Kenya- Japan Exchange Seminar on Marine-Earth Science: Cooperating Towards a Better Planet Earth

Utilizing the Presence of JAMSTEC through CHIKYU to Formulate Partnership in Ocean Science Research

Embassy of Japan in Kenya
University of Nairobi
Japan Agency for Marine-Earth Science and Technology

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1. **Outline:** The progress of Marine-Earth Science in Kenya hinges on establishment of firm mechanisms of collaboration and exchange of information and knowledge in this area of interest. Scientists from Kenya and Japan are utilizing the presence of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) in Kenya through the new and state-of-the-art Deep Sea Drilling Vessel CHIKYU to exchange experiences with a view to formulating partnership in Marine-Earth Science Research. These efforts are spearheaded by the Embassy of Japan in Kenya, University of Nairobi and JAMSTEC who are the organisers of this Exchange Seminar on Marine-Earth Science between Kenya and Japan. This seminar presents an opportunity for young and upcoming Kenyan scientists, university researchers and students as well as other key Kenyan and Japanese stakeholders to be informed on the advances, challenges and opportunities in ocean science research.

2. **Organisers:** Embassy of Japan in Kenya, University of Nairobi, and JAMSTEC

3. **Date and Time**: Thursday, 16th January 2007 from 13.00 to 18.00 Hours (1.00 – 6.00 p.m.).

4. **Venue:** Japan Information and Culture Centre in the Embassy of Japan in Kenya.

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Kenya– Japan Exchange Seminar on Marine–Earth Science: Cooperating Towards a Better Planet Earth

Opening Remarks

Satoru Miyamura
Ambassador of the Embassy of Japan in Kenya

It is a great pleasure and honor for me to officially open the "Kenya-Japan Exchange Seminar on Marine-Earth Science". I welcome you all to the Japanese Embassy; we are a little bit far from Nairobi city center now, but I hope you can drop by again for a variety of events.

In opening this seminar, I would like to remind you of two initiators of this event. They are Honorable Katsuyuki Kawai, Chairman of the Japan-Kenya Parliamentary Friendship Committee, and Honorable Raphael Tuju, Kenyan Foreign Minister. During Minister Tuju's visit to Japan in November last year, Hon. Kawai proposed to have this session in Nairobi, and Minister Tuju immediately welcomed his proposal. This is how this Seminar is born.

My heartfelt thanks go to JAMSTEC and the University of Nairobi for bringing in researchers of world-class high caliber for the seminar. The presence of many qualified scholars, I believe, reflects huge interests in these subjects on the agenda and eagerness to further promote our intellectual ties.

The deep sea drilling vessel Chikyu of JAMSTEC arrived here late last November, and I am fortunate enough to have visited this advanced research ship yesterday from Mombasa. With my personal experience, I am proud of the ship as well as our scientists, because we now have something significant with which to contribute to important global causes and because we have scores of scientists in Japan who are ready to reach out for the world.

CHIKYU has been engaged in petroleum resources exploration since then by Woodside Energy, an Australian oil and gas exploration and production company, as a part of its shakedown activities. CHIKYU is the largest research ship for marine science; and it is open to any relevant research activities and proposals by the scientists worldwide. Taking the opportunity of CHIKYU's first drilling activity off the Kenyan coast, we have decided to hold this seminar; I think it quite meaningful that through this seminar, we, the Japanese and Kenyans, deepen and diversify our contacts to further promote our friendship.

The main mission of the Japanese Embassy in Kenya is to promote the Japan- Kenya friendship, which has been strengthened by such diplomatic activities as mutual visits by high-ranking politicians and government officials as well as frequent visits by Japanese tourists.

Other important aspects of our relationship include ODA projects, trade, and technical exchange activities. I should also touch upon the importance of sports as scores of Kenyan have been an important asset in Japanese athletics and we have received Judo, Karate and Volleyball coaches from Tokyo for years. Cultural activities, like performances by Japanese artists and the showing of Japanese films, too, have contributed to the strengthening of our relationship.

It is not an overstatement that Kenya is now the most known and familiar African country among the Japanese. Intellectual exchange on earth and marine science is a relatively new area for us; as the ambassador, it would be my great pleasure if our two nations have finds a new route to further promote our friendship.

Recently, such natural phenomena as climate, biodiversity, and geological change are being scientifically and more clearly analyzed, to be understood in a global context. To grasp such phenomena in a dynamic way and to predict their future implications, researchers need to collect and analyze relevant data of the Indian as well as the Pacific and Atlantic Oceans. The western part of Indian Ocean off Kenya presents a wide range of unknown problems and unsolved academic questions; and in the beautiful Kenyan coasts and sea waters, there are many research themes of great interest to marine scientists.

I understand that in this seminar, leading researchers in marine and earth science will discuss their research themes and future prospects especially on the Indian Ocean off the Kenyan coast.

I will try my best to be all ears to the discussions; and I shall make most of this occasion to think anew what needs to be done for a "Better Planet Earth". In the meantime, I sincerely wish my petroleum dream to come true for Kenyan people, for you to have a "Better Kenya".

Now, let me finish my opening remarks. Thank you very much, or ASANTE SANA KWA KUNISIKIZA!

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Keynote Lecture

JAMSTEC and The *Chikyu*: Challenge for the Frontier of Marine and Earth Science and Technology

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JAMSTEC

Japan Agency of Marine-Earth Science and Technology (JAMSTEC) is the leading marine and earth science and technology institution in Japan. It operates seven research vessels together with manned deep submersible (Shinkai 6500), remotely operated unmanned vehicle (Kaiko 7000) and autonomous underwater vehicle (Urashima) (Fig.1). Among 1,000 employees, 350 scientists actively engage in the field of physical oceanography, marine geology, geophysics and geochemistry and marine biology. One of the world best supercomputer, the Earth Simulator also belongs to our list of state-of-art technologies. The recent addition to our list is a deep-sea drilling vessel, the *Chikyu*, the world largest scientific laboratory afloat.

Scientific Drilling Vessel, the *Chikyu*

The plan for building a new scientific deep-sea drilling vessel in Japan started more than ten years ago. The construction of a Deep Sea Drilling Vessel, the *Chikyu* began in April 2001 and was completed in the summer of 2005. The *Chkyu* is a 210 meter-long vessel, with a gross tonnage of 57,087 tons, and a drilling derrick standing 121 m above sea level (Fig.2). The *Chikyu* is a state-of-the-art drilling platform, with a highly automated drill floor system capable of being run efficiently and safely and provides a fully integrated riser and blow-out preventer (BOP) drilling system. The *Chikyu* enables operations in geological environments and at depths previously inaccessible to scientific drilling.

The *Chikyu* is designed to drill deeper than ever before beneath the deep-sea floor. The target was set to drill to 7000m, in water depths initially up to 2500m.

The ship is required to remain stationary for a long time at sea against wind, waves, and currents. This station-keeping capability is achieved using six powerful computer-controlled thrusters.

Floating Laboratory

Recent progress of earth science suggests that the interaction of interior and exterior of the earth is far active and pervasive than previously estimated. Understanding the role of deep biosphere, huge amount of sub-seafloor gas hydrate and deep-seated circulation of fluids in the earth system dynamics becomes an important issue for the sustainability of the earth-human relationship. The main purpose of operation of the *Chikyu* is to achieve new understanding of the earth system science with the framework of international collaboration.

The Chikyu houses advanced and comprehensive scientific research facilities. Four stories of laboratories with an array of tools and equipment provide space for fifty scientists and technical support staffs. With synergy of state-of-art technology and enthusiasm of researchers and engineers, the *Chikyu* challenges such objectives as understanding of seismogenic zone of plate boundary, origin of large igneous provinces and island arc crust, tectonic-climate linkage and exploration of deepest biosphere.

Preparation and Perspective

Currently, the *Chikyu* and its crew is undergoing full-scale of preparation and test work. From December of 2006, riser drilling operation takes place offshore of Kenya and Australia. In September 2007, the *Chikyu* is scheduled to begin drilling operations in the Kumano Basin area offshore of Southwest Japan, all as an integral component of the Nankai Trough seismogenic zone experiment in IODP (Integrated Ocean Drilling Program).

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NATSUSHIMA(1981)

KAIYO(1985)

YOKOSUKA(1990)

KAIREI(1997)

MIRAI (1997)

TANSEI-MARU(1982)

HAKUHO-MARU (1989)

CHIKYU (2005)

Figure 1. JAMSTEC Fleet

Figure 2. The Deep-sea Drilling Vessel *Chikyu*

Climate Variability in the Tropical Indian Ocean and Its Impact on Climate in Kenya

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Climate variability in the tropical Indian Ocean has long been believed to be affected mostly by the El Niño-Southern Oscillation (ENSO) in the Pacific Ocean and to have only minor influence on the global climate system. However, recent studies reveal that significant interannual variability occurs in the tropical Indian Ocean, known as the Indian Ocean Dipole (IOD) events, and affects regional climate over several remote areas through atmospheric teleconnections. The IOD events usually start during early boreal summer and reach their mature phase during autumn. The positive (negative) event is associated with high (low) sea surface temperature anomaly (SSTA) in the western tropical Indian Ocean and low (high) SSTA in the southeastern tropical Indian Ocean. They are similar climate phenomena to the ENSO in the sense that air-sea interactions are essential for their life cycle, but they are basically independent from the ENSO. The positive IOD event accompanies westward shift of the atmospheric convective region, which stays over the maritime continent in usual years, hence, the significant change in the precipitation over the wide area of the rim countries of the Indian Ocean, including Kenya. In particular, the east African short rain during October/November season is strongly affected by the IOD events.

A coupled atmosphere-ocean general circulation model developed in FRCGC/JAMSTEC successfully predicts the positive IOD event in 2006 and associated regional climate variability in many places in Africa and Asia. The model results indicate that subsurface temperature anomaly in the southern tropical Indian Ocean and subsequent westward propagation as the Rossby waves are important preconditions for the event in 2006. It is also shown that predictability of the IOD event is about six months or more, which is well before its occurrence. To prevent devastating natural disasters associated with the IOD events, it is necessary to develop a system that transfers information on the IOD predictions to people who needs the information. In addition, a comprehensive sustained observation network in the Indian Ocean is also required to understand the ocean conditions there and to provide accurate data for the climate prediction models. The observation network along this line is now planned and partly implemented.

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Indian Ocean Dipole Index Recorded in Kenyan Coral Annual Band

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Variability in the tropical and subtropical climate in the Pacific and Indian oceans has often been explained by the variability in the El Niño Southern Oscillation (ENSO). However, correlation between ENSO and climate variability in the Indian Ocean is not always high. Recently, the Indian Ocean Dipole (IOD) was discovered [Saji et al., 1999], which has similar east-west anomalies and periodicities in the Indian Ocean as those produced by ENSO in the Pacific Ocean. IOD, which governs climate variability not only over the Indian Ocean but also globally [Yamagata et al., 2004], produces precipitation anomalies in the East African short rain period from October to November. A positive IOD is represented as anomalies of high precipitation and high sea surface temperature in the western Indian Ocean and over East Africa, and heavy rains in 1961, 1997 and 2006 were accompanied by positive IODs. However, the IOD has been analyzed by instrumental observation and using models, and therefore, the known IOD record extends back only for the past few decades. To elucidate decadal scale variability in the IOD and its relationship to ENSO and other climatic indices, a proxy and extended record are necessary.

One feasible proxy is coral annual bands, which contain information on climate variability spanning more than 100 years. We obtained coral (*Porites*) cores from Malindi Marine Park, Kenya (3.2°S, 40.1°E), and found IOD signatures in them [Kayanne et al., 2006]. The signature of the IOD in precipitation was detected in them by luminescence intensity under UV light and by oxygen isotope values. Luminescence peaks correlate well with the peak discharges of Sabaki River, which river mouth is located 15 km north to Malindi. Oxygen isotope values showed cyclic pattern with light and heavy peaks matching with high and low SSTs, respectively. However, anomalies of the oxygen isotope values dated to January, a few months after the short rain period, correlated well with high and low precipitation, which were related to positive and negative IOD indices, respectively. The coral IOD index thus reconstructed matched with major IOD events, but did not match with ENSO events. This study indicates that the coral annual band record is effective for reconstructing IOD events and should be able to reconstruct the long-term IOD record prior to instrumental observations in long coral cores.

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Tropical Indian Ocean – Climate Interaction: Process modelling and global change scenarios

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The University of Nairobi's Department of Meteorology was founded in 1963 at the request of the East African Community (EAC) to train professional Meteorologists for the English speaking countries of Africa. It started off by offering a postgraduate diploma in Meteorology course for students holding a degree in Mathematics and Physics. The B.Sc. was then introduced alongside the postgraduate diploma in 1972 and to date the Department remains the only institution in sub-Saharan Africa offering a full range of undergraduate and postgraduate courses in Meteorology. Indeed the Department has trained majority of senior staff, and particularly the Heads of National Weather Services in most of the English speaking African countries.

Indian Ocean – atmosphere interaction has been a subject of research, in the five thematic areas within the Department, for over a decade now. These interactions are important for weather and climate prediction and for climate change studies. Some of the recent studies include the following. First, the influence of African equatorial stratospheric dynamics, as depicted by total ozone variability on Indian Ocean, whose Sea Surface Temperatures (SSTs) are operationally used for East African seasonal rainfall prediction was investigated. Three areas, which are normally operationally considered in prediction process of the seasonal East African rainfall, were found to have significant correlation with ozone. SST prediction models for some of the ocean areas were developed. These models exhibited satisfactory skills. This indicates that the time evolution of the SSTs over these ocean areas can be predicted with a lead-time of several months using stratospheric parameters, such as total ozone, and hence increase the lead-time of prediction of seasonal rainfall over East Africa. Second, The Influence of the global SSTs on inter-annual variations of March to May Rainfall over East Africa was studied. The aim of the study was to investigate the link between global SST and the inter-annual variability of the March to May rainfall over East Africa. Both empirical and dynamic approaches were employed. Intra-seasonal variability in the relationship was noted. Simulation of the impact of El-Nino Southern Oscillation (ENSO) on the short rains over East Africa was performed. The General circulation model (GCM) was forced with global SST for the El Nino and la Nina scenario. The Effects of regional ocean basins on the rainfall were also investigated.

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Impacts of Global Change on the Marine Ecosystems of the Western Indian Ocean

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The Western Indian Ocean (WIO) region comprises five coastal states (Somalia, Kenya, Tanzania, Mozambique, and South Africa and five island states (Mauritius, Comoros, Seychelles, Reunion-France, and Madagascar. The WIO is renowned for the attractiveness of its coastal zones, high marine biodiversity, and rich marine and coastal resources. In the 52 tropical inshore fish families endemism is high, 22% in the WIO region compared to 13% in the Red Sea and only 6% in the Eastern Indian Ocean. Furthermore, five of the world's seven species of marine turtles nest on beaches in the region. Global change, as understood, represents a significant threat to global biodiversity and ecosystem integrity. Global change is characterized by a shift in conditions in a directional incremental mode, with values of climate elements changing significantly. The International Panel on Climate Change (IPCC) predictions with the current rate of emission of greenhouse gases we can expect global warming in the next 100 years of between 0.15 ˚C and 0.33 ˚C decade^{-1} which may be accompanied by sea level rise at a rate of between 2 and 10 cm decade^{-1}. In addition there is a major concern in increased variability of weather patterns with storms are becoming more frequent, intense and widespread, while rainfall patterns have changed and may lead to countries experiencing severe draughts and floods. Floods, in particular have severe impacts on coastal and marine ecosystems by exacerbating land based source of pollution and siltation. This paper discusses the impacts of these global change scenarios on marine and costal ecosystems (Intertidal areas, mangroves, coral reefs, and riverine wetland etc) in the western Indian Ocean. It is concluded that the science of ecological impacts of global change should be a fully integrated as a part of conservation biology. Furthermore, in order to enhance a political and scientific understanding of ecological responses to global change there is need to radically improve and expand the WIO countries' capacity to carry out biological monitoring. All this requires a major training effort in marine science and technology that is a real challenge in many of the WIO states.

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Marine Research in Kenya Coast

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The Kenya Marine and Fisheries Research Institute (KMFRI), was established by an Act of Parliament (Science and Technology act, Cap 250 of the Laws of Kenya) in 1979, to undertake aquatic and marine research to provide scientific data and information to enhance sustainable exploitation, management and conservation of aquatic resources. In the past, research activities have concentrated in the shallow and nearshore environments where socio-economic activities predominate. These studies cover biological, chemical and physical oceanography, bathymetry and fisheries in estuaries, creeks, bays and lagoons. Large scale and offshore oceanographic studies have been limited to sporadic expeditions in collaboration with foreign partners, with no sustained activities, mainly due to lack of a suitable research vessel and other facilities. However, KMFRI has lead national and regional oceanographic projects in the past. These include the Kenya National Oceanography Data Centre (KNODC) which archives oceanographic data extracted from the US NODC World Ocean Database 2001 and Coastal Zone Color Scanner (CZCS) data derived from the Advanced Very High Resolution Radiometer (AVHRR) carried aboard satellites. KMFRI contributes to the international effort to monitor and generate data on sea-level variations by running two sea-level monitoring stations under the Global Sea Level Observing System (GLOSS). More recently, the Western Indian Ocean Satellite Application Project (WIOSAP) project was initiated to assist commercial fishing vessels to locate aggregates of migratory fish species by detected and monitored thermal fronts and ocean color using remote sensing techniques. The deep sea environment and fisheries in the Indian Ocean is largely unexplored. KMFRI's strategic plan includes participation in global marine and fisheries research. The current marine research issues include ocean environment monitoring, deep sea fisheries exploration and biodiversity studies.

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Marine Biological Studies in the Kenya's Coasts

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The marine biological studies in the Indian Ocean are much less than in the Atlantic and Pacific Oceans. Expeditions have been carried out several times inclusive of Challenger expedition etc. Recently research cruise focusing the link among seasonal surface production and deep-sea benthic communities was carried out in the Gulf of Arabia, but little is know in the open ocean deep-sea ecosystem in the Indian Ocean.

One major interest in the Indian Ocean from the point of view of deep-sea biology is hydrothermal vent communities found in the triple junction area. Intensive ecological studies on these communities have been carried out by JAMSTEC and insights to the evolution of hydrothermal vent ecosystem in the global scale have developed.

Studies on the marine biota in the Kenya coasts are also very few. However, the marine area is well known to be under strong influence of seasonal monsoon and periodical high primary productivity associated with the up welling. Major research in this area was done in The Netherlands Indian Ocean Programme from 1990 to 1995. In this symposium, results of the program as well as future perspective of the research program running in the region, especially project Census of Marine Life will be presented.

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The Conjugate East African and Madagascan Continental Margins, and the Western Somali Basin: Tectonics and Stratigraphy

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The conjugate sedimentary basins and margins of East Africa and Madagascar, together with the intervening Western Somali Basin, developed during the Mesozoic breakup of East and West Gondwana. Extensional basins began forming in Permo-Carboniferous time, and extension recurred intermittently for ~150 million years until the initiation of seafloor spreading between Africa and Madagascar east of the Davie Fracture Zone in Middle Jurassic time. Occasional marine incursions and subsequent dessications resulted in deposition of salt in isolated Tanzanian grabens, and in the conjugate Somali coastal and Madagascan Majunga basins. At the initiation of seafloor spreading, facies changed throughout the basins from dominantly continental to overwhelmingly marine, and both volcanism and faulting occurred. Mid-Cretaceous time was marked by the onset of vigorous abyssal circulation in the Western Somali Basin, and Late Cretaceous time was marked by widespread regional volcanism, especially on Madagascar. During Paleogene time, rifting was renewed in the Tanzanian coastal basins, extending to the Davie fracture zone, and all basins record numerous hiatuses in Paleogene and Oligocene sections. A vast sediment slide offshore Somalia and Kenya occurred in mid-Tertiary time, demonstrating that olistostromes characterized by significant internal deformation (including thrust faults) can form in passive margin settings. An intense erosional event in the Western Somali Basin marked the end of Paleogene time. Volcanism was frequent in the Diego Basin throughout Cenozoic time, and in the Comoros Islands during Neogene and Quaternary time. Folding and faulting of onshore and offshore strata of the Tanzanian margin have continued through Neogene and Quaternary time to the present. A major network of late Cenozoic canyons and channels characterize both the East African and Madagascan margins, as well as the Western Somali Basin. Accumulations of Middle Jurassic through Holocene sediment on the East African and Madagascan margins total 8+ and 5+ km, respectively.

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Geological Structure of Kenya: Past Global Change and Internal Earth Processes

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The geologic structure of Kenya involves formation of lithological and tectonostratigraphic units dating from Mesoarchean (3.2-2.8 Ga) and Neoarchean (2.8-2.5 Ga) for the oldest units to Quaternary (< 1.75 Ma) for the youngest. The folded, faulted and sheared Archean lithologies occur around Lake Victoria in western Kenya and comprise the granites and greenstones that are part of the East African (Tanzanian) Archean Craton. The greenstones were deposited in ancient deep marine and shelf environments. The low grade, flat lying, volcanic and sedimentary rock units of the Neoproterozoic (1000-900 Ma) Kisii Group unconformably overlie the Archean sequences. The high-grade, north-south trending, Neoproterozoic (1000–540 Ma) Mozambique mobile belt rock units form a large tract in Kenya on either side of the Kenya (East African) Rift. The Mozambican terrane was produced as a result of collisional plate tectonics at the closure of the Pacific-sized Mozambique Ocean at the end of Neoproterozoic times during the East Africa Orogen (EAO). The EAO has been recognized as manifesting an episode of Tibetan-style continent-continent collision and crustal thickening.

The aggradation of the supercontinent Gondwanaland at the closure of the Mozambique Ocean led to a prolonged period (> 200 Ma) of stability over the greater part craton. The huge Gondwanaland cratonic region entered into a remarkable phase of deposition of continetal facies lithologies typified by the Karroo Supergroup of eastern, central and southern Africa spanning the Upper Paleozoic-Lower Mesozoic boundary. The Permo-Carboniferous glaciation opened this phase with deposition of basal tillites. The north-south trending Karroo lithologies are the oldest lithologies resting directly on the Neoproterozoic Mozambique mobile belt basement in Kenya. The supercontinent Gondwanaland entered the phase of fragmentation and dispersal by rifting during Late Jurassic–Early Cretaceous times or slightly earlier (around 135 Ma). The initial phases of this breakup involved development of narrow marine troughs, crustal warps and fractures which defined margins of the future southern continents as we know them today while other extensional fractures/faults and rifts were developed in the interior of the continents. The Anza graben in Kenya is an example of the latter and is continuous with the oil bearing Abu Garba Rift of southern Sudan. Episodes of marine transgression and regression are recorded in the stratigraphic column. As carbonate deposition spread with regression, basin shallowing occurred in the Middle Jurassic with a salt basin forming in offshore regions of the Lamu Embayment. With the break-up of Gondwanaland, the Middle Jurassic (Callovian, 160-154 Ma) to the Cenozoic, (Paleogene, 65-23.5 Ma, Neogene (23.5-1.75 Ma, and Quaternary (1.75 Ma to the present) times saw the development of the Lamu Embayment and the Mandera Basin into a passive continental margin and a gently subsidizing platform respectively.

The most conspicuous structural features in Kenya today are the Central Kenya Dome (CKD), the associated north-south continental tri-radial Kenya Rift, and associated magmatism. Regionally the Kenya Rift is part of the 3000 km long East African Rift System (EARS) starting at the Afar depression-triple junction to Lake Malawi in the south. The CKD's gross topography mirrors the domal or shield morphology, with highlands of 1370 to nearly 4000 m above sea level (asl) between 2^{o} north and south flanking the rift in the middle portion and decreasing in altitude radially. The broad domal zone of high ground is cut by a prominent, generally north-south trending Kenya Rift that is a fault-bounded graben. The western Nyanza trough/rift arm, within which the Winam Gulf of Lake Victoria lies, forms the third arm of the tri-radial Kenya Rift. Evidence of the domal rift structure has also been recorded by the Kenya Rift International Seismic Project (KRISP) that showed large-scale variation in lithospheric structure along and across the Kenya Rift. Well-preserved and still active central rift volcanoes are located within the central inner trough of the Kenya Rift. Characteristic Kenya Rift magmatism changed from nephelinitic and carbonatitic, through phonolitic to trachytic, and sometimes peralkaline sialic, with basalts accompanying all stages but tending to change from alkali to transitional types. The central inner rift trough is also the site of rift lake basins in Kenya, a characteristic also observed elsewhere within the EARS. These lakes and basins have resulted from a combination of rifting, volcanism and regional and global climate changes. Sedimentary columns in the East African Rift Great Lakes and related rift basins are, through limnological, paleolimnological and biodiversity studies, recognized as recording climate dynamics, variability and changes over a period of up to 300 Ma since the supercontinent Gondwanaland began to breakup through rifting. Off Kenya Rift central and related volcanic centers form the Chyulu Hills, Aberdare Ranges, Mount Kenya, the second highest mountain in Africa, Nyambene Hills, Mount Marsabit all east of the rift, and Mount Elgon to the west of the Kenya Rift along the Kenya-Uganda border.

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Greetings from Mr. KAWAI Katsuyuki, Member of the House of Representatives of Japan

KAWAI Katsuyuki,
Member of the House of Representatives of Japan

Jambo!

My name is KAWAI Katsuyuki, a member of the House of Representatives of Japan. I would like to make a few closing remarks on behalf of the Japan–Kenya Parliamentary Friendship Committee, of which I am the chairperson. Please allow me to speak in Japanese.

Hello everyone. I have hoped that many friends would come together today to attend the Joint Seminar on Marine Science in Kenya and Japan. I would like to congratulate you on this successful event.

I paid my first visit to the Republic of Kenya in November 2004. At that time, I was the Parliamentary Secretary for Foreign Affairs of Japan and was in charge of mainly the Africa region. The first country on my visits to Africa was your country, Kenya. I was able to meet His Excellency President Mwai Kibaki, and many others, and I worked to deepen the friendship between Kenya and Japan.

Before I visited your country – I suppose it was in October or November of that year – His Excellency President Mwai Kibaki and his accompanying group visited my hometown Hiroshima as a state guest. At that time, I had dinner at an ordinary restaurant until late in the evening with Honorable Mr. Raphael Tuju, who is now Minister of Foreign Affairs, Honorable Dr. Mukhisa Kituyi, Minister for Trade and Industry, and Amb. Chirau Ali Mwakwere, Minister of Transport who was Minister of Foreign Affairs at that time. After dinner, we went to a Karaoke bar, where I had the wonderful chance to directly listen to the beautiful and skillful singing of the three ministers, and we became very good friends.

At the end of last year, one of the three, the Minister of Foreign Affairs, Honorable Mr. Raphael Tuju, came to Japan, and we talked about various matters. I told him that “Chikyu”, which is one of the most advanced vessels for deep-sea drilling in the world and the pride of Japan, was planning to cruise off Kenya. Various researches on oceanography and natural resources are carried out by the Japan Agency for Marine-Earth Science and Technology, JAMSTEC. So I took this good opportunity to propose to Minister Tuju to hold a seminar focusing on “Chikyu” for scientists from both countries – if possible, young people who will play a key role in the next generation – to exchange views and discuss various matters related to oceanography mainly in the Indian Ocean, off the coast of Kenya. When I sought the cooperation of the government of the Republic of Kenya, Minister Tuju kindly agreed. We decided to create an occasion for exchanges with active participation by JAMSTEC, and today’s joint seminar on marine science was organised.

Although I digress somewhat, when I visited Kenya for the first time, I was inspired by the country: the beautiful smiles of Kenya’s people, the lovely eyes of the children, the beautiful majestic nature, the horizon and animals of the Masai Mara where we went on an overnight trip for research and to observe tourist resources. After returning to Japan, I talked to other members of the Japanese House of Representatives, praising Kenya, and launched an organisation called the Japan- Kenya Parliamentary Friendship Committee, and became its first chairperson.

I believe that Japan has much to learn from Kenya, and likewise that Kenya has much to learn from Japan. Each of the two countries should not think one-sidedly, but should teach each other and learn from each other to become two countries that are respected even more than today. This desire motivated me to establish the Parliamentary Friendship Committee.

I was told that this coming summer, the great wild beast migration will be around August. I am now planning to visit Kenya around this time together with members of the Parliamentary Friendship Committee, and we are currently making preparations.
We hope to meet you all on that occasion.

I hope today’s seminar marks the start of scientific and technological exchanges between Kenya and Japan, and, as the person who proposed this initiative, I look forward to fruitful results. I also look forward to seeing all of you from Kenya again in the future. Japan will continue its efforts to contribute to the people of Kenya and the world in the field of science and technology.

Thank you very much for your attention.
Asante sana!
Thank you very much.

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