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· PHOTOGRAPHY · ESSAY WRITING

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A SHARED FUTURE

CONGRATULATES WINNERS FROM NIGERIA

Campus Outreach Event at the University of Lagos

COMPETE COLLABORATE AND CO-CREATE A SHARED FUTURE

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INDIAFRICA: A Shared Future is a unique approach to foster a People-to-People (P2P) understanding with Africa by inviting creative exchanges between young Africans and Indians through a multidisciplinary contest series and a Young Visionaries fellowship program. This initiative aims to create a dynamic platform for students and professionals across India and Africa to collaborate through competition, innovation and en trepreneurship. The contest series, in the areas of Business Plans, Essay Writing, Photography and Poster Design, will help create a platform for talented young Indians and Africans to exchange ideas about emergent realities, successes and challenges, and explore future collaborations in business, design and culture. The Young Visionaries fellowship programme, seeks to identify promising young entrepreneurs in India & Africa and offer them opportunities for growth and collaboration. INDIAFRICA aims to forge meaningful bonds between youth from both geographies; inspire new possibilities of collaboration and encourage recognition of diverse nations as interdependent creative problem solvers with unique and invaluable resources and talents.

INSTITUTIONAL PARTNERSHIPS 2012

Business Venture: Lagos Business School, Nigeria and Indian School of Business, Hyderabad

Poster Design: National Institute of Design, Ahmedabad

Photography: National Institute of Design, Ahmedabad

Essay Writing: TERI University, New Delhi

INDIAFRICA PHOTOGRAPHY COMPETITION 2011-12 WINNER FROM NIGERIA

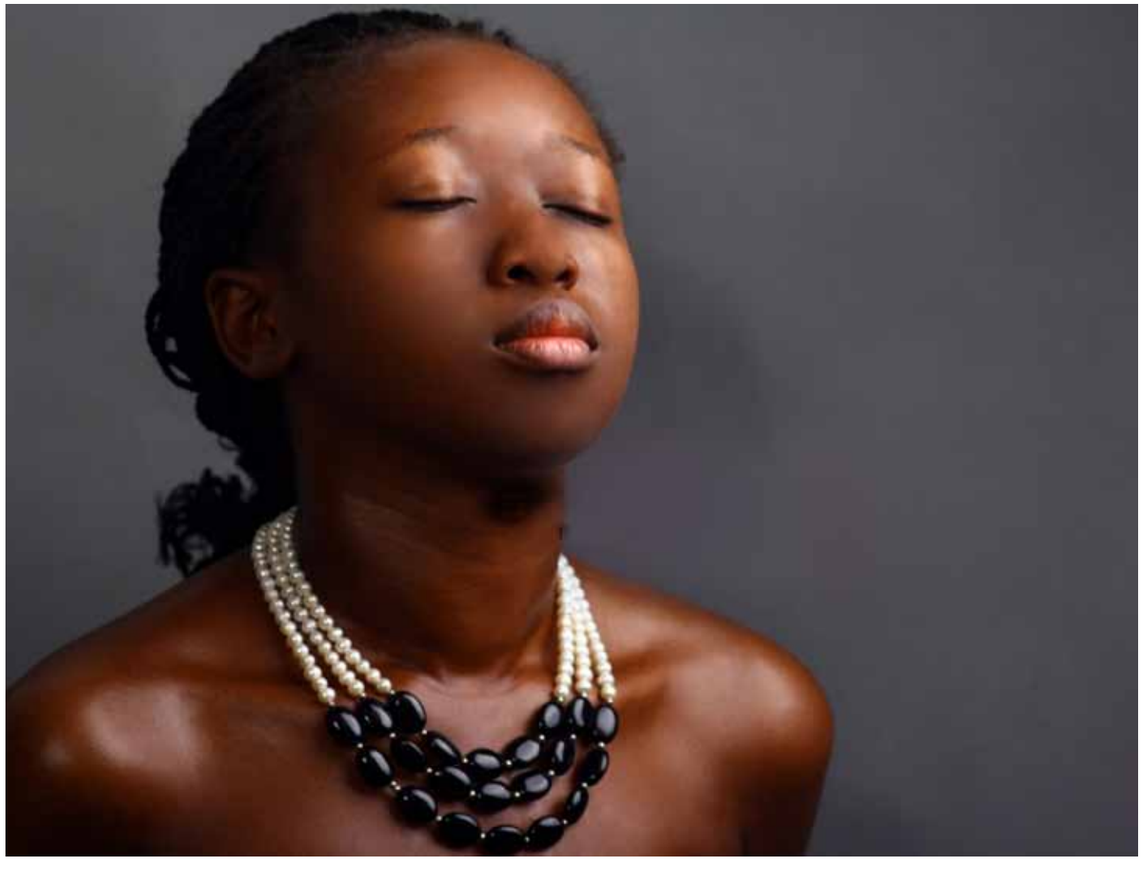
GBELA OLUWATOSIN KEHINDE

Obafemi Awolowo University, Nigeria

GBELA OLUWATOSIN KEHINDE was born in the mid 80s to a family of five. He describes himself as a God fearing, a charismatic person with a great flair for photography. He captures anything he sees because he feels that he usually sees what most people don't. Gbela is a very open minded person who is also meticulous with everything he does. He enjoys travelling, meeting new people and making friends.

Gbela was placed amongst the Top 18 and won USD 1000 in prize money

GBELA's Winning Photo Entry



IGE GBOLUWAGA

Obafemi Awolowo University, Nigeria

IGE GBOLUWAGA bagged his Bachelors of Science degree in geography from Obafemi Awolowo University Ile-Ife Osun State, Nigeria. He is an alumnus of AIESEC in Ife, A member of Ashoka and Association of American Geographers. He has worked with cross cultural teams on promoting entrepreneurship and sustainable development through AIESEC. Ige is currently a partner of "Project Green Flag", Nigeria (NGO) focused on environmental sustainability and works in a research and training company. His interests include research, training, urban design, environmental sustainability, entrepreneurship and Information Technology. He loves reading, swimming, travelling and learning during his leisure time.

JUBRIL ADEKUNLE ADESANYA

Obafemi Awolowo University, Nigeria

JUBRIL ADEKUNLE ADESANYA has studied Architecture from the Obafemi Awolowo Univeristy Ile-Ife, Nigeria. He has also completed his Masters degree in Architecture from the University of Lincoln, Lincolnshire, UK with a specialization in building urban design and research. He is now an incorporated member of the Chartered Institute of Building (CIOB) UK and has worked in a number of practices with Nigeria and other sectors in the UK. He has written and collaborated on a number of thesis/write-ups ranging from architecture, law and politics to aviation. He was working individually till he joined Deckard Tyler in 2011.

This team was placed amongst the Top 9 finalist and won USD 1250 in prize money

IGE and JUBRIL's Business Venture

Their business model is for an agriculture based firm 'Sustainable Strategic Agricultural Systems Company' (SSASC), which provides subsidiaries in crop farming, livestock farming, produce distribution and value added processing. They envision being the largest producer and distributor of agricultural produce and derivatives in Nigeria. SSASC would adopt a cost effective and environment friendly approach for producing quality products at competitive prices for consumers, creating employment and sustaining the environment. They would implement an extensive distribution network together with competitive pricing to ensure the returns on investment for all shareholders.

INDIAFRICA BUSINESS VENTURE COMPETITION 2011–12 WINNERS FROM NIGERIA

KEVIN EKWENWA

Federal University of Technology
Nigeria

KEVIN EKWENWA from Nigeria is the founder of "The Fisher Project Social Venture". He believes that its innovative solutions of the "Collapsible Fish Pond" aim to boost Nigeria's local fish production in order to meet up with the huge demand by providing a low-cost and viable alternative source of revenue to local fishermen, who have lost their only means of livelihood due to oil spillage in the Niger Delta region. The "Collapsible Fish Pond" is durable, conserves land space and saves cost by up to 70%, thereby increasing flexibility of making capacity focused decisions and maximizing profits.

JOSEPH AJAO

Obafemi Awolowo University
Nigeria

JOSEPH AJAO is an entrepreneur, engineer and a technologist. He is the founder and CEO of "GloballyEducated". He has worked at Google, Goldman Sachs and Rocket Internet. He has also travelled across 6 continents representing Nigeria in business, technology competitions and conferences. He is the ambassador of One Young World, World Business Dialogue, Business Today and Global Enterprise Experience. Joseph has also received awards from UNESCO, World Business Dialogue, United States Embassy, GIST, and ANZ Bank for using ICT to impact education in Africa. He was recently selected amongst the 80 entrepreneurs globally for a 3 month entrepreneurship programme at the Singularity University, CA.

KEVIN's Business Venture

His company, the Fisher Project aims to become a leading producer and supplier of quality Fish ponds and Fishery-Allied Products thereby becoming a synonym for Agricultural excellence in Nigeria. It is an Agricultural based community project. It started with the aim of equipping the unemployed youth and low income earners in their university's four host communities with skills, knowledge and confidence required in Catfish Farming.

Kevin and Joseph were placed amongst the Top 18 and won USD 1250 each

JOSEPH Business Venture

His proposed company "GloballyEducated", is a Web and Mobile Open Educational Resource platform which provides free access to educational resources and courses developed by local subject-matter experts. His strategy is to use interactive classes where teachers will teach a set of students across different centers, different countries and students can participate synchronously online or on a local TV channel or asynchronously by downloading the videos or getting a DVD of the classes. GloballyEducated will create access to all educational resources and educational opportunities. In creating educational access to educational resources, he is making use of the most available, accessible and affordable media. This medium includes mobile phones, local TV stations, mobile version of our website, a web portal and DVDs. He envisions this to become the biggest educational portal in the world in 5 years, penetrating both developed and developing countries.

INDIAFRICA BUSINESS VENTURE COMPETITION 2011–12 WINNERS FROM NIGERIA

EZEJI EBUKA

University Of Nigeria
Nigeria

EZEJI EBUKA is studying Biochemistry at the University of Nigeria and is passionate about providing scientific solutions to African related illnesses. He is among the regional Unilever Idea Trophy winners and is currently a Unilever Nigeria Campus brand ambassador. He is a USAID trained campus peer educator and a HIV counsellor. He is currently a part of a scientific research working on the use of local plants for the treatment of African related illnesses at the University of Nigeria.

CHUKWUNONSO DANIEL OGBE

University of Delhi
India

CHUKWUNONSO is an alumnus of the University of Nigeria and is a lawyer by profession. He is currently a postgraduate student of Comparative Law at the University of Delhi, India. He has to his credit a published book titled: "The Dilemma of Nigerian Youths". He enjoys reading and writing. Chukwunonso is extremely passionate about the empowerment of the Nigerian youth, through the creation of entrepreneurial opportunities for them.

EZEJI's Business Venture

EZEJI EBUKA business idea is "Morincare", a health based company with a passion to provide solutions to some healthcare issues with our locally and naturally available resources. With a broad knowledge of the side effect of chemically produced and synthesised pharmaceuticals, he plans on providing alternate natural sources easily available and affordable. It is still in its budding stage.

CHUKWUNONSO's Business Venture

CHUKWUNONSO DANIEL OGBE'S business plan focuses on poultry farming, which entails the rearing of domestic birds is as a method that can be easily managed by anyone without having any specialized skills. He describes his venture as a revival in the poultry farming business in Nigeria based on grassroots level poultry farming which will spur an employment chain reaction that will create jobs for the teaming unemployed youths. It will reawaken the abandoned cultivation of arable farmlands for the cultivation of grain and other cereal crops for poultry feed, and give rise to the setting up of cold rooms for dispensing poultry meat which will lead to the creation of employment opportunities, reduce migration from rural to the urban areas and lead to the reduction in crime rate.

Ezeji and Chukwunonso were amongst the Top 18 and won USD 1250 each

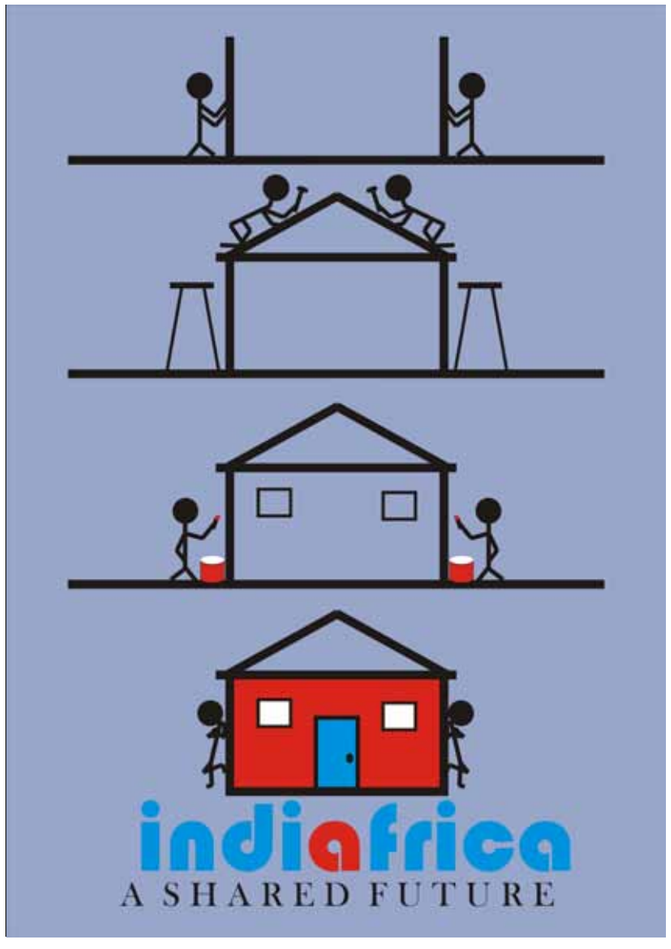
INDIAFRICA POSTER DESIGN COMPETITION 2011–12 WINNER FROM NIGERIA

GIDEON EMMANUEL

Babcock University, Nigeria

Gideon was placed amongst the Top 18 and won USD 1000 in prize money

GIDEON's Winning Poster Entry



INDIAFRICA ESSAY WRITING COMPETITION 2011–12 WINNER FROM NIGERIA

JOSEPH AJAO

Obafemi Awolowo University, Nigeria

JOSEPH AJAO is an entrepreneur, engineer and a technologist. He is the founder and CEO of GloballyEducated. He has worked at Google, Goldman Sachs and Rocket Internet. He has also travelled across 6 continents representing Nigeria in business, technology competitions and conferences. He is an ambassador to One Young World, World Business Dialogue, Business Today and Global Enterprise Experience. Joseph has also received awards from UNESCO, World Business Dialogue, United States Embassy, GIST, and ANZ Bank for using ICT to impact education in Africa. He was recently selected amongst the 80 entrepreneurs globally for a 3 month entrepreneurship programme at the Singularity University, CA.

Joseph scored the highest amongst the Top 18 and won USD 1000 in prize money

JOSEPH's Winning Essay

An Integrative Approach to Environmental Reconstruction and Climate Change in Nigeria and India

India and Nigeria: What is Common?
India is the second most populous country in Asia and the world, while Nigeria is the most populous country in Africa. India and Nigeria are both developing countries.1 India and Nigeria have one of most culturally diverse population.2 India and Nigeria collaborating to solve environmental issues is a synergy that will definitely yield results.

While it is a globally known fact that developing countries are lagging behind in the fight against climate change and environmental degradation, a successful synergy between two big nations among other developing countries can be a success story and case that other developing countries can use to lunch a fight against environmental issues in their countries.

Environmental Issues in India and Nigeria
The environmental problems in India are growing rapidly. The increasing economic development and a rapidly growing population that has taken the country from about 300 million people in 1947 to more than one billion people today is putting a strain on the environment, infrastructure, and the country's natural resources. Industrial pollution, soil erosion, deforestation, rapid industrialization, urbanization, and land degradation are all worsening problems.

Overexploitation of the country's resources be it land or water and the industrialization process has resulted in environmental degradation of resources. Environmental pollution is one of the most serious problems facing humanity and other life forms on our planet today.

India has been ranked as seventh most environmentally hazardous country in the world by a new ranking released recently. The study is based on evaluation of "absolute" environment impact of 179 countries, whose data was available and has been done by researchers in Harvard, Princeton, Adelaide University and University of Singapore 0n January 12, 2011. Brazil was found to be worst on environmental indicators whereas Singapore was the best. United States was rated second worst and China was ranked third.3 India is also placed at 8th position for threat to its endangered species and marine environment. The rising carbon dioxide emissions in the country, which causes global warming– were also sighted as alarming for protecting environment. India is now world's third biggest carbon dioxide emitter.

The Nigerian environment today presents a grim litany of woes. Many Nigerian cities are especially vulnerable to flooding, erosion and storm damage. Invariably, natural disasters in cities kill or injure members of low-income groups disproportionately because the poor often live in unsafe housing on vulnerable lands. The loss of homes, possessions, and often livelihood because of a natural disaster often leads to further impoverishment. Motor vehicles and motorcycles also pose a significant environmental threat to urban residents. Road traffic accidents in Nigeria between 1990 and 1995 were 121,451. Of these figures 15.66% totaling 19,049 cases occurred in Lagos, Nigeria's Metropolitan city(Danmole, 2002). Industrialization's effect on the environment is also noteworthy. While motor vehicles are the primary cause of pollution in cities, increased demandfor energy to run air conditioning and electrical appliances is contributing to pollution in many cities. Producing the energy required to run modern urban systems often involves burning fossil fuels, which releases such greenhouse gases as carbon monoxide, carbon dioxide, and nitrogen oxides. These emissions lead to global warming, which can cause destruction of the ozone layer, climate change, rising sea levels, changes in vegetation, and severe weather events.

Pollution Cases in Nigeria and India
The World Health Organization estimates that about two million people die prematurely every year as a result of air pollution, while many more suffer from breathing ailments, heart disease, lung infections and even cancer.4 Fine particles or microscopic dust from coal or wood fires and unfiltered diesel engines are rated as one of the most lethal forms or air pollution caused by industry, transport, household heating, cooking and ageing coal or oil-fired power stations.

In Nigeria and India, there are four major sources of pollution– emissions from vehicles, thermal power plants, industries and refineries. This sources have been attributed to the high population and exploration activities in India and Nigeria. Also, the problem of indoor air pollution in rural areas and urban slums has increased. In both countries, the governmental bodies monitoring pollution are ineffective and not doing their duties well. It is a well known fact that the problem with Nigeria and India is not environmental policy formulation, but environmental policy implementation.

Reading about the aims, goals and missions of these agencies, it will be seen that they were well laid down. However, the major problem can be attributed to poor implementation and the high level of corruption. Companies that should be fined for environmental degradation will always escape the law because there is always an internal person in the agency they can bribe. This cannot help us. We are only endangering our lives and the lives of generations to come. Another major problem can be poor spreading of awareness about

Environmental Degradation, Climate Change and their negative effects on human live. People in Africa see climate change as a fallacy(Dunlap et al, 1992). In a recent article I wrote and presented in Germany at the Daimler Sustainable Leadership Conference in Stuttgart, Germany, I highlighted the reasons climate change is not taken as a serious issue in Africa.

Indian air pollution has been blamed for its dry monsoon season, but a scientist has revealed that European pollution may also play a part in it. The volume of the summer monsoon has been weakening since the 1950s and Yi Ming of Princeton University in New Jersey claimed his experimental models suggest that the effect of European aerosol pollution accounts for about half the drop in the volume of monsoon rainfall – the other half is down to pollution over south Asia.

Coal pollution in India and Nigeria
India's environmental problems are exacerbated by its heavy reliance on coal for powergeneration. More than 80 per cent of energy is produced from coal, a fuel

that emits a highamount of carbon and greenhouse gases. Coal pollution kills more than 300,000 people every year.Andhra Pradesh, the coastal state of eastern India is experiencing a coal-plant construction boom, including the 4,000-MW Krishnapatnam Ultra Mega Power Project, one of nine such massive projects in planning or under construction across the country.

On August 23, 2011 the Jharkhand State Pollution Control Board has ordered the closure of 22 BCCL mines in the underground fire zone of Jharia. BCCL had taken over most of the 103 mines from private owners8. Hence, none of them had got environmental clearances. Most of the coal mines under the JSPCB's scanner were located in Jharia.

Vehicle emissions in India and Nigeria
Vehicle are responsible for 70% of the India's air pollution. The major problem with government efforts to safeguard the environment has been enforcement at the local level, not with a lack of laws. Air pollution from vehicle exhaust and industry is a worsening problem for India. Exhaust from vehicles has increased to about eight-fold over levels of twenty years ago; industrial pollution has risen to about four times over the same period. The economy has grown about two and a half times over the past two decades but pollution control and civil services have not kept pace. Air quality is worst in big cities like Chennai.

According to the Society of Indian Automobile Manufacturers, India's auto production has doubled from 7 million units in fiscal year 2004 to over 14 million units in year 2010 largely on the back of a buoyant domestic market.

The transport induced environmental pollution in Nigeria, is compounded by recent influx of motorcycles and tricycles, most of which have 2-stroke engines. Equally, the importation of used vehicles and lack of vehicular emission control also contributed to the high level of pollution in the atmosphere. Petrol and diesel engine motor vehicles emit a wide variety of pollutants, principally carbon monoxide (CO), oxides of nitrogen (NOx), volatile organic compounds (VOCs) and particulates, which have an increasing impact on air quality. In addition, photochemical reactions resulting from the action of sunlight on nitrogen dioxide and volatile organic compound from vehicles leads to the formation of ozone, a secondary long range pollutant, which impacts in rural areas often far from the original emission site. Acid rain is another long range pollutant influenced by vehicle nitrogen oxide emissions. That is why vehicle emission pollution problems are worsening in countries where there is no adequate legislation towards its control.

Municipal solid waste in India
India's urban population slated to increase from the current 330 million to about 600 million by 203010 , the challenge of managing municipal solid waste (MSW) in an environmentally and economically sustainable manner is bound to assume gigantic proportions. The country has over 5,000 cities and towns, which generate about 40 million tonnes of MSW per year today. Going by estimates of The Energy Research Institute (TERI), this could well touch 260 million tonnes per year by 2047.

Sources of Environmental Pollution in Nigeria
There are six major sources of environmental pollution in Nigeria they include:

Household Solid Waste: This source of pollution appears to be the most physical manifestation of poor environmental control in Nigeria. A survey of major cities in Nigeria shows that most municipal authorities have little or no dexterity in managing solid waste. The result is that cities are littered with bagged or heaps of refuse.

Flooding: Retention of water on the soil surface after rainfall is a major threat to lives and properties. Flooding is a direct consequence of lack of well-designed drainage system or blockage of existing ones. The poor drainage system in Nigerian cities is a sharp indication of major shortcoming inherent in our urban planning system.

Sewage Lagoons: Open-air disposal of sewage results in sewage lagoons. Sewage lagoons are meant to be treated, in most case gases and liquids derived from such treatment are recycled for use. Treatment and recycling of sewage is non-existent in Nigeria, thus sewage sites not only degrade the environment but constitute potential risk to community health.

Desert Encroachment: Desert encroachment to a certain extent is a natural phenomenon. However, human perturbation of the environment by depletion of forest resources has contributed to a large extent in speeding up this natural process. The use of firewood by the rural populace is known to be a major factor to desertification. This means that any plan to conserve the natural forest must offer the rural populace an alternative source of fuel.

Oil – Field Brines and Oil Spillage: Production of Oil and gas is usually accompanied by substantial discharge of wastewater in the form brines. Constituents of brines include sodium, calcium, ammonia, boron, trace metals, and high total dissolved solids (TDS). Oil spillage is a result of leakage of hydrocarbon from the pipes. To a large extent, poor maintenance of oil pipelines and poor monitoring of pressure regimes of the fluids with respect to the strength of the pipe.

Industrial Effluent: Effluent from industries is a major source of environmental pollution in Nigeria. The uses of water in industrial plants are for cooling, sanitation, manufacturing and processing. The quality of the effluent varies with the type of industry and type of use.

Pollution due to e-Waste in India and Nigeria A UN environmental conference in Cartagena, Colombia, attended by more than 170 countries in October 2011, has agreed to accelerate a global ban on the export of hazardous waste, including old electronics and discarded computers and mobile phones, from developed to developing countries. Environmental campaigners, who have been battling to broker a deal on the dumping of toxic waste for more than 20 years, said they were "ecstatic" about this "major breakthrough". "All forms of hazardous waste including that sent for recycling, to obsolete electronic waste, will be banned from leaving wealthy countries destined for developing countries."

This is not common source of pollution in Nigeria due to what is called "Tokunbo". Tokunbo is the sale of used-electronic devices at cheaper prices that they were bought in a secondary market.

This devices are sold either in good or bad conditions. If sold in bad conditions, they are usually sold to Engineers who will repair them and sell them to the poor who cannot afford to buy new devices.

Recorded Oil Spills in Nigeria and India
In the list of Oil spills related environmental issues on Wikipedia11, Nigeria and India are the two of just the 5 developing countries on the list, with records of Nigerian Oil spills appearing more than four times and majorly in the Niger delta region of the country.

The Forgotten Hero
Now, mother earth cries for help. Who will help her?

"Let me Narrate my Story; Let me Handover my Glory; My Proper Existence is Soiled; MyActual Abilities disabled; Am Burning Within every second; Yet my Beloved Ones Still Ablaze me on bulk; Preserve me Good Morals; Preserve me Abundant Grace; Visualize my Environment; Appreciate my Infection; Equate the Probabilities; Draw up my Score of Subsistence; Preserve me Chances; Preserve me Good Luck; Observe the Liberties; Judge my Brood; Am I Empty?; Am I Lacking?; Or Am I just Sleeping?; Give me Voice beloved Creation; Give me a Chance like Destiny; Pity me Old fart; Pity me Off-the-cuff; In existence I'm in Trouble; Out of Existence all is Gone; Much Measured Nonsense When am Obsolete; But Treated With Contempt When I Breath; Have I Offended Nature in Anyway?; Have my Progenies Defiled Creation?

Oh Pity me Vengeance; Oh Pity me Armageddon; Hear my Voice Eternity; Hear my Cry Conservation; My Children Preserve Your Existence; Make me Proud; Save Your Mother" ~ The Earth Cries for Help < http://www.unitedworldpoets.com/motivational-poem/earth-crieshelp>

It is time for India and Nigeria to collaborate on finding solutions to environmental issues!

Environmental Pollution Control in India and Nigeria
Environmental pollution resulting from uncontrolled discharge of sewage and toxic industrial effluent in India and Nigeria can be managed by monitoring chemical out-flows from the industries. One method of approach is to first conduct a chemical determination of the off-limit concentration of all the chemical constituents of the effluent beyond which environmental safety cannot be guaranteed.

A vigorous program on afforestation and irrigation of arid zones in India and Nigeria should be pursued to checkmate the rapid advancement of the desert. Injecting the brine through wells into deep formation that are geologically isolated from overlying fresh water aquifer can control pollution arising from oil-field brine.

Oil spillage can be tackled by bailing and skimmer pumping12. Most importantly, enforcement of existing legislation on oil-field practices is the most effective solution.

The Earth Summit (UNCED), which took place in Rio de Janeiro in 1992, recognized the pressing environment and development problems of the world and, through the adoption of Agenda 21, produced a global programme of action for sustainable development in the 21st century. Agenda 21 stresses the importance of partnerships in improving social, economic and environmental quality in urban areas. It suggests renewed focus on effective land use planning to include adequate environmental infrastructure, water, sanitation, drainage, transportation and solid waste management, in addition to a sound social infrastructure capable of alleviating hunger. According to Afonja (1999), the Earth Summit broadened environmental issues and emphasized the synergies with other social and economic policy issues The 1997 Special Session of the UN General Assembly emphasized the formulation and elaboration of national strategies for sustainable development. National governments are to integrate environmental, economic and social

objectives into decision-making by either elaborating new policies or strategies for sustainable development, or by adapting existing policies and plans. It also reaffirmed that all sectors of the society should be involved in their development and implementation. The World Summit for Sustainable Development (WSSD), held in August 2002, urged in its Plan of Implementation that nations should take steps to make progress in the formulation

Environmental degradation is a cause and consequence of poverty. It is the poorest farmer and herdsman, the assetless households and settlers of shantytowns and industrial margin areas who are the most exposed to hunger, famine and starvation. (Olanrewaju, 2003). The Millennium Development Goals are interdependent. Achieving one will help achieve the others (Jolly, 2003). Therefore, addressing the most pressing challenges of the urban poor will result in the reduction of environmental degradation and the achievement of sustainable urbanization.

A Proposal: Indian and Nigerian Coalition Against Climate Change

The UN predicts that India will overtake China as the world's most populous nation by 2025, when it will have almost 1.5 billion people. Nigeria is also facing an ever-increasing population growth. Experts say the whole world will face huge challenges containing poverty and saving the environment.13 India and the Nigeria can sign an agreement to establish a bilateral energy cooperation programme to promote clean and energy-efficient businesses and programmes. There is an opportunity for Indian and Nigerian companies to make joint venture deals in the renewable energy sector. This partnerships will be monitored by INCACC India and Nigeria can also set-up a Joint Clean Energy Research and Development Centre.

Funding for the centre is should come from national budgets of both countries and pursuing private sector participation.

Other Responsibilities of INCACC Will Include:

Awareness on Climate Change and Environmental Issues.

Recycling Monitoring and Evaluation.
Planning and Formation of Environmental Policies.
Development of Strategies for pursuance of Environmental Justice.
Ensuring efficient resource use and eco-innovation.
Enhance international environmental co-operation
Priorities actions in the key sectors affecting the environment: energy, transport, agriculture and Fisheries.

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INDIAFRICA ESSAY WRITING COMPETITION 2011-12 WINNER FROM NIGERIA

CLEMENT EWULUM

University of Aberdeen, Scotland

CLEMENT EWULUM was born in Benue State, Nigeria, to the family of Sir Barr & Lady Barr (Mrs.) C. Ewulum. He is an LLB, LLM (University of Aberdeen) and BL degree holder. He is also a member of the Association of Professional Negotiators and Mediators (DCON Consulting, Nigeria). Clement has authored two English-literature novels, "The Storm is Over" and "When Beauty Fades" which are currently being used in secondary schools in Imo State, Nigeria. He served as an editor in a law school magazine "A chosen generation" and as an editor-in-Chief in a community development book "Law and the society".

Clement was placed amongst the Top 18 and won USD 1000 in prize money

CLEMENT's Winning Essay

Environmental issues unlike the economic and political sectors have been recognised by scientists and the civil society as playing a key role in the vulnerability and precariousness of the earth since the 1960's 1. This is due to the surge in industrialization. Laws and policies have been put in place to put in check the negative effects of this surge, but due to the changing nature of the environment, it is pertinent to have a periodical overhaul and adoption of new laws to complement the existing ones to ensure a healthy and productive environment 2. Even though the WTO 3does not provide a specific agreement that deals with the environment, through the binding rule of the WTO, India and Africa can adopt trade-related measures aimed at protecting the environment(Subsidies) as long as they are non-discriminatory. India and Africa can achieve this by adopting the principle of learning, unlearning and re-learning measures to sustain the environment and ecosystem by adopting competitive means by way of; setting high tasks for an award of excellence, setting up a joint scholarship scheme to be awarded to countries attaining excellence in accelerating internationally agreed development goals 4, including the Millennium Development Goals , adopting a body on sustainable environmental development, to be chaired by the country accessed and adjudged to be the leading figure on environmental sustainability. India and Africa can collaborate by means of full participation of the civil society in round table discussions for purposes of co-creating the environmental future.

In trying to extrapolate how best India and Africa can sustain the environment to foster economic, social and political growth, some basic areas like forests/Land, freshwater, air/Climate change and waste management would be discussed.

FORESTS/LAND: One of the most important issues for management of forests is planning of forest road network 5. Due to the short- and long-term environmental and social hazards to sustainable forestry caused by forest road construction and maintenance as seen in the GIS data collected, it would be in the best interest for India and Africa to adopt a restrictive policy on indiscriminate forest road construction or maintenance. Also there is need for assessing of mass acquisition of land for potential environmental, economic and social impacts, so as to minimise setbacks to host countries.

1. Rio +20, 'UN Conference on Sustainable Development' http://www.uncsd2012.org/index.php?menu=22 (accessed 6th July, 2012) Official (Organizational) Publication.
2. Rio de Janeiro, 'United Nations Conference on Sustainable Development' http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N12/381/64/PDF/

N1238164.pdf?OpenElement (accessed 6th July, 2012). Official (Organizational) Publication.
3. WTO, 'Trade and Environment' www.wto.org/english/tratop_e/envir_e/envir_e.htm (accessed 7th July, 2012) Official (Organizational) Publication.
4. United Nations Environment Programme, 'Rio declaration on Environment and Development' http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163 (accessed 7th July, 2012) Official (Organizational) publication.
5. S. Ataollah Hosseini, M. Reza Mazrae, M. Lotfalian, A. Parsakhoo, 'Designing an optimal forest road network by consideration of environmental impacts in GIS' (2012) (Vol. 20, Issue 1) JEELM 58.

The aforementioned result can be achieved by collating, analysing and interpreting every form of geographic data derived from the GIS of various geographical locations. From the GIS information, overexploited resources would be deduced, which would aid in couching programmes/policies to protect the income of farmers. Reason for this proposal being that, when people lack alternatives, pressure on resources increases 6. Studies 7 have shown that due to access granted by logging roads, selectively logged areas are eight times more likely to be settled and cleared by cultivators than untouched rainforests.

India and Africa should be mindful here that no matter the level of policies put in place to ensure safety of the environment, so long as corruption thrives, it would be almost impossible to maintain a 'green city' or 'eco city'. Corruption to the environment is akin to poison injected into a living thing, as it kills the environment by making environmental policies inactive. Policy inaction should be put in check, to curtail stagnation in enforcing policies on ground for protection against rainforest degradation and depletion. Even though these policies need overhauling, those already on ground if properly enforced can protect against logging, and other environmental hazards. It becomes imperative here therefore that India and Africa collaborates by exchange of information between its environmental enforcement agencies, especially in the area of environmental protection. This should be done in a manner not deemed to be in breach of state sovereignty.

India and Africa can compete on policies such as replacing every tree cut by another one planted, to guard against loss of forest resources and damage to the ecosystem. This seems much impossible, but is achievable by integrating issues of biodiversity into global environmental and economic agenda's 8.

FRESHWATER: When there is limited quantity and quality of water to meet increasing demand by the teeming population and industry expansion, water scarcity is said to exist 9. According to the International Water Management Institute (IWMI), 20 litres is deemed the minimum daily requirement for drinking, washing, cooking and sanitation. If India and Africa are to combat this hydra-headed monster and co-create the future on water sustainability, each will have to focus on the efficient use of all water sources (groundwater, surface water and rainfall). India and Africa should also focus on laws which mitigate threat to fresh water and ecosystem by forward-looking water technologies and management techniques that were not available to countries in Europe and North America at the time they began contaminating their waterways.

6. UN Documents, 'Our Common Future: Report of the World Commission on Environment and Development http://www.un-documents.net/ocf-02.htm (accessed 7th July, 2012) Official (Organizational) publication.
7. Mongabay, 'Logging' http://rainforests.mongabay.com/0807.htm (accessed 8th June, 2012) Official (Organizational) Publication.
8. UN Environment Programme, 'Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental issues' http://www.unep.org/publications/ebooks/foresightreport/Portals/24175/pdfs/Foresight_Report-21_Issues_for_the_21st_Century.pdf (accessed 6th July 2012) Official (Organizational) Publication.
9. World Water Day, 'coping with water Scarcity' www.unwater.org/wwd07 (accessed 9th June, 2012) Official (Organizational) Publication.

Notwithstanding the importance of rainwater, it is rarely integrated into water management strategies which usually focus on surface and ground water. India and Africa will need to integrate rainwater harvesting more fully into their IWRM strategies to promote its use to alleviate water scarcity. The harvested rainwater could be used for purposes other than human consumption such as artificial irrigation, car wash, industrial use, general cleaning etc.

Intersectoral and multidisciplinary approach to manage water resources should be put in place to ensure coordination, development and management in order to optimise economic welfare without compromising the sustainability of vital ecosystems. The integration need to put into consideration; development, use, demand and supply, placing emphasis on people and the ecosystem that sustains them. On the idea of demand, we should enhance the productivity of water use in all sectors.

Furthermore, in co-creating the future on water management, India and Africa need to focus her policies at protecting and/or restoring ecosystems which naturally capture, filter, share and release water, like; rivers, wetlands, forests and soils. This is very vital in sustaining the availability of good quality water, by protecting rivers and wetlands from pollution (especially by industrial activities); forests and soils from indiscriminate activities which could lead to degradation or depletion.

'Green policies' (policies to act as catalyst in observing surface water quality, waste water treatment, ground water quality, adequate and effective agricultural water use, and guard against water pollution) should be put in place to ensure that there is proper protection and conservation, proper/effective reuse of this resource.10

AIR/CLIMATE CHANGE: Besides detrimental health effects, economic losses which arises due to air pollution are becoming an increasing concern either because of direct financial losses or detrimental attractiveness to a place. For India and Africa to collaborate in tackling this problem of air pollution, it would be necessary to understand (i) the physical characteristics of tropical urban atmosphere, (ii) emissions, formations and transformation of air pollutants, and (iii) the health impacts and air quality. This is very vital to be able to formulate 'green policies' to combat air pollution. In order to facilitate (i) & (ii), and get data for (iii) above, it is suggested that India and Africa put resources together in conducting continuous and long term measurements of meteorological variables on air pollutant's causes and effects. Further research could then be carried out on the data collected, for possible solutions. To achieve this, India and Africa will have to stay poised in their focus on; the dynamics and structure of a tropical urban atmosphere, as well as mode of transport of air pollutants; continuous monitoring of a comprehensive number of criteria pollutants, air toxics and meteorological variables;

10. Isabel .C. Escobar, 'sustainable water for the future water recycling versus desalination' (2010) (Pages 3-5) comprehensive inventory of local and regional emissions from natural and anthropogenic sources (anthropogenic degradation of the environment); development of predictive air quality models, including forecasting of trans-boundary smoke-haze episodes; conducting research in order to study how air pollutants are formed/evolve; study of greenhouse gases and global climate change, including aerodynamics of cloud interactions; effects of exposure to different air pollutants and collating data on their health impacts, and finally adopt policies to ensure a cost-effective, benefit analysis and policy implications of reducing these pollutants 11.

Global warming is considered to be the result of increased concentrations of greenhouse gases in the atmosphere due to anthropogenic activities since the industrial revolution. To effectively combat this 21st century scourge, India and Africa will have to develop ambient monitoring by putting on ground stations to measure air quality across the city, to measure hourly ambient concentration of pollutants. Due to urban sprawl/residential extension, urban air quality is of utmost importance, especially in monitoring road transport and industrial emissions (e.g. gas flaring of oil and gas facilities – while natural gas flaring is bad for the environment, the venting of raw gas is even worse).

As a way of putting a check to this hydra-headed scourge, especially in the industrial sector, the imposition of tax on industrial emission should be put in place. This is another gray area worthy of mention which has been overlooked in recent times. Tax laws if strengthened, would yield much benefit by curtailing as well as enhancing environmental growth. A proper tax law would help checkmate some discrepancies as well as promote economic growth as we see in some developed countries.

It is obvious that without the necessary structures on ground, it would only be a waste of gun powder firing at the moon. In the light of this fact, there is the need to have installed, 'supersites' equipped with state-of-the-art instruments with expert staff for operation and maintenance. Also, in collaborating to foster significantly reduced ambient levels of pollutants, adoption of proactive measures without compromising impacts on public health which could result in health costs, loss in manpower hours and ultimately reduce quality of life is highly solicited. In co-creating the future on environmental issues, there is the need for India and Africa to adopt air quality modelling, which are models used for simulating the formation of pollutants and their dispersion. These models are used in predicting air pollution concentrations, particularly those of secondary pollutants, and which would serve as means of developing air quality laws, because they can evaluate control measures under present and future emissions and climatic scenarios.

11. Review of Singapore's air quality and greenhouse gas emissions, 'Current situation and opportunities' http://dx.doi.org/10.1080/10962247.2012.666513 (assessed 11th June, 2012) Official (Institutional) Publication.

WASTE MANAGEMENT AND HAZARDOUS CHEMICALS: The systemic concept of environmental sustainability says that the economy is embedded in society, which is embedded in nature 12. This means they are inter-twined, and so in taking steps to protect our environment, we are indirectly laying a good foundation for a robust economy. India and Africa in putting their resources together to foster a 'green environment', should adopt policies which promotes best practices in hazardous-waste management. Policies like adopting the US principle of placing the burden of property management and disposal of hazardous-waste on companies that generate them13. This principle is not absurd because it is only fair that everyone be held liable for their personal acts and conduct.

To guarantee an efficient hazardous-waste management program, there is the need for communities to implement policies which would review all waste generated on site (anything discarded in drains, trash, or recycle bins.), treat any unknown material as hazardous-waste, and store it in a closed container that is labelled and dated. This is to allow for proper documentation and evaluation of both hazardous and non-hazardous waste articulated on the need for further research on such material.

For India and Africa to meet the target of the 7th Millennium Development Goal's (MDGs) centred on environmental sustainability, India and Africa will need to reinforce their Environmental Protection Agencies, by making these bodies more proactive. This could be achieved by collaborating in organising a periodic joint workshop and training where ideas are exchanged and issues brought to the table and deliberated upon by parties in attendance. In search for a 'green environment', the issues of high cost of collection of waste, transportation and disposal of municipal solid waste (MSW) and the attendant lack of incineration and landfill facilities which are major hindrances should be given priority. The establishment of the '3R' principles of Reduce, Reuse and Recycle is highly recommended at national and local levels where they have not been adopted. Through study, 14 it can be deduced that India and Africa can make headway in sustaining the environment with a decrease in the generation rate and variations in the characteristics of flammable garbage of food waste disposal use. This will in turn yield a cost-saving benefit in terms of managing garbage collection and transportation, which in so doing, recycling of materials and thermal energy recovery of the collected garbage will become easier.

12. D.G. Gajghate, B. Talwar, P. Pipalatar and T. Pustode, 'Chemical characterization of PM10 for metals in ambient air of Chennai, India' (2012) (Vol. 16, issue 2) Journal of hazardous, toxic and radioactive waste 169.
13. Powell Isaac, 'Best Practices in Hazardous-waste management' (2008) (Vol. 104, Issue 8) Pg. 49.

14. Xinmi Yang, Yakao Okashiro, Katsuliko Kuiyasu and Hideaki Ohmori, 'Impact of food waste disposers on the generation rate and characteristics of municipal solid waste'

Since the 21st century, the zeal to attain maximum renewable energy development has been underscored, but attaining that height has been a mirage. Through the elimination of economic, regulatory and institutional barriers, the sky would only be a stepping stone to victory in renewable energy development. Notwithstanding the copious advantages of industrialization, it has become a thorn in the flesh in disguise especially as it pertains to environmental degradation. In the light of this, implications of novel technologies and chemicals need to be accessed before they reach production phase, so as to reduce the risk to the society and nature at large. The ISWM was targeted at municipal solid waste management 15, but the United Nations Environmental Program is promoting this concept to cover all waste generating sectors to optimise the level of material and resource recovery for recycling and waste management.

These environmental programs and policies may not necessarily be the key to upturning corporate governance in environmental issues, as the law alone cannot enforce common interest, rather, community knowledge and support would entail more public participation in environmental decisions. This can be achieved by decentralizing management of resources which requires promoting citizens' initiatives, empowering people's organizations and strengthening local democracy 16

15. Mushtaq Ahmed Memon, 'Integrated Solid Waste Management based on the 3R approach'

16. UN Documents, 'Our Common Future: Report of the World Commission on Environment and Development http://www.un-documents.net/ocf-02.htm (accessed 7th July, 2012) Official (Organizational) publication.

CONCLUSION

For India and Africa to compete, collaborate and co-create the future on environmental issues, it becomes imperative for the duo to be open to new ideas, given the fact that the old ones though effective, have not effectively emancipated our environment from the doldrums of 'near-success-syndrome' of environmental sustainability. The writer suggests that the Localism Bill 17 which received the royal assent in the UK on 15th November, 2011, with the aim of shifting power from central government back to individual, communities and councils hands be adopted. This would foster a speedy development plan in environmental sustainability due to the fact that, decentralization of power helps alleviate the bureaucratic, stifled and too interfering nature of central governments, especially in the public sector. Also the erection of power generating plants to convert landfill biogas into electricity would yield revenue from plants which could be used to finance improvement of waste disposal infrastructure.

The writer further suggests that the "comply or explain" principle of corporate governance be adopted in ensuring compliance with the policies enshrined in the various Environmental Protection Laws. This compliance principle which came about as a result of the combined codes evolving from the Cadbury, Greenbury and Hampel committees, is to the effect that any company which doesn't abide by the set out codes of best practice should give reasons why it has not complied. Such reasons should be by way of managers explaining any policy adopted, also the workability and how it could be used to achieve the said objectives of a company. Where shareholders are satisfied with such policy(s), they could go ahead, otherwise, they would be asked to abide by the codes of best practice as enshrined in the combined codes. Unlike in the world of corporate governance, where the "comply and explain" principle has often been misinterpreted to mean "comply or perform" and as such been viewed as erroneous, the writer is of the view that in an environmental setting, whatever formula yields the desired result, should be given credence.

The writer proposes that India and Africa should come up with what could be described as "combined codes of best practice" for a sustainable environment to encompass among other elements; environmental impact assessment, town and country planning with a view to mitigating flooding, consultation on streamlining the planning process for national significant wastewater transfer and storage infrastructure projects, tree preservation (replacing any tree cut by planting another), planning for waste facility and planning for water security using the 3R approach. Just like the flexibility principle in the 'comply or explain' principle of corporate governance, there should be no rigid application of such combined codes of best practice in relation to environmental sustainability, as reference to the particular circumstance/geographic location should be considered. The reason for this being that, different jurisdictions may or usually suffer from varying calamities not similar to other jurisdictions due to topographic, climatic or

17. Communities and Local Government, 'The Localism Act' www.communities.gov.uk/localgovernment/decentralisation/localismbill (accessed 8th June, 2012) Official (Government) publication.

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INDIAFRICA ESSAY WRITING COMPETITION 2011–12 WINNER FROM NIGERIA

AJAYI IFEDAYO OLUMIDE

University of Calabar, Nigeria

AJAYI IFEDAYO OLUMIDE from Nigeria is a graduate student currently pursuing his Master's degree in Environmental Geoscience at UNICAL (University of Calabar, Cross River State, Nigeria). He holds a Bachelor's and a Post – Graduate degree in Geology, Applied Geology, Environmental Geology and Pollution Studies. Ajayi has been involved in research concerning the use of an aquatic weed, water hyacinth (Eichornia crassipes) which will help in cleaning up metal-polluted water and stream sediments in the riverine community of Oberrekai, Akamkpa Local Government area of Cross River State, Nigeria. He has a deep-seated passion for Energy and Environment-related issues and is an advocate for a clean and green Environment.

Ajayi was placed amongst the Top 18 and won USD 1000 in prize money

AJAYI's Winning Essay

After 50 years of independence, Africa is still largely dependent on foreign aid and remains specialized in commodities. On the other hand, the global context has changed profoundly and Africa has diversified the range of its partners greatly. The new issues at stake are manifold. Africa is concerned by many problems that are global in scope, such as climate change impacts (global warming, greenhouse gas emissions, drought and desertification), food security, water security, Energy security, managing urbanization, land and water pollution.

Africa and India, fully cognizant of the immense requirements of dealing with issues pertaining to energy and environment, reiterate100 their commitment to focus on these areas, particularly in the context of sustainable development as important areas of cooperation. They dedicate themselves to fulfilling programmes established under the Action Plan and to look at enhanced engagement in areas such as the continental NEPAD-Identified infrastructure projects and PIDA, particularly with regard to increasing financial flows to these sectors.

India has expressed a desire to further invigorate the historic India-Africa relationship and is set to build on its historic relations and its strength in knowledge to impart a strategic character to its relations with Africa. This will provide a better environment for200 greater investment in these sectors. They have agreed to work closely together in the interest of developing countries to set an appropriate international agenda to benefit the development of both Africa and India.

Efforts will be made to give more attention to new areas like new and renewable energies through training programmes and capacity building as well as in sustainable environmental practices. They have also agreed to cooperate in the area of environment, including desertification and support for Africa's Great Green Wall project. The Great Green Wall is a project developed by the African Union to face desertification in South300 Sahara. The project, held by 11 African countries, consists to create a green belt, 15 km across and 7,775 km long, from Senegal to Djibouti.

Its origins can be traced to Burkina Faso's president Thomas Sankara, who led efforts fighting desertification in his country from 1983-1987. In July 2005, under the Presidency of Olusegun Obasanjo, the African Union decided to adopt and support the project, which shows similarities to the more decentrally organized Green Belt Movement which has been initiated by Nobel Prize winner Wangari Maathai. This green barrier, coordinated by Senegal, is aimed to protect the land against encroaching400 sand and erosion.

Contributing to improved local incomes, this green barrier will be a global answer to the combined effect of natural resources degradation and drought in rural areas. On June 17, 2010, the Global Environment Facility (GEF) announced the project will be first financed by a $119 million grant, already adopted by the African Union in 2007. The consumption of many types of resources gives rise to environmental degradation. Fossil fuel use results in land degradation from coal mining, freshwater pollution from mine drainage and oil refinery operations, marine pollution from oil spills and tanker operations, and air pollution500 from all forms of combustion.

Air pollution from fuel combustion has local effects on public health, regional impacts such as acid precipitation, and globally contributes to greenhouse gas emissions that may lead to climate change. Consumption of forest resources can lead to environmental problems as well as the loss of critical habitat and species. In many parts of Africa and Asia, fuel wood consumption exceeds forest growth, contributing to forest degradation. In principle, logging for timber can be sustainable, but often in practice it is not.

The environmental consequences of resource consumption in India include not only growing industrial pollution, 600 but also the resource degradation that results from population growth. Development and environmental goals are inextricably linked in countries such as India. Development must alleviate poverty if renewable resources are to be preserved for current and future use. The first Africa-India Forum Summit was held from 4–9 April 2008 in New Delhi, India. The Summit adopted the Delhi Declaration containing political commitments of the two sides, as well as an Africa-India Framework for Cooperation.

In the Declaration, Africa and India recognized that climate change is a global challenge, that development is the best form of adaptation and stressed that700 the foremost priority for developing countries is to ensure accelerated social and economic development. They underscored the importance that adaptation measures be adequately financed through additional resources and not from development funds. Africa and India also expressed their determination to participate effectively in the negotiations under the UNFCCC's Bali Action Plan towards comprehensively addressing climate change in accordance with the provisions and principles of the UNFCCC, in particular the principle of common, but differentiated responsibilities and respective capabilities.

In the Framework for Cooperation, Africa and India agreed, inter alia, to create an enabling environment for investment and development of renewable800 and non-renewable energy sources; enhance cooperation and capacity-building in best practices and adaptation on the impact of climate change and desertification; exchange experiences on recent advances on alternative energy sources and sustainable land management; and engage in technical cooperation for Clean Development Mechanism projects. Only 5% of India's investments in Africa are in green projects. There is need for more investments in green projects in Africa for sustainable development

Population growth and increased urbanization are two major global mega forces affecting environmental change (KPMG, 2012). They are key drivers of the demand for energy, water, and food, and the resulting900 degradation and depletion of natural resources. Governments will have to deal with the interactions among these megatrends, and businesses "can expect significant supply chain and price volatility as a result of such rapid growth coupled with increased use of resources" (KPMG, 2012).

Concurrent with population increase is rapid urbanization that creates pressures on human health, water and energy needs, and waste management. India and Africa's "to-do" list is economically and socially challenging: they must vastly improve infra-structure for water systems, sanitation, and urban development; lessen hunger, assuage poverty, and promote human dignity; curb greenhouse-gas emissions; avoid persistent, bio-accumulative, and toxic1000 chemicals; and protect biodiversity.

India: The Environment and Climate Change Issues

India is South Asia's dominant actor with more than 1.17 billion citizens, with a growth rate of 1.3% (2011 census, 2011 estimate). The carrying capacity of India's land is under stress. India has 2% of the world's surface area, 4% of its fresh water, and 17% of its population. Over 70% of Indians depend on farm incomes with about 65% of Indian farms dependant on rain fall. Pressure on agricultural production from climate change is exacerbated by degraded soils and water shortages. An estimated 45% of Indian land is seriously degraded due to erosion, soil acidity, 1100 alkalinity and salinity, and water logging rain has become more erratic in recent years as ground water is being depleted. One study found that the water table in India's northwest is falling by 1.6 inches per year.

Global climate change is anticipated to affect India in a number of ways. Sea level rise from global warming would inundate low lying areas. More intense and destructive weather events, such as cyclones, are

also anticipated. Potential changes to the monsoon rains, which are critical for agricultural production in India, could also reduce agricultural output and undermine food security for millions in India.1200 Rising temperatures will also likely lead to Himalayan glacial melt that would alter the flow of India's rivers. The Indian Institute for Meteorology has demonstrated that global warming will likely cause erratic monsoon behavior in India that would itself lead to static or declining food output for India.

However, India does offer Africa the fruits of its experience in agricultural expansion, clean-water management and dealing with the growing threat of climate change. The first principle of India's involvement in Africa is to add value to the natural resources in Africa, thereby making India Africa's strategic partner. India's investment for impact1300 can have a powerful new role in the continent of Africa. With commitment and rigorous action, the perils of this moment can be avoided and the vision of India and Africa can be realized, applying the wealth of the present era to address some of their most troubling environmental challenges.

India's engagement with Africa has to be strategic to unlock Africa's potential. A rising India is good for Africa. A rising Africa is good for the world. Thus, it is important for India and African countries to work out adequate policy packages and institutional structures, technologies and inter-regional development schemes to1400 develop mutually beneficial linkages in the spirit of genuine South-South cooperation.

Africa: The Environment and Climate Change Issues
Climate change presents additional challenges to Africa – at a time when it is already hard hit by high oil prices. Climate change, through changing and more erratic rainfall, has severely affected the generation capacity of hydroelectric power dams in both Eastern and Western Africa, forcing countries to spend their limited resources on adding emergency generation capacity, relying mainly on coal- or fuel-based systems thus aggravating greenhouse gases emissions. Twenty-eight countries are or have been affected by the energy crisis in the past 24 months.

Africa is thus faced both1500 with the challenge of increasing access to energy, and the opportunity to exploit the large potential for development of its clean energy sources. There is enormous untapped renewable energy potential – especially hydroelectric power, geothermal energy, solar and wind power, as well as more improved energy efficiency, and more efficient use of biomass. Climate change and carbon finance thus provide Africa with the incentives to develop clean energy, and in particular hydroelectric power. Greater access to finance and regional cooperation are both crucial to exploiting this potential.

For Africa to address pressing environmental problems such as climate change vulnerability, disease, and1600 unsustainable resource use, while improving the wellbeing of its citizens, priority has to be given to scientific research and the development of environmentally sound technologies. While advancements in science and technology have created new opportunities for innovative development solutions, the benefits from these technologies have so far been limited. Looking forward, it is clear that African countries cannot afford to focus on upgrading their industrial capabilities along traditional lines of economy first, environment later.

African countries also need to make use of advanced technologies (e.g. ICT, biotechnology, and Geographic Information Systems) to provide a range of new applications in agriculture, 1700 health, and environmental management. Many of these technologies can assist in providing solutions to basic needs, such as cheaper diagnostic kits and high-yield seeds, and to improve productivity both in agriculture and in industry.

INDIAFRICA: Co-creating the future on environmental issues.
India and Africa can combine forces to create a future that is prosperous, peaceful, healthy, colourful, vibrant and resilient—in short, a diverse and sustainable world. There is growing recognition that diversity is the lifeblood of sustainable development and human welfare. Diversity is the key to resilience—the ability of natural and social systems to adapt to change. Resilience of social systems in this context means 1800 the added capacity of India and Africa to anticipate and plan for the future.

Hence, there is the need for both parties to concentrate on developing Biodiversity as a means of natural system resilience. Biodiversity is a very wide concept that refers to the variety of landscapes, ecosystems, species and genes, including their different functional processes. Therefore, Africa and India must strive to maintain and conserve biodiversity demand efforts on these four levels. While the first level is oriented to preservation of assemblies of "ecosystems", the second one focuses on protection of habitats in which the populations of species live. 1900

At the species level, most knowledge on biodiversity concerns the large plants and animals such as flowering plants and vertebrates. The extent of diversity of smaller plants and animals remains to be inventoried and protected. While most biological diversity is constituted by wild plants and animals, an important subset involves the diversity among of domesticated organisms. In this fourth level, the interest focuses on conservation of genetic variation of crops and domesticated animals.

Indigenous Africans and Indians need to carry out a non-specialized production based on the principle of diversity of resources and practices. This mode of subsistence results in the 2000 maximum utilization of all the available landscapes of the surrounding environments, the recycling of materials, energy and wastes, the diversification of the products obtained from ecosystems and, especially, the integration of different practices: agriculture, gathering, forest extraction, agro forestry, fishing, hunting, small scale cattle-raising, and handicrafts.

As a result, indigenous subsistence implies the generation of a myriad of products including food, domestic and work instruments, housing materials, medicines, fuel woods, fibers, animal forage, and others. Indigenous subsistence would foster strong import-export trade ties between the two parties as well as formidable south-south trade cooperation. Given the demonstrated importance of 2100 indigenous peoples for biodiversity conservation, it is essential to recognize the necessity of empowering local communities in both India, and Africa. That is to maintain, reinforce or give control to the indigenous communities on their own territories and natural resources as well as sufficient access to information and technology.

Important here are legally recognized and enforceable rights to lands and waters, which give the communities both an economic incentive and a legal basis for stewardship. In many countries, national recognition and policy support for existing, community-based property rights systems are crucial. In India and many African countries, returning a measure 2200 of control over public lands and resources to local communities is also fundamental to slowing biodiversity loss in threatened regions.

India is so far the only country that has a law recognizing the rights of both breeders and farmers; it acknowledges the triple role of a farmer, namely as a cultivator, conserver and breeder. The Indian Plant Variety Protection and Farmers' Rights Act rewards farmers and farm communities through the National Gene Fund for their invaluable contributions to the conservation and improvement of genetic resources. In areas rich in agro biodiversity like the Koraput region, tribal families have preserved and 2300 improved rice genetic material over many centuries. Tribal families who have conserved important genetic material for the public good at personal cost were recently honoured by the Indian Government with the first Genome Saviour Award.

Similarly, it is very important to establish new resource-management partnerships between local communities and the state and other society institutions to maintain biodiversity. Local stewardship in conjunction with external governmental and non-governmental agencies and institutions is perhaps the best way to guarantee effective protection of landscapes, habitats, species and genes worldwide, and especially in tropical countries.

Besides co-creating the future on biodiversity, India and Africa 2400 can also do the following: build sustainable landscape mosaics that include networks of effectively managed protected areas, managed areas that were not formally protected, and corridors linking habitats together; restore populations of the most ecologically, economically, and culturally important species; design conservation strategies that better deal with, and help mitigate, climate change impacts , and strengthening coastal defences.

Projects in coastal areas of several African countries and India are looking at strengthening the resilience of mangrove forests – important defence barriers against rising seas and severe storms – through restoration and improved protection. India can also contribute their quota in helping African 2500 coastal villages protect themselves by planting trees and building dykes to stabilize beaches. India and Africa can form an alliance to ensure continued freshwater ecosystem services.

Climate change will affect water quantity, water quality, and water timing in freshwater ecosystems, adding new pressures to already stressed and degraded river basins around the African continent and India. Water resource managers in India and all over the African continent could collaborate to identify vulnerability to climate change impacts and develop strategies to adapt to these, through: improved water management, including for flood retention, water security, and pollution reduction; strengthened societies, through enhanced 2600 livelihoods and increased institutional capacities; and enhanced ecosystem resilience, through restoring freshwater ecosystems.

They can also enter into partnership with a view to increasing their capacity to store flood water and so reduce damage from floods, the predicted climate change impact for these regions. Aid and cooperation are part of the game of influence played by India in its support for Africa and Africans, and it may have

regained great legitimacy in new issues such as energy, the environment and security. Africa is now being courted by India and also by industrial powers for its resources (biodiversity, forests, hydrocarbons, mines, 2700 arable lands) and for a market that, from 900 million people in 2010, should reach two billion people in 2050.

The politics of cooperation cannot be reduced to utilitarian objectives. India has used, and will continue to use active diplomacy, especially with African countries. For their part, Africa has also turned dependencies and one-upmanship with India into a strategic resource. What happens in Africa has global implications in terms of climate change, biodiversity, preservation of natural resources, epidemiological and security risks. 2781

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INDIAFRICA ESSAY WRITING COMPETITION 2011–12 WINNER FROM NIGERIA

ADENIYI MARCUS

University of Ilorin, Nigeria

ADENIYI MARCUS was born in Lagos, Nigeria in the late 1980s. He currently lives in Ilorin where he studies Medicine from the University of Ilorin, Kwara State, Nigeria. He writes poems, short stories and essays. His writings have also appeared in the school journals and magazines. He was the first runner-up in the 2012 National Professor Olikoye Ransome-Kuti Memorial Essay Competition. He also loves cooking, hanging out with friends and listening to music. He is working on a collection of his poems which will be published next year.

Adeniyi placed amongst the Top 18 and won USD 1000 in prize money

ADENIYI's Winning Essay

Saving the environment– A partnership that works

India's relations with African countries date back to centuries ago, and with varying degrees of importance. India and Africa have been fraternal partners and allies in the struggle for independence and achievements through self-determination. In the twenty first century, the partnership has taken on a new paradigm – one in which both regions seek to cooperate with each other to build a better life for their citizenry. This partnership etches on fundamental principles of equality, mutual respect, mutual benefit, and the historical understanding amongst the people. India and Africa share common grounds on issues regarding history, economy, geography, population, culture, development and environment. The footprints of Indian private and public enterprises can be seen in Africa. For instance, major private enterprises are Tata, Ranbaxy Laboratories, NIIT Technologies, Ashok Leyland, Bharti Airtel Communications, Mahindra and Mahindra, Apollo Hospitals; and public sector enterprises like Oil and Natural Gas Corporation Videsh Limited (OVL), Indian Telecoms Industries, Konkan Railways, to mention a few.

One thing is unique with both regions – that even with our individual deep-rooted cultures; we can still embrace other cultures. There is also a very dynamic and democratic presence in both settings which embraces transfer of knowledge, efficiency, accurate implementation of legislation, and good communication – all of which are relevant to the progress of the environment.

Africa is the second largest continent in the world and home to a wide diversity of natural resources – exotic wildlife, evergreen forests, gushing rivers and a vast expanse of arable land sprawling through the length and breadth of the continent, amidst other natural splendors. India is the second most populous country, with over one billion people, which makes about sixteen percent of the world population. In the last few decades however, rapid industrialisation, together with other activities of man have led to depletion of the environmental resources, as well as problems of air pollution, water pollution, loss of biodiversity, environmental degradation, and consequent ills of climate change and global warming.

The staggering magnitude of environmental issues that confront both regions is distressing to say the least. Many governments and international agencies are at sea, unsettled by the dilemma of an environmentally repressed world burdened with a huge army of dependants.

Events of environmental disasters have taken centre stage in many local and international discourses, and are popular headlines of news. Unprecedented flood disasters have held regions in shock and rendered many homeless. On the second day of July, 2012, the Brahmaptura River overflowed, flooding more than 2000 villages in India and destroying hundreds of homes, with a dead toll of at least 95 persons and almost half a million people displaced, living in relief camps. Flooding is also a major issue because of its effect of soil erosion, destruction of wetlands and consequent reduction in quantity and quality of agricultural yield, hence threatening food security.

In many regions in Africa and India, air pollution is significant. The high levels of sulphur dioxide and fine particulate matter is a threat to human health as it has been shown that particulate matter is one of the leading causes of acute respiratory tract infections and cancer. A satellite picture taken in 2004 shows thick haze and smoke along Ganges Basin in Northern India. This has been attributed to the accumulation of smoke from incessant biomass burning observed in rural and urban India. If this pollution continues at current levels, it is scary to think of the consequences that will ensue. South Africa also experiences negative environmental impacts from mining activities. Pollution from mining activities is probably the most direct cause of groundwater pollution in South Africa.

Deforestation is a process whereby trees are felled for several purposes without replanting the felled ones. More than ever before, we are cutting down trees at grossly alarming rates. The forests are disappearing too quickly. In Malawi for instance, the story is that of a rapid unsightly transition of once heavily forested area that can now boast of only twenty percent of area covered by tree canopies, with a pace of deforestation faster than anywhere else in the world.

Biodiversity is also immensely affected. Majority of Indian rivers are polluted with industrial and human wastes. There has been an increase in the number of deaths of fresh water fishes and the dolphins in Ganges River have been choking to death in the highly toxic water. Similarly, in many parts of Africa, tree density and floristic richness is ebbing out. Another example is the Cross River Gorilla in Nigeria that has decreased to about 300 in number because of poaching by locals and mass habitat destruction.

India is the world's largest consumer of fuel wood, agricultural waste and biomass for energy purposes. In rural India, a rural stove using biomass cakes, firewood and trash is the most popular mode of cooking. The stove, also called chullah in some parts of India, is said to produce smoke and numerous air pollutants at concentrations five times higher than coal. Surveys suggest these stoves are present in over 100 million households, and are used two or three times a day, every day. The use of chullah is further compounded by erratic power supply in many parts of the country. Current data shows that, excluding South Africa and Egypt, no more than twenty percent (and in some countries as few as five percent) of Africans have electricity. Also, fifty-five percent of rural India does not have access to electricity.3

The role of the partnership between India and African countries is to identify the key environmental issues that are peculiar to individual regions and develop strategies and action plans on how best to tackle them. It should aim to identify opportunities for working together and providing a forum where information can be shared. Environmental partnership makes it easy to incorporate effective environmental policies across different countries. It is no wonder that the goals seven and eight of the Millennium Development Goals are focused on ensuring environmental sustainability and developing a global partnership for development respectively.

The concept of inter-regional collaboration is a tool that many countries in the world have adopted to address crucial issues. For any partnership to work, there has to be development of a strong network to enable sharing of knowledge and best practices between African countries and India. Countries in Africa and India have to learn from each other and work together to ensure maximum benefit.

To make progress in attenuating the ravaging spree of environmental degradation witnessed across Africa and India, there has to be a critical assessment of the problem in a bid to evolve a clear strategic plan. There should be creation of shared vision with a view to ensuring each partner's needs and expectations are appropriately addressed. It should also identify and utilise the strengths of each partner, and support one another's limitation for their combined benefit.

Alternative cleaner energy sources should be well-researched and provided. For instance, India is the third largest producer in the world of solar batteries and photo-voltaic modules. Africa can tap its plentiful sunshine to generate electricity. Also, India receives 5000 Kilowatt-hour of solar radiation per year. The sun is free and inexhaustible. With photovoltaic panels, radiation from the sun can be converted directly into electricity with no pollution or damage to the environment. This is a potential that can be exploited in a tropical climates like Africa and India.

Other alternatives such as thermal, hydro and windmill plants can also be put to good use in industries and homes, hence curtailing the immense magnitude of air pollution from burning of biomass and fossil fuels from the use of chullah stoves, and the use of generators which is the prevailing mode of power in many industries, offices, shops and homes across India and Africa, and stalling land degradation from excessive use of fuel wood. Also, the production of electricity should be a topmost priority of the government as this provides the people with cheaper clean energy for cooking and general heating needs. Other forms of clean burning fuel and combustion technologies should be researched and made available.

There may be a challenge of limited access to clean technologies at affordable cost. For instance, with all their advantages, solar systems are not cheap to install. This is where partnership can really work. India can provide Africa with cheaper imports, investments and low-cost technologies. India can also utilise her technological edge and work together with African countries to reduce waste, increase reuse, recycling and composting and minimise the environmental impacts of waste.

In many parts of Africa and India, environmental prohibition laws do not exist. Where they do, they are hardly brought to bear and criminals get away with it so easily. This further feeds the attitude of lawbreakers. Prohibition laws regarding the indiscriminate disposal of refuse, sewage and other wastes into water bodies should be stiffened. Offenders should be prosecuted and duly punished. Laws that govern unauthorised tree-felling should also be enforced to check the alarming rate of deforestation. Hence, strict measures should be put in place and penalties for defying environmental laws are strategies that can work.

Also, intensive afforestation exercises should be commenced. Indeed, planting of trees should be encouraged. Both government and non-governmental bodies should seek ways to sensitise the populace on the immense benefits of tree planting.
There should also be establishment of rules that govern the exploration of natural resources and the appropriation of strict safety guidelines. This will essentially check indiscriminate mining and exploration activities that are closely related to environmental degradation.

Sewage treatment plants should be provided to convert the toxic wastewaters into less dangerous forms. The treated water can be used to serve various domestic functions such as washing and bathing. These facilities should also be properly maintained to ensure continuity. India is clearly more advanced than other African countries in education, information and technology, and technology for tailor-made small and medium enterprises. For instance in Uganda, Indian technology created nearly three times more electricity being generated, from 300 MW to 1000 MW.5 As such, she should serve as a distributor of ideas and technologies as it relates to sewage treatment and other equipments that can help recreate the environment.

The citizens, Indians and Africans, have a part to play. We need to have a re-orientation about our environment. We need to reshape our thought processes regarding the environment. For example, we have to desist from the casual dumping of wastes on the roads and water bodies which is rampant in most cities in India and Africa. We need to imbibe the attitude of environmental cleanliness.

Individual governments and environmental agencies alike have to be proactive and keep abreast of new developments in the environment. We should also seek for ways to generate wealth from wastes by converting them to beneficial materials or via recycling. This is a method that has worked in many climes around the world.

The teeming population contributes in no small way to environmental degradation. According to Malthus theory, a growing population exerts pressure on agricultural land, causing environmental degradation, ultimately reducing crop yield. Hence, human population needs to be controlled in a strategic manner. People cannot continue to have children at alarming rates. Family planning methods should be adequately publicised and made available to the populace. Also, the government has to set up population laws to check the alarming rate of population growth in our society.

Environmental change is not only the right thing to do; it is necessary even for economy to grow. Stakeholders in business have a major responsibility to the environment which they have to respond to. The big multinational companies should be made to recognise their role in environment disability and pay their dues in being financially and socially committed to the success of environmental-oriented programmes in their host countries. This is because every business has a link with the receding quality of our environment, directly or indirectly.

The use of audio-visuals in promoting the message of environmental responsibility and discipline is an avenue to be exploited. The far-reaching influence of media in changing the minds of the people, and enlightening them on core environmental values cannot be overemphasised.

The governments at various levels need to invest in the environment. No amount is too big to secure a safe and friendly environment for ourselves and the generations after us. There should be investment into environmental researches and projects aimed at providing sustainable energy services to the masses and combat the menace of climate change.

It is pertinent for India and African countries to collaborate on mitigation, adaptation, on further improving projections and predictions of climate change data, deforestation and incentive mechanisms for best practices, technology transfer and capacity building, and to cope with insecurity and climate-related developmental challenges.

To be innovative is to have the ability to introduce new ideas or to be original and creative in thinking. Indians and Africans have shown over the years to be innovative and illustrious people. It is time to put on our thinking caps to redress our numerous environmental ills and make headway from the setbacks we have had.

We need to reaffirm our solidarity to each other, and form support structures for each other and be committed to our common good. For instance, in times of unexpected disasters like flooding, it is important for partner-countries to rally round the affected country, providing aid and rescue teams. We should indeed be our brother's keeper. Where it is possible, rehabilitative efforts such as recruitment of trained medical personnel from India to cater for the needs of casualties of environmental disasters should be made. Africa can glean from the experiences and expertise of India and learn a lot, and vice-versa. Today, we have a chance to take charge of our own destiny, and give a new meaning to the concept of collaboration towards a sustainable, equitable and environmental-friendly development.

Our environment is our pride. We cannot afford to watch it wallow in decay and ruin. We must arise and take action. This is so because we cannot survive without our environment. It is the bedrock of life, the basis for our existence, and the platform on which we exercise our presence as human beings. An African maxim has it that 'A tree does not make a forest'. The environmental challenges confronting us are so huge and overwhelming that Africans and Indians cannot tackle them independently. We have to come together, working hand-in-hand to enjoy the immense benefits of a cohesive and progressive partnership.

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Winners of the INDIAFRICA Business Venture Competition 2011–12 with jury members and organisers.

INDIAFRICA AWARDS CEREMONY LAGOS, 2012

The INDIAFRICA: A Shared Future Business Venture finals were held at the City Hall, Lagos Island on Tuesday, September 25 featuring presentations by nine teams from Nigeria, Kenya, Uganda, South Africa and India, before a nine member Grand Jury that included **Jahman Anikulapo**, Editor of The Guardian on Sunday; **Enase Okonedo**, Dean, Lagos Business School; **Ini Onuk**, Sustainability Expert and CEO, Thistlepraxis Consulting; **Vivian Ani**, Advisor, Enterprise Development Centre, Pan African University; **Niyi Yusuf**, Country Managing Director, Accenture Nigeria; **Ozim Obasi**, Senior Counsel & Compliance Leader, GE Sub-Saharan Africa; **Prof Aruna Reddy**, Indian School of Business; **Anoop Ratnaker Rao**, COO, Naandi Foundation and **Karthik Chandrasekar**, CEO, First Light Accelerator.

BUSINESS VENTURE COMPETITION JURY PROCESS

153 executive summaries qualified for assessment. Top 50 were shortlisted (25 each from India and Africa) and won USD 250 each. These 50 submitted complete Business Venture proposals. Top 18 shortlisted entries won USD 1000 each. Top 9 of these 18, made their final presentations before the Grand Jury in Lagos on Sep 25 for the 3 top prizes of USD 10000, 7500 and 5000.

POSTER DESIGN COMPETITION JURY PROCESS

Out of the 120 entries received, the top 18 entries won USD 1000 each. The winners were from Ethiopia, India, Tanzania, Nigeria and South Africa.

PHOTOGRAPHY COMPETITION JURY PROCESS

Out of the 266 entries received, the top 18 entries won USD 1000 each. The winners were from Egypt, Ethiopia, India, Kenya, South Africa, Tanzania, Uganda and Nigeria.

ESSAY WRITING COMPETITION JURY PROCESS

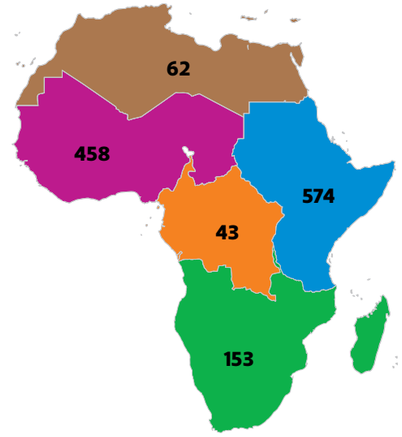
Out of the 187 entries received, the top 18 entries won USD 1000 each. The winners were from Ghana, India, Mozambique, Tanzania, Uganda and Nigeria.

University of Addis Ababa, Ethiopia

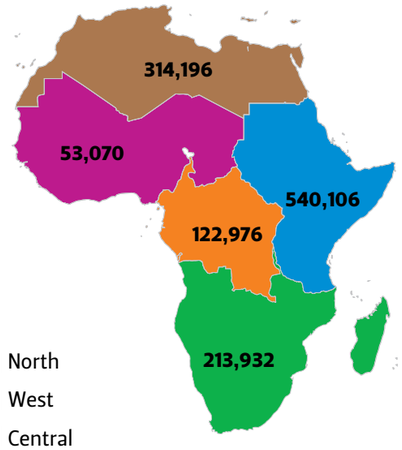
AIESEC Apprenticeship Challenge, Capetown, South Africa

Interaction with African Heads of Mission, New Delhi

Participation



Facebook Reach



AFRICA DAY Celebrations, New Delhi