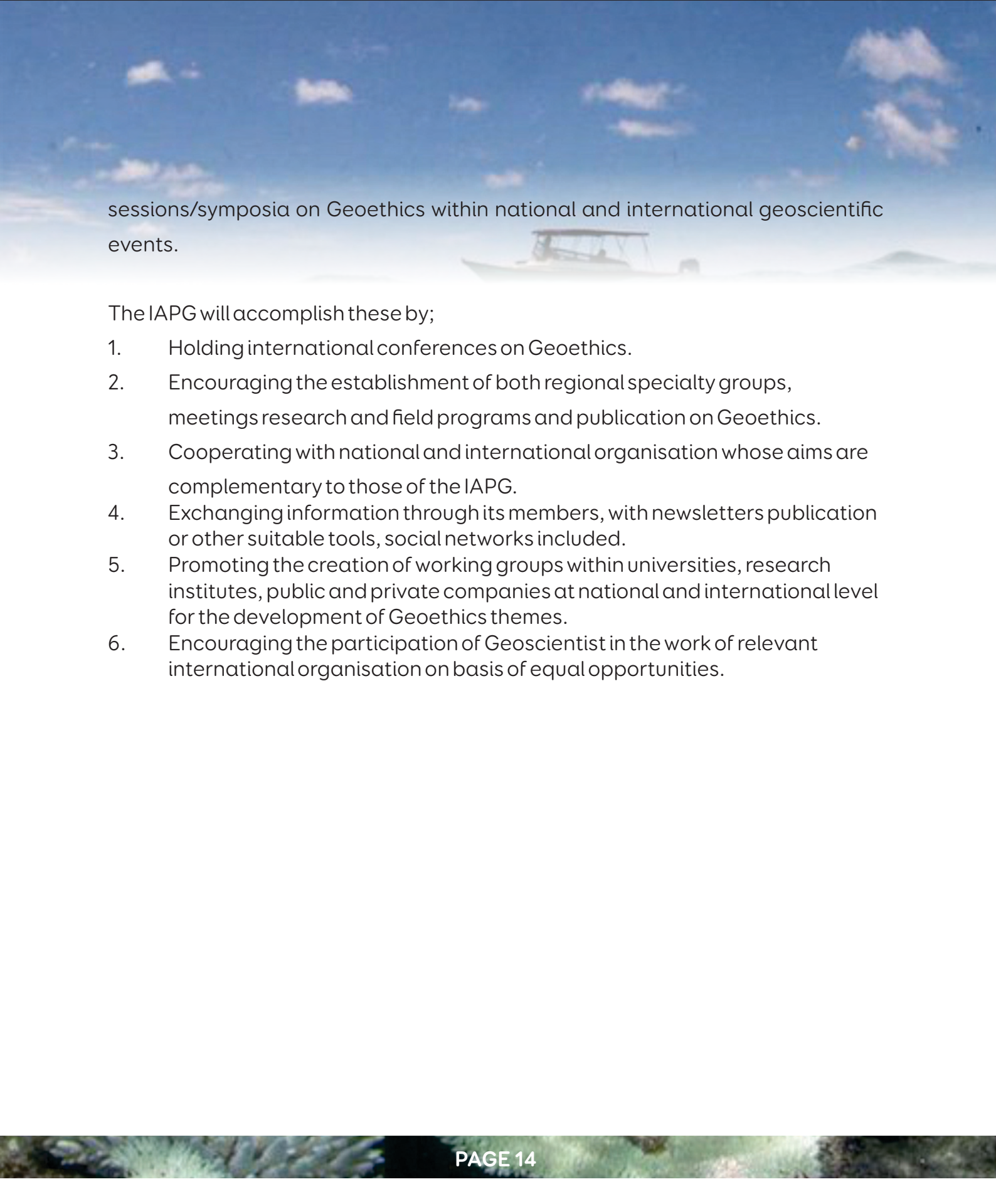
Geoethics is an emerging field in geosciences and IAPG has taken a leading role at an international level, by organizing successful events worldwide and publishing books of a high scientific level. IAPG is a multidisciplinary, scientific association for widening the discussion and creating awareness about problems of Ethics applied to the Geosciences. IAPG is a not-for-profit association with more than 1200 members in 5 continents, recognized as an affiliated society or partner from the most important geoscience organizations of the world.

## **MISSION AND VISION STATEMENT**

The IAPG aims to promote Geoethics values and principles through international cooperation, encouraging the involvement and debate of geoscientist, especially those belonging to less developed countries and assuring a good coordination among these nations.

The IAPG intends to foster the dissemination of Geoethics through dedicated website, the publication of scientific papers, the organization of meetings and





sessions/symposia on Geoethics within national and international geoscientific events.

The IAPG will accomplish these by;

1. Holding international conferences on Geoethics.
2. Encouraging the establishment of both regional specialty groups, meetings research and field programs and publication on Geoethics.
3. Cooperating with national and international organisation whose aims are complementary to those of the IAPG.
4. Exchanging information through its members, with newsletters publication or other suitable tools, social networks included.
5. Promoting the creation of working groups within universities, research institutes, public and private companies at national and international level for the development of Geoethics themes.
6. Encouraging the participation of Geoscientist in the work of relevant international organisation on basis of equal opportunities.

## IAPG - INTERNATIONAL ASSOCIATION FOR PROMOTING GEOETHICS: AN UPDATE ON ACTIVITIES

**Giuseppe Di Capua<sup>1,5</sup>, Peter Bobrowsky<sup>2,5</sup>, Susan Kieffer<sup>3,5</sup>, Silvia Peppoloni<sup>1,5</sup>, Stefano Tinti<sup>4,5</sup>**  
EOSS "Geoethics: theoretical and practical aspects from research integrity to relationships between geosciences and society"

(1) Istituto Nazionale di Geofisica e Vulcanologia, Italy (giuseppe.dicapua@ingv.it; silvia.peppoloni@ingv.it); (2) Geological Survey of Canada - Natural Resources, Canada (Peter.Bobrowsky@canada.ca);  
(3) University of Illinois at Urbana-Champaign, USA (skieffer@gmail.com); (4) Università degli Studi di Bologna, Italy (stefano.tinti@unibo.it);  
(5) IAPG - International Association for Promoting Geoethics (iapgeoethics@aol.com)



### Abstract

The International Association for Promoting Geoethics (IAPG: <http://www.geoethics.org>) was founded on August 2012 to unite global geoscientists to raise the awareness of the scientific community regarding the importance of the ethical, social and cultural implications of geoscience research, education, and practice. IAPG is an international, multidisciplinary and scientific platform for discussion on ethical problems and dilemmas in Earth Sciences, promoting geoscientific themes through scientific publications and conferences, strengthening the research base on geoethics, and focusing on case-studies as models for the development of effective and operative strategies. IAPG is legally recognized as a not-for-profit organization. It is a non-governmental, non-political, non-party institution, at all times free from racial, gender, religious or national prejudices. Its network continues to grow with more than 1100 members in 104 countries, including 21 national sections. IAPG operates exclusively through donations and personal funds of its members. The results achieved since inception have been recognized by numerous international organizations. In particular, IAPG has obtained the status of affiliated organization by the International Union of Geological Sciences (IUGS), American Geosciences Institute (AGI), Geological Society of America (GSA), and the Geological Society of London (GSL). IAPG has enlarged its official relationships also through agreements in collaboration with other organizations, such as the American Geophysical Union (AGU), the European Association of Geoscientists and Engineers (EAGE), the International Association of Professional Geologists (IAPG), the International Geoscience Education Organisation (IGEO), African Association of Geoscientists (AAGG), and others. IAPG considers publications an indispensable activity to strengthen geoethics from a scientific point of view, so members are active in the publication of articles and editing of books on Geoethics with a peer-review process. Moreover, IAPG organizes sessions/symposia on geoethics in national and international congresses, thus encouraging a wide participation of the scientific community in the discussion on geoethical topics. This presentation provides an update on new results and numerous ongoing activities carried out by the IAPG with a brief look to future initiatives.

**Geoethics is the research and reflection on those values which underpin appropriate behaviours and practices, wherever human activities interact with the geosphere. Geoethics deals with the ethical, social and cultural implications of Earth Sciences education, research and practice, and with the social role and responsibility of geoscientists in conducting their activities.**

- Geoethics deals with problems related to the **georisks management** and the use of **geo-resources**.
- Geoethics provides **references and guidelines** to find socio-economic solutions compatible with the respect for the environment and the protection of Nature and land.
- Geoethics promotes the **social role** played by Geoscientists and highlights their **responsibilities** in making choices that have repercussions on society.
- Geoethics fosters the **proper and correct dissemination** of the scientific results.
- Geoethics aims to organize effective **teaching tools** to develop awareness, values and responsibility, especially amongst the young people.
- Geoethics promotes the development of geoparks and geo-tourism, in order to create social awareness about the **value of the geological heritage and geodiversity**.
- Geoethics highlights the **usefulness of the geological knowledge in daily life** by promoting disciplines like medical geology and forensic geosciences.



**Self-behaviour**

**Behaviour towards colleagues**

**Responsibility towards society**

**Responsibility towards the Planet**

Heug et al. (2015), *Teaching Geoethics Across the Curriculum*, *Geophysical Research Abstracts*, Vol. 17, EGU2015-7494.

### What is the IAPG

The IAPG is a multidisciplinary, scientific platform for widening for widening the discussion and creating consciousness about problems of Ethics as applied to the Geosciences. The IAPG is a non-governmental, non-political, non-party institution, free from racial, gender, religious or national prejudices



The IAPG is legally recognized as a not-for-profit association, has more than 1,100 members in 104 countries in 5 continents, and can count on a network of 21 national sections



### The IAPG vision

Geoscientists more aware of the ethical and social implications of their activities, solutions, and decisions will be better able to transfer not only best practices but also best values to society and to contribute to create a knowledgeable society and a sustainable development for future generations.

### The IAPG mission

Promote Geoethics values and principles through international cooperation; foster the dissemination of Geoethics; increase the research base on Geoethics; identify methods for its more effective application; reflect on the role that geoscientists can have in society; raise awareness about geoscientist's responsibility.

### The IAPG goals

- increase of a research base and the strengthening of the Geoethics from the scientific point of view;
- identification of methods for its more effective application;
- reflection on the role that geoscientists can have in society and the identification of suitable forms, positions, means and actions to be adopted by them;
- growth of awareness about our responsibility, both as Geoscientists and as members of the human community
- promotion of the idea of a common and shared "geo-heritage", to be considered as a cultural, educational and scientific value, as well as an economic resource;
- cultural renewal in the way we perceive and relate to our Planet;
- sensitization towards the defense of life and the richness of the Earth, in all its forms.



**IAPG headquarter**  
c/o Italian Institute of Geophysics and Volcanology, Rome, Italy

Website <http://www.geoethics.org> Email [iapgeoethics@aol.com](mailto:iapgeoethics@aol.com) Blog <http://iapgeoethics.blogspot.it>

Follow us:





## Sessions in congress



# Lectures

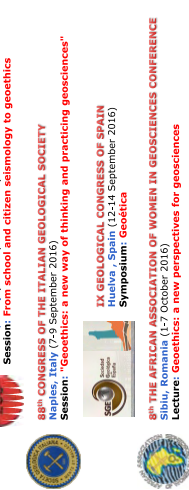
## How and what should we teach novice geoscientists about geoeethics?



**Abuja (Nigeria), 15-16 June 2015**  
**Workshop "Teaching GeoEthics Across the Geoscience Curriculum"**

- The foundations of geothetics**  
Montana (USA), 10–13 June 2014  
European Federation of Geologists workshop  
**Geothetics: themes, goals and ongoing initiatives**  
Palermo (Italy), 29 May 2014  
Ethics breakfast at the Offshore Technology Conference (OTC)  
**Geothetics: A Way of Thinking and Practicing Geosciences**  
Houston, Texas (USA), 9 May 2014  
Request for the Geological Survey of Canada  
**Geothetics: the importance of geothetics**  
Ottawa (Canada), 10 May 2013

35th EUROPEAN SEISMOLOGICAL COMMISSION GENERAL ASSEMBLY



## COUNTRIES



## Dissemination of Geoethics into Society

- 
- into Society
- MINERLIMA 2015 in Lima:** first minerals exhibition in Peru,  
Activities with students in Egypt.
- Interviews at the Austrian (ORF1) and German (SWR2) Radio.**
- Italian Science Festival 2013 and 2014 (Genoa, Italy):** two conferences,  
Italian Science YouTube Channel: Nautilus – RAI Cultura (Italy): video-interviews,  
Conference on Geoparks network 2014 (Amman, Jordan).
- Day for Earth Sciences in Africa and Middle East (DESAME):** 2014, 2015, 2016,  
Courses on geosciences for professional geologists in Texas and Italy.

## facebook

234

3444

1065



**The IAPG is legally recognized as a not-for-profit association and exists with donations and personal funds of its members.**

**Become an IAPG member. No fee is due.**  
**Fill in the form: <http://www.geoethics.org/membership.html>**







## The Young Scientist Club of the International Association for Promoting Geoethics

Marie Charrière<sup>1</sup>, Francesco De Pascale<sup>2</sup>, Jonathan Gomez Cantero<sup>3</sup>, Tharwat Hassan<sup>4</sup>,  
Ndivhuwo Cecilia Mukosi<sup>5</sup> and Craig O'Brien<sup>6</sup>

### Mission and goals:

The Young Scientists Club (YSC) promotes the topic of geoethics and the International Association for Promoting Geoethics (IAPG) among the young researchers community.

**Our vision is to enable young scientists to participate in the debate on Ethics applied to the Geosciences** through a multidisciplinary platform and a space where young scientists can share their views and expectations.

YSC will be able to combine young enthusiasm with common sense and foresight, continuing to carry on into the future what the IAPG has already started: develop new ways of thinking, studying and managing our planet.

### Activities:

**U** Develop the debate on the issues of geoethics through seminars, webinars, meetings and conferences.

➔ 2016: EGU, 35<sup>th</sup> IGC (South Africa), 3<sup>rd</sup> Young Researchers and 1<sup>st</sup> IARS Conferences (Egypt).

**U** Convey geoethics' expectations of young scientists by suggesting topics and issues to be explored.

➔ The IAPG Blog:



**U** Propose initiatives and activities to establish links with other youth sections of scientific organizations and with university departments.

### Join the YSC!

If you are a geoscientist younger than 35 years old, become a member of the IAPG on its website and request to join the YSC using the contact form.

**We are looking forward to having you on board!**

**FEEDBACK WANTED: How, where and with whom can young scientists promote the implementation of geoethics in the daily Geosciences' practice and research?**

*Please write down any ideas you have. Add your email address if you would like to participate more actively or to be informed on the YSC's activities.*



### The YSC Executive Board



(2) University of Calabria, Italy  
Expertise: Geography, Geoeducation, Risk Perception



(3) Universidad de Alicante, Spain  
Expertise: Climate Change, Natural Hazards.



(4) South Valley University Egypt  
Expertise: Geochemistry, Igneous Petrology, Environmental Geology.



(5) Council for Geoscience, South Africa  
Expertise: Geology, Geochemistry, Mining, Geoconservation, Geotourism.



(6) JTF Energy, UK  
Expertise: Upstream Oil, Gas Technology.



(1) TU Delft The Netherlands  
Chair of the IAPG-YSC  
Expertise: Risk Communication, Risk Education, Natural Hazards.

**IAPG website: <http://www.geoethics.org/>**  
YSC Contact and Information: [m.k.m.charriere@tudelft.nl](mailto:m.k.m.charriere@tudelft.nl)



Image credit: Arash Modaresi Rad  
(distributed via [imagedeo.egu.eu](mailto:imagedeo.egu.eu))



European Geosciences Union General Assembly,  
Vienna, 12-22 April 2016

# GEOSCIENCES AT THE SERVICE OF SOCIETY IN THE EXPERIENCE OF ANTONIO STOPPANI

## ONE OF THE FATHERS OF GEOETHICS

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Geologist Fandromano RM - Italy  
srsterianialucchesi@libero.it

Antonio Stoppani (1824-1891) was a great naturalist and passionate scholar of **EARTH SCIENCES** who was able to use his knowledge and professional skills as an instrument of:

- **TRAINING**
- **EDUCATION**
- **SOCIAL PROMOTION**

He highlighted the importance of Earth Sciences for **CULTURAL AWARENESS AND DEVELOPMENT OF SOCIETY** during his historical time (after the Unification of Italy in 1861).

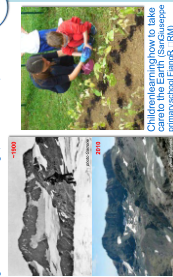
## THE BASIC PRINCIPLES OF GEOETHICS are in his works

1

### MAN AS GEOLOGICAL AGENT

He stressed the importance of **human beings** being capable, with the use of reason, to modify nature and to participate actively in shaping the Earth's surface.  
He introduced in his *Course of Geology* (1871-1873) the term **"Anthropozoic Era"** to define the latest time period in which human action began to be significant and decisive.  
This intuition somehow anticipates the modern concept of the **Anthropocene** elaborated at the end of the XX century.

The Barf Glacier (Piedmont, Italy) in 1900 and 2010. Is evident the shrinkage that is affecting the NW Italian glacier from the Little Ice Age (Lacoste et al., 2014)



Children playing in the lake created by the glacier retreat in the town of Sares (Italy). See Lacoste et al., 2014

2

### HUMAN RESPONSIBILITY AND ETHICAL COMMITMENT towards the Earth, society and future generations

Unlike the other morphological agents human being has the capacity and at the same time the responsibility to contribute, through knowledge and scientific progress to a **responsible and ethical management of the environment and of the georesources**.  
On these aspects is based the **GEOETHICAL PROMISE** recently proposed by Matteucci et al. (2014).



Drawing of Antonio Stoppani teaching his students to his grandchildren and friends. He used to say "Oh, the study of nature! You could fall in love!"

3

### WHOLISTIC VIEW OF SCIENCE AND MAN

He also strengthened the importance of **DIALOGUE AND INTERDISCIPLINARITY** among the different sciences between **physics and human sciences** including ethics and metaphysics.  
Against the fragmentation of knowledge his approach is nowadays fundamental for the growth of the **common good** and for the **development of peoples**.



The Trossa fall (Italy) (A) and the Trossa fall (Norway) (B) in drawings (1875 from "Il Bel Paese") and in recent photos (right).

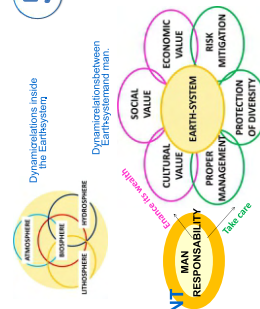
### THE EARTH HERITAGE TO BE PRESERVED IN ITS UNIQUENESS AND GEO-DIVERSITY

Significant are the dimensions of **beauty harmony and sacredness** that Stoppani found in nature and that he considered cause for attention, appreciation and respect of the geosphere.  
With these principles he somehow laid the foundations for **GEOCONSERVATION** and promotion of **GEO-DIVERSITY**.  
He is one of the first estimators of **GEO-SITES**.

5

### THE EARTH AS A SYSTEM

Stoppani had a modern approach to the study of the Earth-system, embracing a perspective of **dynamic relationships** between the various components of the **ECOSYSTEM**.  
This vision is nowadays essential for a **proper management of georesources** for the assessment and mitigation of risk, as well as for a more **integrated growth** of the human being in **harmony and synergy with the ecosystem**.  
Man has the double responsibility towards the Earth system to **enhance its wealth** and to **take care of it**.



The contribution of Stoppani is therefore of great significance, establishing the criteria that should guide researchers, scholars, educators, professional and decision makers in their studies and activities in the field of Earth Science, and he actually can be considered one of the **FATHERS OF GEOETHICS**.





## AGREEMENT

### MEMORANDUM OF UNDERSTANDING BETWEEN THE AAWG- AFRICAN ASSOCIATION OF WOMEN IN GEOSCIENCES AND IAPG- INTERNATIONAL ASSOCIATION FOR PROMOTING GEOETHICS.

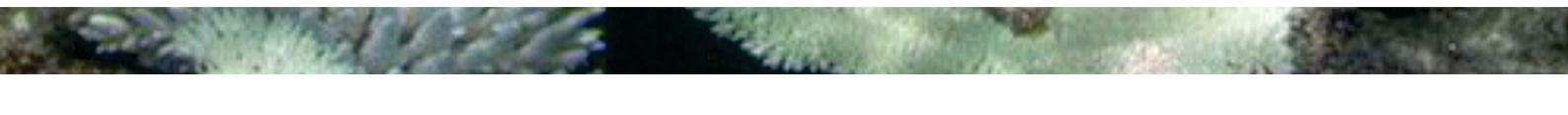
The AAWG and the IAPG has signed an Agreement on cooperation (18th September 2015).

The Agreement expresses a mutual desire to co-operate on a range of themes in the field of Geoethics. The aim of the agreement is to promote co-ordinated events discussing the ethical, social and cultural implication of geoscience and initiative enhancing the role of women scientists in geosciences. In particular;

- Promotion of principles and Geoethics, research integrity and professional deontology in geosciences activities among their networks.
- Definition of ethical problems, also through case-studies, affecting geoscience community and organisation.
- Promotion of policies and initiatives to enhance the role of women scientists in geosciences.
- Promotion of initiatives to promote activities for social inclusivity and enhance the role of geosciences in building peace.
- Co-organisation of scientific events to disseminate concepts and values of Geoethics among both the professional and research communities, with particular attention to the involvement of women and young geoscientists.
- Production of relevant publications.
- Identification of possibilities to apply for common projects on Geoethics.

AAWG Nigeria (<http://www.aawgn.org>) is an association born in Nairobi (Kenya) in 1995, created to promote Earth sciences for society through women and to promote women through Earth sciences.

African Association of women in Geosciences is an affiliate organisation of the IUGS- The International Union of Geological Sciences.





## **ABSTRACTS**

**FORSTERING RELATIONSHIP BETWEEN THE SCIENTIFIC COMMUNITY, MASS MEDIA AND GENERAL PUBLIC IN ENVIRONMENTAL SUSTAINABILITY.**

**1M.O RAHEEM&2ABASS ABDULRAFIU**

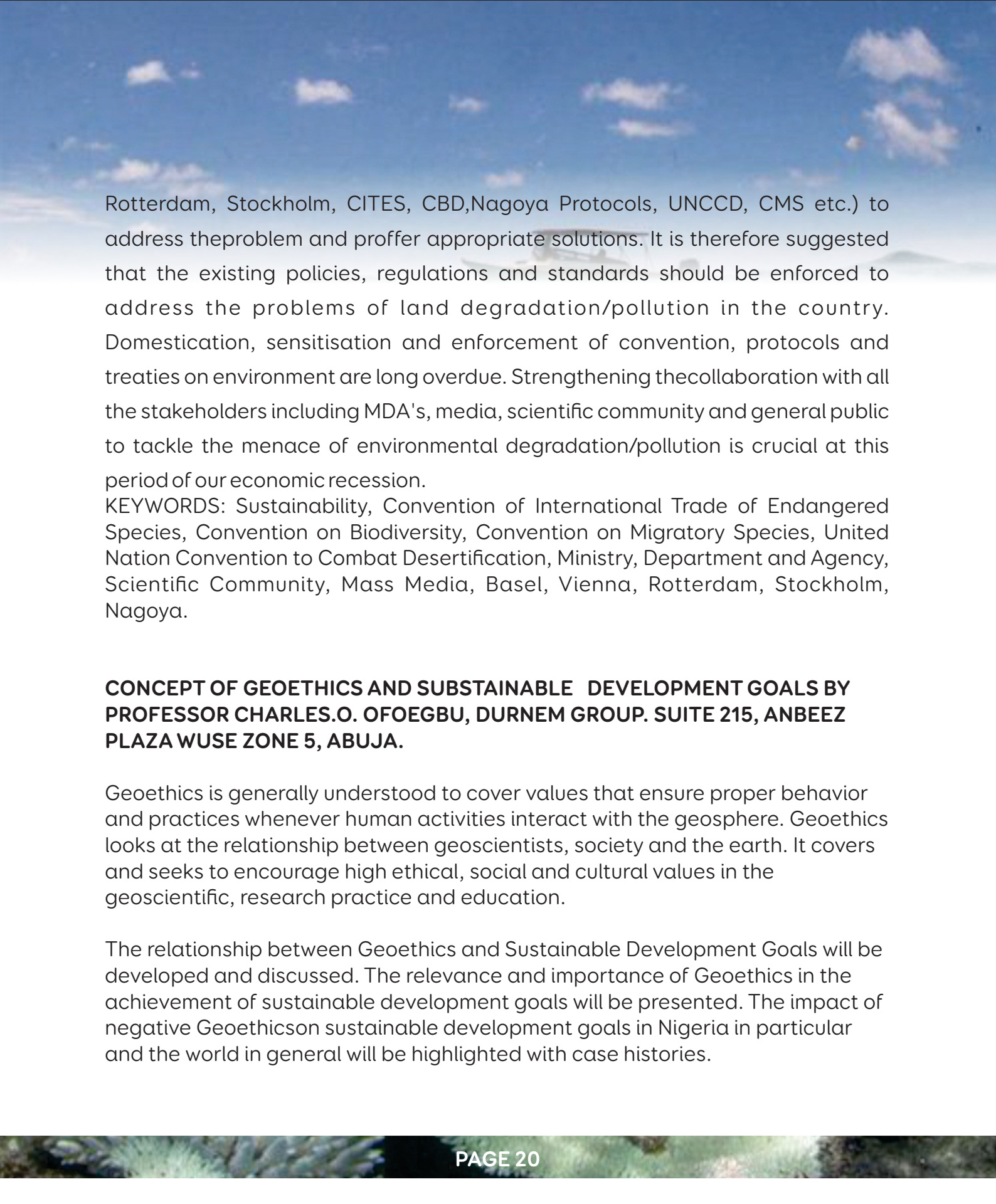
**1SEQUENCE MW INTERGRATED SERVICES NIGERIA LIMITED**

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Sustainable Development offers a vision of progress that integrates immediate and longer-term objectives, local and global action. It involves social, economic, governance and environmental issues as inseparable and interdependent components of human progress. Against the backdrop of a rapidly changing climate, environmental pollution, deforestation, bush burning, desertification, drought, improper waste disposal, flood and erosion, there is need for good relationship between scientists, media and general public as major stakeholders in environment. The theoretical framework for the qualitative study is the development media theory which attempts to explain the normative behaviour of the mass media in the developing countries was adapted. The paper obtain information on existing published and unpublished works as well as observations, certain conclusions were inevitable. The state of the environment is pitiable. Ironically, human beings, the greatest beneficiaries of the earth's resources, are guilty in destroying the environment through such actions as water/air pollution, over grazing, illegal felling of trees, excessive and unapproved hunting, etc. All these activities put the flora and fauna at risk, and deplete the ozone layer. The realization that the earth is endangered has prompted several human reactions including the convening of summits/conventions (Basel Convention, Vienna,



Rotterdam, Stockholm, CITES, CBD, Nagoya Protocols, UNCCD, CMS etc.) to address the problem and proffer appropriate solutions. It is therefore suggested that the existing policies, regulations and standards should be enforced to address the problems of land degradation/pollution in the country. Domestication, sensitisation and enforcement of convention, protocols and treaties on environment are long overdue. Strengthening the collaboration with all the stakeholders including MDA's, media, scientific community and general public to tackle the menace of environmental degradation/pollution is crucial at this period of our economic recession.

**KEYWORDS:** Sustainability, Convention of International Trade of Endangered Species, Convention on Biodiversity, Convention on Migratory Species, United Nation Convention to Combat Desertification, Ministry, Department and Agency, Scientific Community, Mass Media, Basel, Vienna, Rotterdam, Stockholm, Nagoya.

**CONCEPT OF GEOETHICS AND SUSTAINABLE DEVELOPMENT GOALS BY PROFESSOR CHARLES.O. OFOEGBU, DURNEM GROUP. SUITE 215, ANBEEZ PLAZA WUSE ZONE 5, ABUJA.**

Geoethics is generally understood to cover values that ensure proper behavior and practices whenever human activities interact with the geosphere. Geoethics looks at the relationship between geoscientists, society and the earth. It covers and seeks to encourage high ethical, social and cultural values in the geoscientific, research practice and education.

The relationship between Geoethics and Sustainable Development Goals will be developed and discussed. The relevance and importance of Geoethics in the achievement of sustainable development goals will be presented. The impact of negative Geoethics on sustainable development goals in Nigeria in particular and the world in general will be highlighted with case histories.



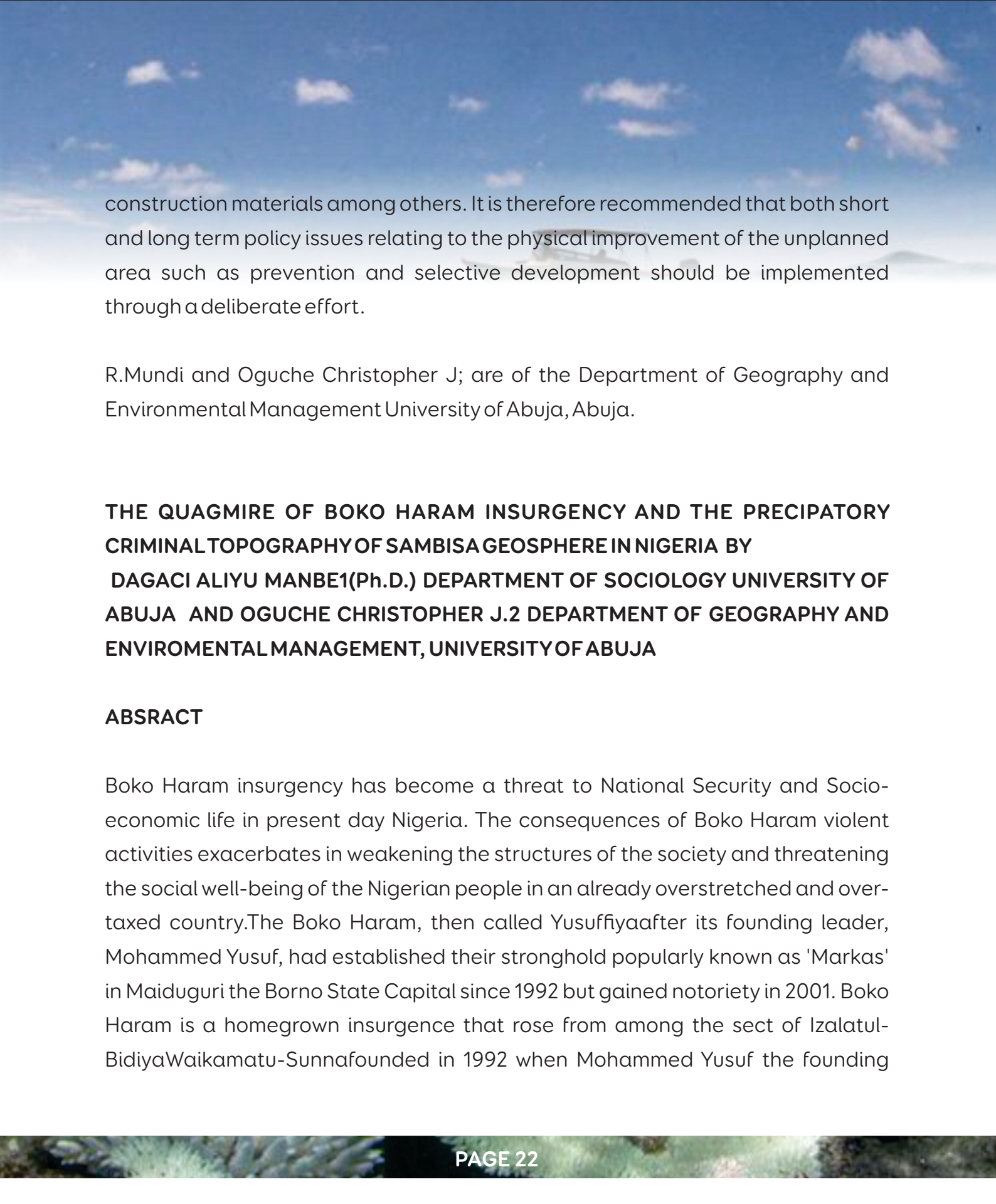
## **THE IMPLICATIONS OF UNPLANNED SETTLEMENTS ON ENVIROMENTAL QUALITY IN GWAGWALADA TOWN, F.C.T**

**R. Mundi(Ph.D) and Oguiche Christopher J.**

### **ABSTRACT**

This study examined the implication of unplanned settlement on environmental quality in Gwagwalada Town, Gwagwalada Area Council, FCT. Abuja. The study identified the unplanned settlement, Characteristics of the areas such as accessibility, waste management, land use structure, housing structures and housing facilities. The study also assessed the impacts of these characteristics on the environment and socio-economic lives of the residents. It covered five settled settlements which form the sampled points. They include; Angwa Gwari, Dagiri, Angwa Dodo, Angwa Tiv and Gwako. In view of the above, necessary procedures were selected to accomplish this. Approach includes the development of data base and choice of appropriate data sources (primary and secondary sources). From the methodology questionnaires were administered which was six hundred and twenty eight which focused on the physical, social and economics characteristics of the environment and households within the area. Two hypotheses were put forward to test whether there exist significant variations in accessibility to motorable roads and method of household waste disposal among the five sampled points. The data obtained was analyzed using the Kruskal Wallis H- Test at 95% level of significance. The results obtained show that there existed no significant variations between the samples mean of the five sampled points for the parameters tested. It reviewed that a large percentage of the dwelling units lacked modern basic facilities, the land use structure in the area is in violation of the original plan and most of the housing units are built with substandard





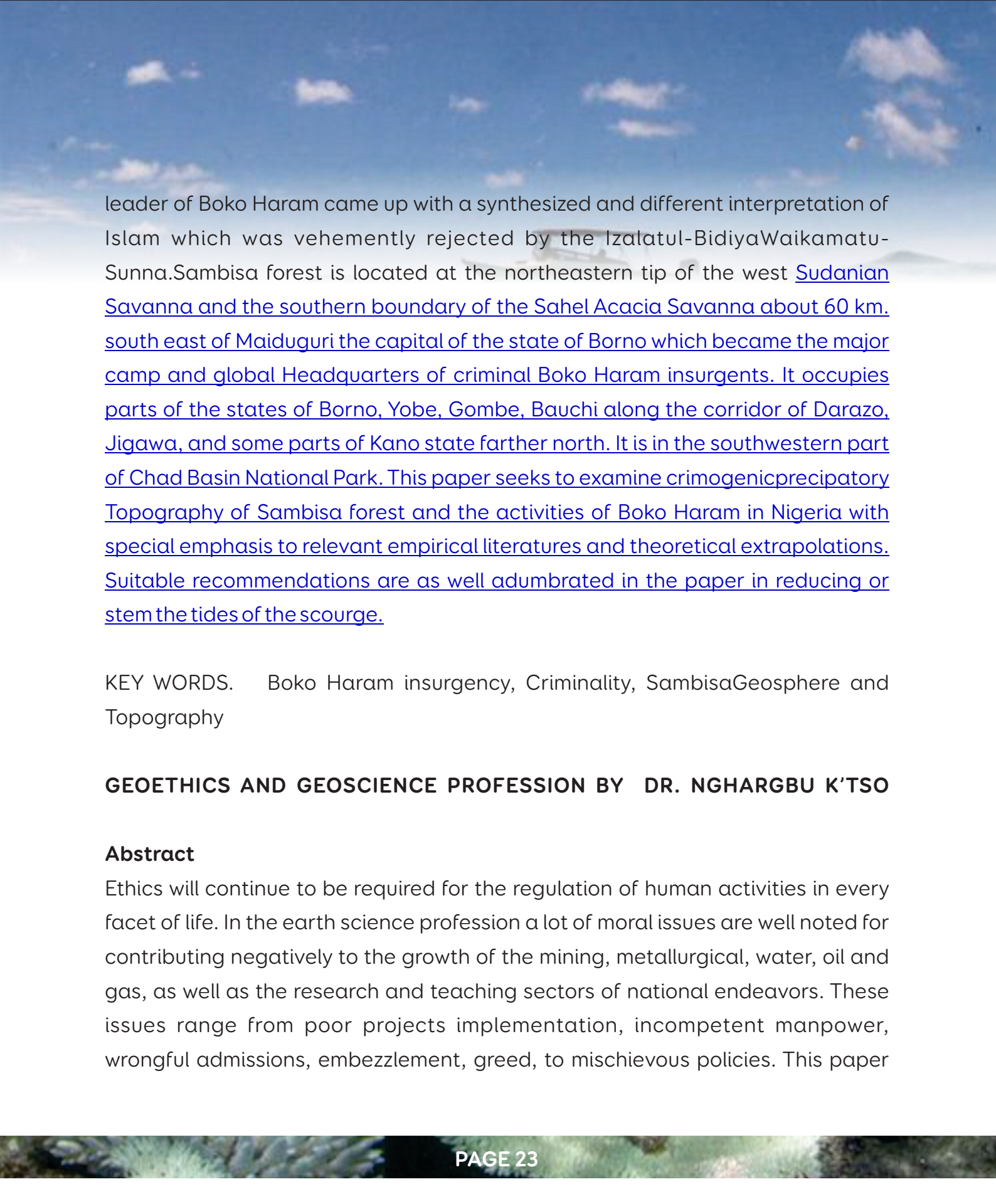
construction materials among others. It is therefore recommended that both short and long term policy issues relating to the physical improvement of the unplanned area such as prevention and selective development should be implemented through a deliberate effort.

R.Mundi and Oguiche Christopher J; are of the Department of Geography and Environmental Management University of Abuja, Abuja.

**THE QUAGMIRE OF BOKO HARAM INSURGENCY AND THE PRECIPATORY CRIMINAL TOPOGRAPHY OF SAMBISA GEOSPHERE IN NIGERIA BY  
DAGACI ALIYU MANBE<sup>1</sup>(Ph.D.) DEPARTMENT OF SOCIOLOGY UNIVERSITY OF ABUJA AND OGUICHE CHRISTOPHER J.<sup>2</sup> DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT, UNIVERSITY OF ABUJA**

**ABSTRACT**

Boko Haram insurgency has become a threat to National Security and Socio-economic life in present day Nigeria. The consequences of Boko Haram violent activities exacerbates in weakening the structures of the society and threatening the social well-being of the Nigerian people in an already overstretched and over-taxed country. The Boko Haram, then called Yusuffiya after its founding leader, Mohammed Yusuf, had established their stronghold popularly known as 'Markas' in Maiduguri the Borno State Capital since 1992 but gained notoriety in 2001. Boko Haram is a homegrown insurgence that rose from among the sect of Izalatul-Bidiya Waikamatu-Sunna founded in 1992 when Mohammed Yusuf the founding



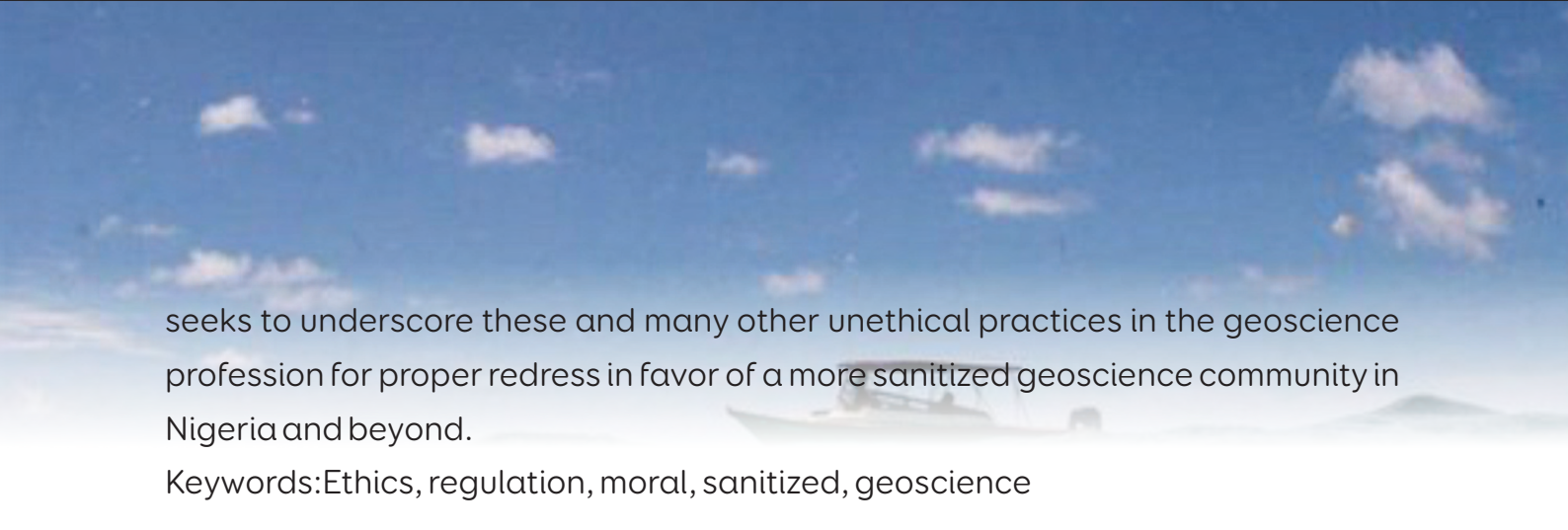
leader of Boko Haram came up with a synthesized and different interpretation of Islam which was vehemently rejected by the Izalatul-BidiyaWaikamatu-Sunna.Sambisa forest is located at the northeastern tip of the west [Sudanian Savanna and the southern boundary of the Sahel Acacia Savanna about 60 km. south east of Maiduguri the capital of the state of Borno which became the major camp and global Headquarters of criminal Boko Haram insurgents. It occupies parts of the states of Borno, Yobe, Gombe, Bauchi along the corridor of Darazo, Jigawa, and some parts of Kano state farther north. It is in the southwestern part of Chad Basin National Park. This paper seeks to examine crimogenicprecipatory Topography of Sambisa forest and the activities of Boko Haram in Nigeria with special emphasis to relevant empirical literatures and theoretical extrapolations. Suitable recommendations are as well adumbrated in the paper in reducing or stem the tides of the scourge.](#)

KEY WORDS. Boko Haram insurgency, Criminality, SambisaGeosphere and Topography

## **GEOETHICS AND GEOSCIENCE PROFESSION BY DR. NGHARGBU K'TSO**

### **Abstract**

Ethics will continue to be required for the regulation of human activities in every facet of life. In the earth science profession a lot of moral issues are well noted for contributing negatively to the growth of the mining, metallurgical, water, oil and gas, as well as the research and teaching sectors of national endeavors. These issues range from poor projects implementation, incompetent manpower, wrongful admissions, embezzlement, greed, to mischievous policies. This paper



seeks to underscore these and many other unethical practices in the geoscience profession for proper redress in favor of a more sanitized geoscience community in Nigeria and beyond.

Keywords: Ethics, regulation, moral, sanitized, geoscience

## **GEOETHICS IN OUR DAILY LIFE U.A. Lar**

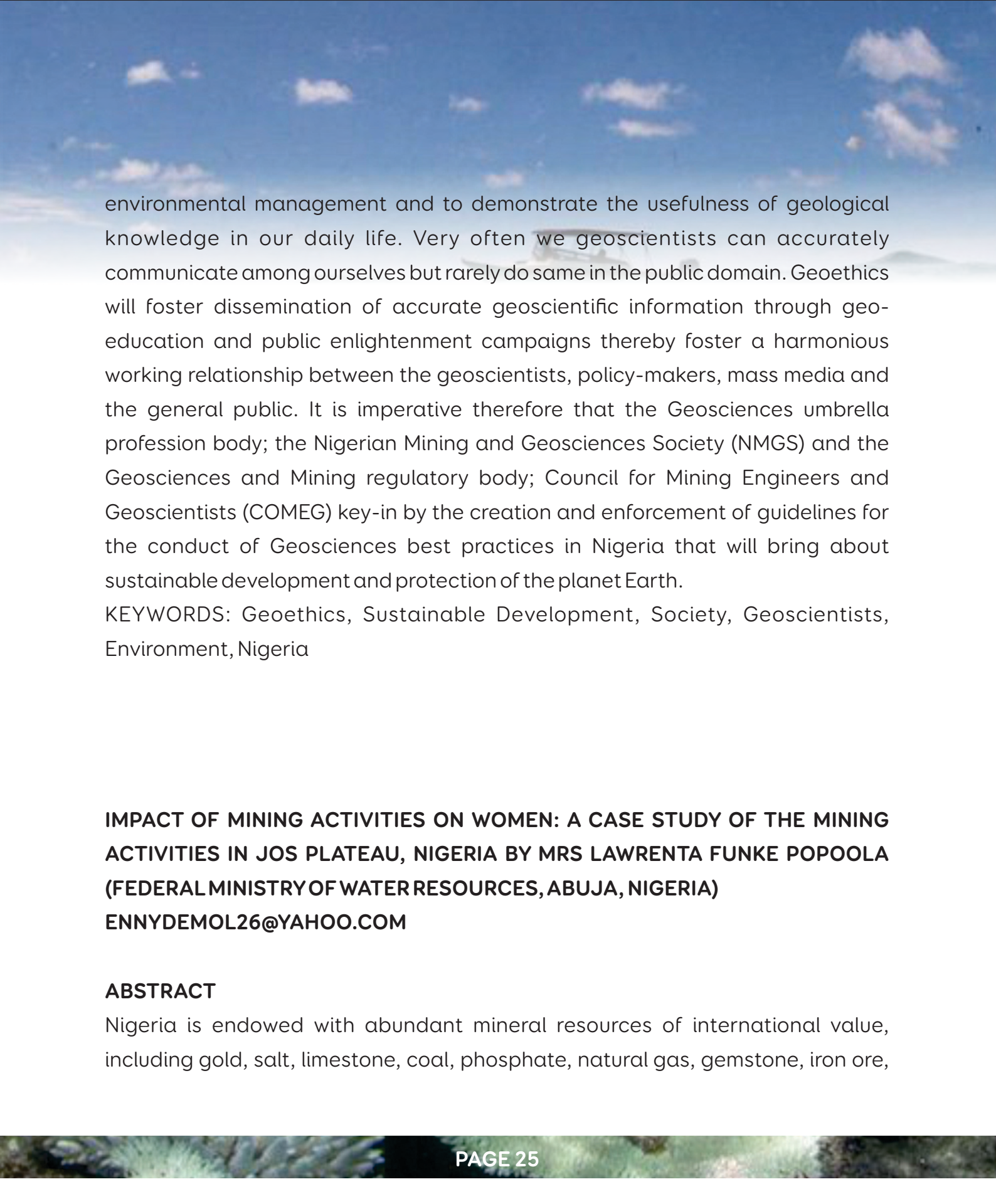
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### **ABSTRACT**

The Oxford Advanced Learner's dictionary definition of Ethic is "moral principles that control or influence a person's behavior". Most professions today are guided by principles and values in the conduct of their professions; be it in the area of education, earth sciences, medicine, research etc. Safeguarding the integrity of any profession requires that some code of good conduct be put in place. The concept of Geoethics is a recent development that has gained advocacy in the last decade aimed at promoting appropriate conduct and best practices in the Geosciences profession. The human interaction with the environment through the over-exploitation of natural resources coupled with natural and man-induced hazards are complex and multifaceted. Also, the consequent environmental problems/adverse human health implications would require a scientific platform that will address such ethical problems. Geoethics seek to promote the accurate reporting of scientific results, the careful management of natural resources and natural disasters for sustainable development. Geoethics require that the modern Geoscientists imbibe in their conduct scientific best practices, develop and adhere to environmentally friendly technologies, so as to promote sustainable





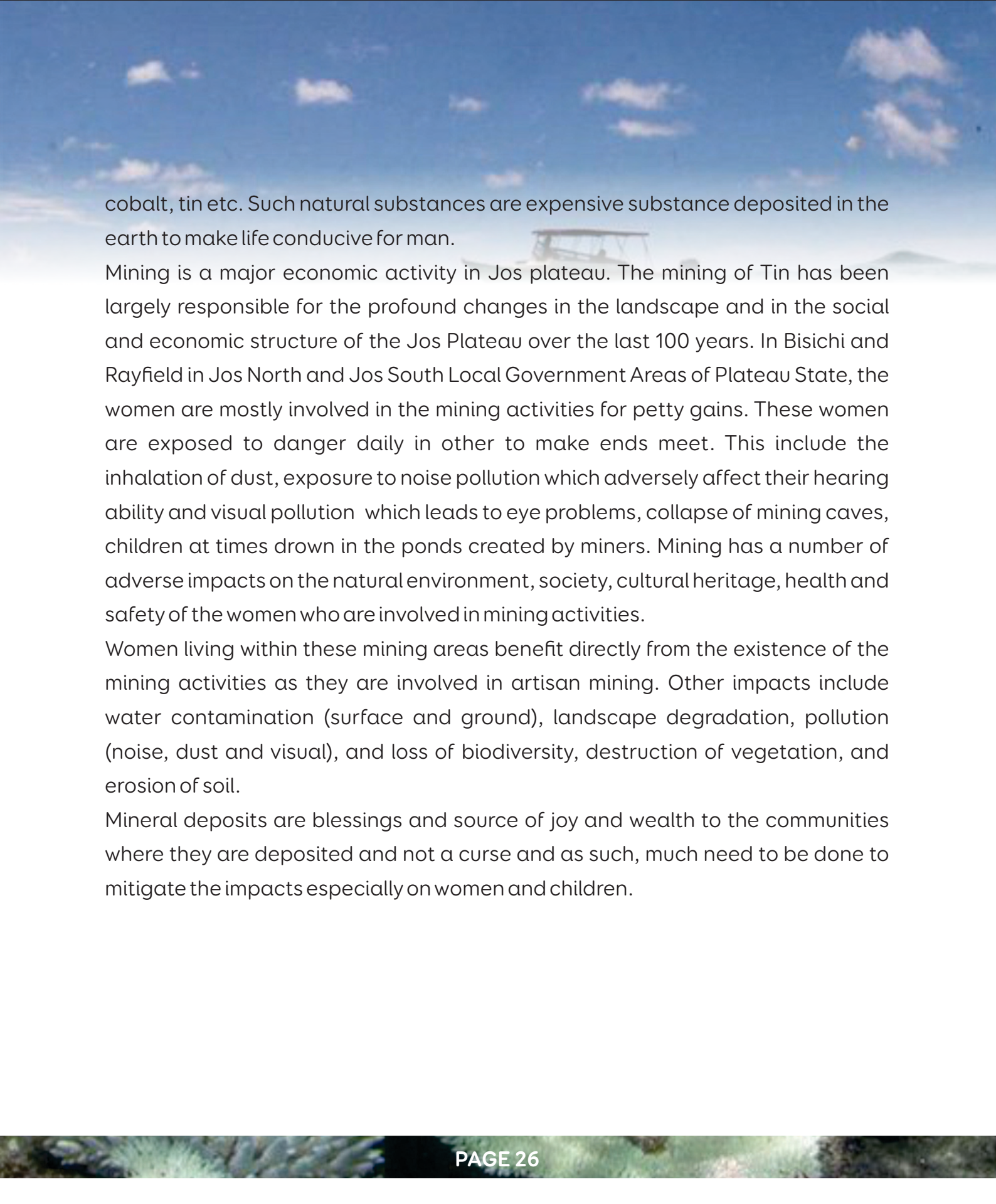
environmental management and to demonstrate the usefulness of geological knowledge in our daily life. Very often we geoscientists can accurately communicate among ourselves but rarely do same in the public domain. Geoethics will foster dissemination of accurate geoscientific information through geo-education and public enlightenment campaigns thereby foster a harmonious working relationship between the geoscientists, policy-makers, mass media and the general public. It is imperative therefore that the Geosciences umbrella profession body; the Nigerian Mining and Geosciences Society (NMGS) and the Geosciences and Mining regulatory body; Council for Mining Engineers and Geoscientists (COMEG) key-in by the creation and enforcement of guidelines for the conduct of Geosciences best practices in Nigeria that will bring about sustainable development and protection of the planet Earth.

KEYWORDS: Geoethics, Sustainable Development, Society, Geoscientists, Environment, Nigeria

**IMPACT OF MINING ACTIVITIES ON WOMEN: A CASE STUDY OF THE MINING ACTIVITIES IN JOS PLATEAU, NIGERIA BY MRS LAWRENTA FUNKE POPOOLA (FEDERAL MINISTRY OF WATER RESOURCES, ABUJA, NIGERIA)  
ENNYDEMOL26@YAHOO.COM**

## **ABSTRACT**

Nigeria is endowed with abundant mineral resources of international value, including gold, salt, limestone, coal, phosphate, natural gas, gemstone, iron ore,



cobalt, tin etc. Such natural substances are expensive substance deposited in the earth to make life conducive for man.

Mining is a major economic activity in Jos plateau. The mining of Tin has been largely responsible for the profound changes in the landscape and in the social and economic structure of the Jos Plateau over the last 100 years. In Bisichi and Rayfield in Jos North and Jos South Local Government Areas of Plateau State, the women are mostly involved in the mining activities for petty gains. These women are exposed to danger daily in order to make ends meet. This includes the inhalation of dust, exposure to noise pollution which adversely affects their hearing ability and visual pollution which leads to eye problems, collapse of mining caves, children at times drown in the ponds created by miners. Mining has a number of adverse impacts on the natural environment, society, cultural heritage, health and safety of the women who are involved in mining activities.

Women living within these mining areas benefit directly from the existence of the mining activities as they are involved in artisan mining. Other impacts include water contamination (surface and ground), landscape degradation, pollution (noise, dust and visual), and loss of biodiversity, destruction of vegetation, and erosion of soil.

Mineral deposits are blessings and source of joy and wealth to the communities where they are deposited and not a curse and as such, much needs to be done to mitigate the impacts especially on women and children.



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TOWARD A SUSTAINABLE FUTURE



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