
Leadership in the Corporate World

I did not waste time before reporting to my new offices as the second Director-General of the National Environment Management Authority (NEMA). Word had gone round that a professor from JKUAT would take over the roles of NEMA from Dr Korir Koech who had been the first director-general since NEMA's inception in 2000. I knew Dr Koech as a former lecturer at Kenyatta University during my tenure as a VC at JKUAT. I used to teach an MSc environmental course in his department where I supervised his two students, Samuel Ngugi and Dr Margaret Karembu. I also examined his courses then. That was my formal contact with Dr Koech.

I drove to the NEMA headquarters five days after my appointment. I actually passed the offices and had to ask a guard for direction. The area is located in a place where one has to drive on the Mombasa Highway for a reasonable distance before making a U-turn on a busy intersection.

My landmark was the Belle-vue Cinema premises and Kenya Bureau of Standards. I got to the headquarters unannounced. The former director-general was not in; he had also been informed about his departure. I introduced myself as the new DG and asked to see the former director-general.

The lady I found at the offices was very kind. She requested me to sit down for a cup of tea as she called him on his cell phone. As I sat there, some staff members passed by and never bothered to find out who I was. A young man who used to be my students came to me, greeted me and announced to the others around that I was the new director-general of NEMA. Word went round that the gentleman whose name was announced some four days earlier had arrived to take over NEMA.

The secretary called Dr Koech and we spoke on phone. He agreed to come over and see me at the office within an hour. I decided to wait around, read the papers and observe the premises. This was around 10 am. Dr Koech arrived and we had a discussion in the DG's office. His main concern was the reluctance of the parent ministry to release funds for the running of NEMA.

NEMA was an independent parastatal of the ministry and was to be treated under the new Environmental Management and Coordination Act (EMCA) 1999. I wondered why the delay from 1999 to 2003. He gave me a rundown of the issues of environmental pollution and degradation. He lamented the slow pace at which Kenya was domesticating some of the crucial international protocols. He also told me about the lack of support staff in handling environmental matters. I listened carefully and only interjected whenever I thought it was absolutely necessary.

I requested that he should write comprehensive handing-over notes and spell out all the concerns that he thought I should tackle. He agreed to do so within three days. I had no problem, but hinted to him that I was ready to consult and work with him in any relevant area. I also assured him that I would be seeking his guidance in future. Meanwhile, I told him that I was now in charge and systems must continue. I was only waiting for his final handing over notes.

Dr Michael K. Koech brought a handing over report and a few copies of the EMCA 1999 Act. I perused through the report and kept it as my reference point once I assumed duty. He did not have a board.

The new NEMA Board of Management was gazetted the same week that I reported. The chairman was Prof. Canute Khamala who was a colleague from the University of Nairobi. Other members included Prof. Mohammed Mohamud, Prof. James Kahindi, Prof. Gemano Mwabu, Dr Dorcas Otieno, Dr Dominic Walubengo, and Mr Marsin.

The Minister for Environment and Natural Resources was Dr Newton Kulundu (deceased). We later on hired a legal officer, Prof. Francis Situma, also a colleague from the University of Nairobi. This was a pseudo-academic set-up.

I knew all the board members; and virtually all of them had worked under me during my tenure as a Vice-Chancellor of JKUAT. It was a kind of reunion. I was again their chief executive, the director-general. They were by law my employer. Some of them had been my external examiners and we had interacted at collegiate level.

My predecessor had not had a management board. He had therefore not been able to transact any business, financial or otherwise. I did not understand why he had not pushed for one. The government bureaucracy is so complex that if one does not push and follow through a request, one is forgotten completely. I suspect that my predecessor had just sat and had waited, without following up, for the board to be appointed. That was one reason why the functions of NEMA had been hampered.

Launching of the First NEMA Board of Management

Normally, boards, councils and trustees are launched by their relevant ministers once they are appointed. It was NEMA's turn to have its board launched once it was gazetted.

The chairman, the permanent secretary and I made plans to have the launch take place soon after the appointment. As the new chief executive, I had to make plans for the launch. This was not a problem.

My immediate concern was to understand my roles as the director-general. This was a new institution and I had never worked in a non-academic set-up previously. Before we were launched, I took the EMCA 1999 Act and read all of it. I highlighted the roles of each body specified in the Act. I picked on the most urgent requirements and prioritized them as urgent, and also noted the least-demanding ones. I also checked what other countries were doing in terms of environmental protection.

I proposed the launching date and the minister, Dr Newton Kulundu, was to be the guest of honour. He was to be accompanied by the permanent secretary, Mrs Rachel Arunga. Preparations were finalized and board members and staff assembled at the headquarters. Speeches were read, remarks were made, promises were made and the expectations of the authority were spelt out.

I was keenly listening to the speeches which were primarily directed at me, as the director-general. After the launch, the minister, board members, and the permanent secretary were paid their allowances and they left. We were now officially launched, given the mandate and powers to monitor, control, manage, and enhance Kenya's environmental issues.

Normally, the board would meet quarterly; its committees would meet once in a while on specific matters as spelt out in the parastatal's guidelines. The bulk of the promises were to be implemented by the DG and my staff. This is true even for universities and other parastatals. It behoved me to understand the laws and rules of the game.

The Minister for Environment, Mines and Natural Resources, Dr Newton Kulundu, the Permanent Secretary, Mrs Rachel Arunga, the Board Chairman, Prof. Canute Khamalla and two other board members came from the same ethnic community. The total number of appointed members was nine; and five of them came from one community.

This composition would later on have far-reaching implications on the general administration of the authority. Kenyan public appointments were so tribally-based that the vice was now haunting the society's fabrics. Boards and other senior appointments in society were, and still are, based on nepotism, on who one knew, whom one campaigned for during the general elections and on how much money one had "coughed out" towards the election of the appointing authority. One had to be loyal, familiar and related somehow. Seldom did credentials and merit matter those days despite their being clearly articulated in the requirements.

Nepotism, tribalism, loyalty and sycophancy therefore played crucial roles in the appointment of persons to key posts. Even the current appointments after the March 2013 general elections and despite the clear guidelines in the 2010 Kenyan

Constitution, professionalism and competencies were not adhered to. Also, people with financial power always get a free hand to secure all types of tenders. Such loopholes cannot enable the country to fully realize its developmental aspirations.

My Role as a Director-General

I took time familiarizing myself with the functions of NEMA. They were written in black and white. No serious work had been done previously and I sincerely did not have a reference point on which I would have based my entry. I had to start on a completely new slate.

First, I needed some parastatal autonomy from the parent ministry and had to transfer some of the staff to my authority. I needed a budget and clear terms and conditions of service for staff. I knew the roles of the board, the permanent secretary and the minister as far as parastatals were run. The head of civil service, Mr Francis Muthaura, had laid-down procedures on how the parastatals were supposed to be managed.

My first immediate headache was staffing. I had to engage staff from the parent ministry where they belonged and basically employ them. I prepared papers to justify the demand and staffing levels. The board met several times and directed me to come up with an equitable distribution of staff for NEMA and those who had to be left at the ministry headquarters.

The requirements for the director-general were so high that very few people would have qualified to fill the post. They included several years of experience, and having worked in a large institution. The person should also have had relevant academic achievements and experience in environmentally-related areas.

We had to think along these lines as we started to second staff from the parent ministry. These requirements were stipulated in the EMCA 1999 Act. It is one of the most comprehensive acts on environment and gave guidelines on sound management of Kenya's natural resources. There was one basic requirement which I always stressed to my students and whenever I make public address: *"Every Kenyan is entitled to a clean and healthy environment and we must all enhance it."* This is the basic cardinal rule as prescribed in the EMCA 1999 Act. Every other requirement on environment revolve around this statement. I again re-read the Act which created NEMA.

Another problem was to prepare and defend the budget to run the authority. Recruiting new staff to oversee the implementation of the law was also another issue. The most urgent problem was to publicize NEMA so that it would be visible within and outside Kenya. I hit the road running and occasionally stepped on people toes.

I quickly learnt the strategies that were required to see NEMA discharge its duties. I was expected to jump-start the authority. My brief from the president

while I was still at JKUAT was that I should ensure environmental compliance for the country. I was aware of the loaded statement and hoped I would be accorded the necessary support.

The first board meeting made several requests for me to pursue. I took the urgent one of asking staff who were already seconded to NEMA to apply for formal absorption. All of them except one lady wrote for deployment and the board accepted them. I then signed the appointment letters after the board had met and approved the list. I never ever acted on anything until the board had endorsed and sanctioned the same. Even at JKUAT, my actions were dictated by the board or Council members.

The board approved the salary scale and other benefits which had been worked on by the parent ministry. It was slightly higher than the one that the staff in the ministry received. The board approved it. But later on the ministry disowned the figures, blaming it on the directorate of personnel. Staff had been earning the salary for over three years.

This caused a major misunderstanding between the authority and the accounting officer, the permanent secretary in the parent ministry. The blame was levelled on the board of management. I thought that was ridiculous because all monies were channelled through the ministry headquarters. The alleged accelerated payments were later adopted anyway.

The appointment of additional staff was processed by an approved consultancy, Manpower Consultants, whom the board approved and recorded. Later on, it was alleged that I was the owner of the recruiting company and used it for my personal gain. The allegations angered me so much that I got a lawyer to establish who owned it. I did not even know it until I was appointed to NEMA. I threatened to sue those behind the allegations but no one volunteered to own up.

We eventually hired competent fresh graduates who included one-third female graduates in total. The board, through my wise advice, had long complied with the balanced gender rule long before it was written in the Kenyan Constitution. I kept the philosophy of gender representation in all public appointments. Again, the board fully supported and endorsed my proposals.

The board interviewed and hired the staff; I was only giving letters of appointment and terms of service. I had done a similar management service before in JKUAT. I knew and was aware of the sensitivity attached to unfair appointments.

It was during my tenure in NEMA that we employed over 80 district environmental officers. This was one of the biggest, pronounced milestones in the promotion of NEMA's activities. We started to be recognized at the grassroots. As the authority was being popularized, I advertised for the appropriate logo and slogan just like I had done for JKUAT. We received excellent proposals and adopted one. We paid for the best competitor. "Our Health, our Environment" was the slogan we adopted.

The board was aware at all times of the events taking place in terms of publicity and documentation. Again, within a short period of time, I planned a seminar for both print and electronic media so that all matters on environment would be adequately advertised. I knew very well that without publicity, our efforts would pass unnoticed. Every requisition had to be approved prior to spending the money. I considered myself a prudent financial manager. I had left excess cash in my previous assignment as a Vice-Chancellor.

What was the reason for publicizing our activities? It is not possible to discuss all the problems that our country was experiencing as far as environmental pollution and degradation was concerned. I would like to highlight a few examples. The EMCA 1999 Act was not known by Kenyans. Not many people were aware that the law existed which gave them powers to sue or be sued by any citizen. They did not know their environmental entitlement. It was my duty as the DG to popularize the EMCA requirements.

Water pollution was witnessed in all our rivers, seas, oceans and lakes. We had to educate Kenyans on the relevant sections of the laws which governed protection of our water bodies. We gave guidelines regarding the rights of people as far as clean water provision was concerned. Later on, standards, regulations and guidelines were formulated to protect water sources.

Solid, liquid and gaseous pollution went on unchecked. Solid waste management still stands as a major challenge in all our urban areas. There is no single solution reached yet on how to control the solids in our towns and cities. This was an issue when I was a DG and it still is a problem which will hurt the economy of our country for a long time to come. Liquid waste management affects towns and cities due to burst pipes and poor connections. We had to make the public aware of the dangers associated with any type of pollution. We advised on health-associated pollutants and how the public could be protected.

The press was also persuaded to cover, where possible, any seminars, conferences, symposia and workshops related to the environment. I had a strong public relations office which was directly under me; and any news, whether positive or negative, had to be communicated at once to the media houses. District environmental officers had direct access to the local media stations. I also started the first magazine, NEMA News Magazine, which was published quarterly and covered the whole country. It was distributed in major offices free of charge. It was the equivalent of Agritech News of JKUAT which I had initiated during my tenure there as VC.

The authority also had a mandate of giving licenses for capital investments like: buildings, highways, airports and residential houses, among others. We had to give permission for all types of structures. Permission was only given once an environmental impact and social assessment (EISA) had been undertaken by competent registered individuals or firm and approved by NEMA.

Kenyans had to know that this requirement was necessary. We therefore had to license experts to carry out the assessment for proprietors at a fee. The press had to be aware of all these developments in order to educate the Kenyan citizens and prospective investors.

Protection of our forests was another important component in the conservation of our natural resources. It was imperative that NEMA highlighted the imminent dangers of deforestation and vegetation clearing. This was important especially on the hill-tops and slopes, water catchment areas and along the valleys. The need to repeat the same safety measures was necessary as part of public awareness. It was not that Kenyans were not aware of the dangers associated with deforestation. But impunity, greed and ignorance of the laws hampered any practice of conservation methods. There were even shameful cases of sacred places which had been grabbed by the wealthy for selfish, commercial interests.

The most disturbing environmental pollution was the polythene papers. NEMA was charged with the ban or control of the light gauge polythene bags which were usually scattered carelessly all over the urban areas and on highways.

The authority gazetted the recyclable bags of 30 microns. The gazette was later revoked because manufacturing companies feared loss of business and laying off of over 4,000 workers from their factories, as they was claimed. We have not managed to arrest the situation despite concerted efforts by environmental activists and lead agencies. The effect of polythene papers on our environment is devastating.

As an authority, we set up a public awareness and participation section to deal solely with educating the public, but few were receptive. I commend both public and private Universities which took up environmental challenges and quickly set up schools and departments to teach environmental courses. My constant interaction with institutions of higher learning eventually paid dividends. In fact, some Universities were very receptive of environmental programmes and I was personally involved in assisting them to draw up the curriculum. I regarded this development as the only way forward in environmental conservation.

Issues of coastal marine, coral reefs degradation and mangrove destruction were also given special attention. I realized the dangers of losing our pristine mangrove sand dunes and the green coral reefs. Hence, NEMA set up a powerful section to monitor the damage. All the coastal hotels and developments were required to carry out an environment audit and report to my office within six months' from the time I took over. I specifically made unannounced visits to some hotels and demanded to know whether they had sewerage treatment plants or they discharged their raw waste into the ocean. This was a tall order for several five-star hotels which were not prepared to comply with the EMCA 1999. Some of the hotels had some sewers but others did not.

We demanded immediate construction of sewerage treatment plants or we would go public and this would affect their businesses. The press was ready

for any sensational news. Most of them complied and came up with excellent sewerage systems which discharged recycled water into the ocean.

They later appreciated our efforts and, again, NEMA gained positive publicity. We knew the damage it could have caused to our tourism industry if we went public. But we meant what we said and allowed for corrective measures. We could have not announced the rules, but just threatened to close the premises and/or take them to court. There were certain specific cases which I handled with the respective hotel managements. The environmental activists supported my efforts to the letter. In fact I had a stronger network with environmental groups than the press had. I used a carrot-and-stick technique to handle some delicate issues.

One area where we partially succeeded was the introduction of environmental classes and lessons at primary and secondary schools. I held a number of seminars with teachers and education officers to induce them to incorporate some lessons in their teaching curriculum. I had also requested the minister and permanent secretary to convince school heads to consider mainstreaming environmental issues in their curriculum. The Kenya Institute of Education accepted to have the matter considered in their normal review cycles. NEMA suggested basic topics which we thought were crucial for our country's conservation agenda. The topics were mainstreamed in the lesson plans.

But my happiness and satisfaction was when Universities heeded to my plea to have the programme introduced at BSc and MSc levels. Environmental courses are now the most popular and attractive programmes for students in many Kenyan Universities. During the publicity, I practically demonstrated the marketability of the courses by introducing several environmental officers we had employed and who were now enjoying doing their work. I planned to post environmental officers to divisions and locations to monitor the appalling land degradation.

The authority took up quarry inspection sites. There was an outcry that people and livestock drowned in open quarries. Developers never bothered to cover them; hence, the quarries posed environmental dangers. Cattle fell in open abandoned quarries; they were mosquito breeding grounds and emitted foul smell from the accumulated rain water.

The disused quarries were scattered all over the country with most of them located in and around Nairobi. I ordered that they should be secured by either having them fenced off or filled with construction soil. Each district, now county, had to identify those who excavated rock and hold them liable to prosecution.

Under normal circumstances, people who introduce or cause environmental pollution are held liable for their deeds. They therefore must make good of the damaged area. This is a common practice world over and is referred to as the *pollute pays principle*. It would have been applied to those who dug up the quarries. Unfortunately, they had already left the country or had wound up their businesses and it was difficult to locate them. We, however, made the public aware that those

who excavate sand, soil, stones or any other mineral are responsible and had to refill the scarred site. We listed the affected areas and took statistics for each county.

NEMA was responsible for ensuring that any new major construction had to undergo environmental impact and social assessment (EISA). Under my watch, the regulations which were mandatory for carrying out the exercise were gazetted. At the same time, the environmental audit (EA) was gazetted. This was the first time to have the regulations, rules and guidelines which were meant for the public. It was a major intervention which had to be adhered to by the proprietors. It brought some order and a sense of conservation of our resources.

The law required that only registered experts had to carry out the EIA and the EA. They had to be registered by NEMA after undergoing a prescribed training course. I led the drafting of the courses to be taught and passed them over to the relevant training institutions.

To date, the EIA is mandatory before anybody develops any project. Environmental audit was supposed to be done on all existing firms, industries, institutions and any outfit in an area to ensure environmental compliance. NEMA-registered experts carried out the audits. I was lenient in this requirement because most institutions were put up several years ago. I only demanded compliance reports, at the same time corrective measures on suspected environmental pollution and/or degradation were being taken.

Universities and training colleges were licensed to train experts and I was ready to provide the back-ups. Currently, we have over 5,000 full experts and a number of associates who carry out the assessments and audits. Audits are supposed to be carried out annually.

During these processes, I became a darling and an enemy of several people. But my belief in the long run was to leave a legacy of environmental compliance now and for the future generations. The biggest challenge was to deal with the politicians and well-to-do developers. They demanded licences immediately through intimidation. They used every method necessary to have me issue licences for project development. I remember receiving a threat letter signed, on the same page, by three ministers demanding to know why I had rejected the development of residential houses in Nairobi's posh Lavington area.

The same ministers, who had interest in the development had called me to their office, had a meeting with me and reprimanded me. I gently told them that the residents' association had refused any further development on the small plot, and a public hearing had been held to reject the same. I was following the law which they were party to when it was discussed and passed in Parliament. The matter stopped there and no further construction took place on the site.

I recalled my primary school days when I got a beating for reporting a teacher's wife who came late to class. But I never gave up, because for every decision I made, there were several people who supported me and only a few were aggrieved.

One major thing that bothered me was when senior officers from the ministry headquarters and others from within NEMA worked secretly to frustrate my efforts and undercut any decisions I made. I knew several cases whereby senior members of the board would incite proprietors to push for licences under dubious circumstances. I suspected corruption but always stood my ground. I was not going to sacrifice my integrity and country.

Another issue which I tackled as the DG was the electronic waste menace. I knew the country was going ICT fast and every company and institution wanted staff and management to be in line with the fast-growing digital-era nations. All sorts of obsolete equipment were being shipped into the country. Computers to schools were arriving in Kenya in numerous containers. Millions of them were donated from other countries.

A good number of them were old and had reached the end-of-use in their respectful countries. This equipment came in unchecked and were becoming functionless within the shortest period after installation. I must admit here that I had no control over their importation. The Kenya Bureau of Standards (KBS) was supposed to inspect and approve the functionality of the said equipment.

What I know is that we have millions of all types of e-waste in virtually every backyard and go downs. They are obsolete and have no use. They are an eyesore and we have no capacity to recycle or reuse them. The largest quantities of them were found in schools under the auspices of computers to schools as donations.

My role was to make the public aware of the imminent dangers caused by the components of e-waste chemicals and metals which would then affect our population, especially the children. E-wastes are major soil and water pollutants and should be handled carefully. I came up with a return-to-life of electron wastes. These included cell phone sets and batteries which usually become junk after a short period of use. The idea was considered brilliant, but currently there is no solution to this problem.

There are a few individuals and organizations which are collecting and dismantling e-waste, but the process leaves the components almost intact. Open empty boxes with exposed wires are seen in many go-downs or office spaces. The problem is far from being solved. The biggest victims of e-waste are children, as their safety becomes endangered.

I used to hold frequent meetings with my staff. I believed in direct communication with them and would leave the details to be expounded by the section heads. We used to have quarterly staff meetings and I would brief them on the latest environmental matters in Kenya and outside.

We wrote the first strategic plan for NEMA as a team and all staff participated. We used the strength, weakness, opportunities and threats (SWOT) analysis to come up with a strategic plan which would give us guidance in planning. Other considerations made during the process included political, economic,

social, technological and legal implications (PESTEL). We considered that any environmental matter had some economic, political and legal implications. If our strategic plan was followed, Kenya would have been a world-class compliant country. The board was happy to have its first strategic plan launched.

We often had retreats and continuous seminars to help the staff bond and appreciate each other's work. We eventually felt that we owned the processes.

I inherited 232 members of staff from the parent ministry. Incidentally, this was about the number I had absorbed as staff when I was a principal of JKUCAT. I therefore knew the process of engaging them productively. The process in NEMA was easier than the JKUCAT one because there were no strict academic qualifications needed. Only one person opted to remain in the parent ministry. The remuneration package in NEMA was better than that of the ministry.

I travelled to many parts of Kenya and came across the pollution and degradation sites. The board employed 81 environmental district officers to oversee the districts. I used to contact them before going there and ask to visit the hot spots and hold public meetings there.

For example, we had to contend with oil spills from over-turned oil tankers on the highways. We had to mediate between disputes on quarry lands, public hearings on land sub-division in ranches, public hearings on complex structures in residential areas, numerous effluent discharges from factories and industries. There would also be some degree of insecurity depending on how I made certain judgements on issues. Many times we engaged the state administrators like the district or provincial commissioners and security personnel during public hearings. The situation would at times become volatile between the opposing sides of some of the projects.

I was the final decision-maker on controversial issues before the aggrieved party proceeded for further legal redress in the high court or in less arbitrator settings. The law was clear on the process one had to follow in case of unfair judgement.

I recall the case of a proponent who wanted to construct a five-star hotel in the famous Maasai Mara National Park. He had been cleared by environmental impact assessment to proceed and apply for the licence. I took a team to the site and found that there were several other hotels within a few kilometres apart. It was also going to be sited next to the sanctuary where elephants usually give birth.

I had to cancel the award of the licence despite numerous cries from interested parties. The hotel was not built and the foreign investor left. In any case, hotel bed occupancy analysis revealed that there was no need for additional hotels as annual occupancy was only 70 per cent for the entire year. I was justified in my rejection and the board supported me. I always kept the management fully informed of all the activities that I undertook. They were appreciative. Several other cases of large magnitude were presented to me and were amicably solved.

It should not be construed that I was out to reject any requests for development, far from that. I similarly endorsed numerous projects for development after going through the necessary procedures in documentation, assessment and approval. Only the complex cases which had not met the necessary requirements were rejected.

The law requires that NEMA conducts a whole country's environmental status and makes a comprehensive report on the same. The state of environment report is a detailed document which is compiled by lead agencies. The lead agencies, along with my staff, conducted surveys, visits, questionnaires and literature review to compile such reports. It covers the whole country and looks at all facets of environmental concerns. The lead agencies tackle specific problems in an area of their jurisdiction and document whether the environment is being enhanced and protected or polluted.

Each year's report tackled different themes. I remember that the first such report to come out covered all aspects of the environment. That was in 2004. The second one in 2005 dealt with waste management; subsequent ones covered biodiversity and climate change. These reports were the most comprehensive for Kenya and by law had to be tabled in parliament by the Minister of Environment.

It is in these reports that individual members of parliament would be aware of shortcomings in their respective constituencies. The reports were meant to monitor pollution and degradation in order to have those concerned address the issues. The report revealed and outlined the shortfalls and suggested corrective measures for each problem.

The state of environment reports were very significant milestones which I considered to be the best ever compiled. Nobody would claim that they did not know their areas as far as pollution, natural resources and poverty levels were concerned.

We developed instruments which gauged poverty levels in each constituency. We held public hearings during the data collection and ensured that whatever was captured was included in the reports. The stakeholders for each thematic group were eager to report problems which affected their well-being. The meetings were publicized and stakeholders assembled in halls to respond to our queries.

The reports covered water issues, solid waste management, refuse from hospitals and clinics, forests, natural resource, soil management, animals and crops in an area, processing industries, noise pollution, air pollution, electronic waste and any matters which would affect the environmental compliance of the nation.

The comprehensive annual reports are still being produced and cover specific concerns which NEMA considers urgent and need to be brought into focus for speedy action.

It was through these meetings that the role of NEMA became so popular and ordinary people got to know their right to a clean and healthy environment.

NEMA became a household name and my name was synonymous with NEMA. I took pride in advising Kenyans that we needed to take care of our country in all aspects of natural conservation. I warned the polluters and threatened them with court actions if they did not enhance the environment.

During my tenure as the DG, I accused the Nairobi City Council of neglecting solid garbage control and they instantly took action. I was instrumental in the closing down of the Dagoretti Abattoir, for being filthy and for discharging its wastes into the adjacent neighbourhood and the nearby river. I also took Kenyatta National Hospital to court for careless discharge of hospital wastes which was a danger to the community.

All these cases compelled the relevant organizations to respond to the charges. I involved the media in covering the processes and any action was an eye-opener to the rest of the country.

I used to get calls to address problems. I had several staff members who were assigned and responded to specific queries. It became routine for me to get at least five to ten requests per day and was able to address some and delegate others to my able deputies.

I had a team of excellent deputies who were very well versed on environmental issues. They included: Mr Maurice Mbegera; Prof Francis Situma, our legal officer; Mr. Benjamin Langwen; Mr. Reuben Sinange, a finance officer; and the public relations officer, Mr Titus Mungou. Mr Buigutt was an excellent editor for our magazines. They also had other officers below them who were active in accomplishing their assignments.

In rejecting to license more hotel structures in the famous Maasai Mara Wild Sanctuary, I explained that we already had enough human and vehicular traffic. The damage which would be caused by excess hotels would affect and threaten the sanctuary.

The eagerness to increase tourism destination was not matched by measures to preserve the famous ecosystem. The wildebeest migration, for example, attracts several visitors who cannot be controlled in pollution menace. I argued that both tourists and tour operators could be unmanaged and counter-productive as heavy traffic could take its toll on the flora and fauna of the famous sanctuary. I further argued that excess numbers would reduce the high-class tourist visitors who relish exclusivity and a pristine park, and who were ready to pay high premiums.

It was obvious that the amount of waste deposited in the park was destructive to the wildlife, their ecosystem and an eyesore to visitors. Worse still, the teeming humanity would interfere with the wildlife's routine lifestyle. We would expect stacks of wastes of all types in the park.

The problem would be exacerbated by the mushrooming of cheap campsites and restaurants owned by investors who would never pay any attention as far as pollution and degradation were concerned. This would be the case also at the

watering points. At that time, I confirmed that despite enough hotel facility, there were not enough wardens and rangers to track the environmental violations by drivers, tourists and even local people selling their wares. There were guides and tourists who erected illegal campsites at non-designated areas and would drive too close to animals, destabilizing their routine behaviour. Indeed, the garbage at the park then was giving the Maasai Mara negative publicity in those countries whose residents frequented the park.

I chose to highlight the Maasai Mara Sanctuary because it is more endowed in habitat populations than any of the 22 parks and reserves. It is indeed famous for large populations of lions, rhino, cheetah, elephant, leopards, antelopes, giraffe, primates, and, of course, the wildebeest crossing. It is also the link to Serengeti Park in Tanzania which receives more visitors than any park conservancy in Kenya. If the rules were flouted, the encroachment on the ecosystem would be very devastating.

My appeal was that the Maasai Mara was unique. It had to be preserved. I knew for a fact that nowhere is nature's balance better portrayed than in the Great Migration for which the Maasai Mara is popular. The wildebeest migration into and out of the Mara is the planet's greatest scenario. It is now ranked as one of the seven world wonders. Every year close to 1.5 million wildebeest migrate from Tanzania to Kenya in search of the sweet green grass.

One cannot get satisfied of the scenery/view no matter how many times one visits the sanctuary! I have been there more than five times and I always long to go back. The Great Migration has no start and no end; it is an endless cycle. There is the need to appreciate and protect it.

Environmental pollution is a threat now. As the animals move towards the Mara from Serengeti in Tanzania, they face countless dangers from other animals, hunger, exhaustion, and harsh environmental conditions. It is the climax of Darwinian Theory where only the strong, able and lucky ones survive. The hyenas, crocodiles and lions feast on the animals, particularly the young calves which are quickly picked due to exhaustion and the physical strain of the long journey. It is estimated that over 500,000 to 800,000 are killed during one complete migration cycle!

The tour operators had to aim at a no-mass market approach to save the park. They had to go for quality tourists and not merely quantity. Human traffic is threatening the sanctuary. Pollution is on the increase. There should be on-the-spot-penalty for garbage littering, for example, as it is imposed in other countries.

There should also be incentives for anyone who takes care of garbage control, for instance. Some communities from certain countries are under fire for blatantly flouting our parks and littering garbage anyhow.

I wanted to institute rules and regulations for maintaining the standards and have them enforced. Laxity in enforcing the rules does contribute to the

deterioration of the parks in the whole country. Lack of equitable access to benefit-sharing is the greatest hindrance in assuming ownership of such a lucrative resource.

Our natural resources seem to benefit external exploiters more than the local communities. This phenomenon alone discourages protection of the resources. Who benefits when an international crew shoots a wildebeest migration documentary? These are some of the basic questions which are not readily answered.

The exploitation of the resources progresses unabated and the communities within live in abject poverty. For example, certain plant species which have been proven to have medicinal properties are freely harvested and used in pharmaceutical industries without regard to the local communities where the plant is harvested. There is no sharing of any benefits which accrue from such a process. Those multinationals do not support any project which can assist in poverty reduction.

This is true for many products found in third world countries. Mineral mining also does not benefit the locals wherever it is carried out. Examples of such exploitations are many in Africa and many conflicts are resource-related. The well-to-do nations have, for years, contributed to the ever-increasing poverty in African countries by exploiting the natural resources for their selfish use. In Kenya, poaching by foreigners is a real menace.

I have deliberately delved into this particular subject because it was a concern that we could destroy the only world game tourist destination. Publicity did not mean excessive construction of hotels since we had an adequate number in place. Kenyans do not observe the basic laws which govern them. Tourists then follow suit and damage our very ecosystem and create negative publicity.

Yet the Maasai Mara still stands unique in Kenya as a world-famous wildlife sanctuary. It should be protected at all costs.

As I write this book, I have checked and found out that there are 225 temporary tented camps far beyond the number of 70 I knew. The moratorium was lifted and all sorts of camp sites were erected, creating uncontrollable vehicular and human traffic. With such practices, there is an imminent destruction of a world recognized game park. This is simply due to greed and non-conformity to the laws which govern game reserves.

The major problem in adhering to the laid-down regulations in the management of the park is sheer failure to impose the laws. Both the national and international communities do not care about the future generations. It is true that the number of wild game is decreasing steadily.

A typical example is the uncontrolled poaching of elephant tusks in Kenya. One of the big five is threatened with extinction due to high demand of tusks. The elephant tusk is made available by poachers who have an already existing market in other parts of the world. The incessant cries from many Kenyan go unheeded!

The vice continues despite the existing laws which ban poaching. International protocols have not deterred the menace either. The penalties which are imposed on poachers in Kenya are not deterrent enough and culprits usually go scott-free despite there being damning evidence. It will not be long before we lose all the elephants in Kenya.

The same thing applies to lions and other game. Pressure from human encroachment is a major threat to the survival of our game parks. I am saddened by this matter and efforts we tried to put in place to curb the heinous practice never yielded any good results.

This docket was overseen by the Kenya Wildlife Service and, in my view, they are unable to execute this task. They have been overpowered despite the good training they get. The external assistance has not been successful either. No tangible efforts seem to be undertaken as the nation loses precious natural resources. Such a loss will be irreversible.

This will be a terrible reflection on us if we sit by and watch a systematic loss of wild game in this modern age. The annals of history shall record and reflect that Kenya was once the cradle of the most abundant wild game in the world. Maybe there is something that can be done urgently. Time will tell.

Revitalization of National Environment Management Authority (NEMA)

After the announcement in the media that I should leave my post as Vice-Chancellor of JKUAT, I decided to make another jab on the activation of NEMA whose role was not pronounced. I got remote instructions from State House handlers and Mr Francis Muthaura that NEMA wanted a jumpstart. It was a moribund institution whose powers were not yet felt by Kenyans. I recalled my role in all the institutions that I had been assigned. The results were astounding.

I knew what role I played as a chairman to revitalize the Inter-university Council of East Africa; my leadership as a chairman to collect data for the establishment of new campuses to accommodate the 1990/91 double-in-take. I further reflected and revisited the technique I used to place my immediate University, JKUAT, onto the world map of performing Universities. I had enough living testimonies of successful projects. I saw a window of opportunity to make NEMA a great institution to tackle pollution and degradation in our country.

I decided to take a swipe at it. As alluded to earlier, I took the EMCA 1999 Act and studied it carefully. I picked out urgent areas which needed action and divided them in actionable blocks. The demand for environmental protection was important for the whole country, but other areas were more degraded than others and needed urgent action.

I also mapped out those which could create immediate and visible results for Kenyans. I knew the capability of the staff, their roles and expertise. I was also aware that the parent ministry was watching over my shoulders to size me

up. I was aware that NEMA had already been branded a name that I had to turn into another JKUAT campus by swift actions. I was never deterred by negative publicity. My role was clear, to publicize NEMA and try to correct the environmental mess in all aspects.

The following achievements of NEMA are worth mentioning to demonstrate the role I played in my new assignment:

- a) The establishment of formidable staff drawn from various universities at graduate level to man the districts. These were interviewed by the board and competitively hired. They were fully responsible for environmental complaints in their areas of jurisdiction.
- b) The posting of staff who had attained their MSc or PhD degrees in natural science areas to be in charge of all the provinces of Kenya. Some staff were deployed from the headquarters and others were hired to man the provinces. Their remuneration packages were higher than those of their counterpart provincial commissioners. They had the required academic credentials and I felt constrained to pay them less. The board approved their packages. The visibility of NEMA and its roles were now prominent at the grassroots levels.
- c) I held numerous training courses, seminars, workshops, conferences and symposia to popularize the role of NEMA. I wanted the public to be aware of the imminent dangers if we did not care to protect our environment, more importantly the natural resources. Again, the board was fully involved in conducting the target gatherings which brought together diverse stakeholders including lead agencies and the press.
- d) I held a few workshops specific for the Kenyan electronic and print media personalities and trained them on how to write scientific articles on the environment. The money for the meetings was sourced from donors and the government.
- e) I drafted a policy paper which was specific about the abolition of polythene paper. The idea was bought by many environmentalists including the Nobel Peace Winner, Prof. Wangari Maathai (deceased) who was the assistant minister then. She gave the policy paper full support and even proposed that we put a levy on each bag collected to deter excessive litter. I proposed a formula to the supermarkets for collecting and reusing the bags but the idea was killed by the manufacturers who wanted to continue producing them. The littering of polybags goes on unabated even today and untold environmental pollution keeps on escalating. Our water channels are choking as the previous productive pieces of wastelands are covered with polythene litter.
- f) International linkages were boosted as I attended several United Nations conferences. Kenya's name was on the world map as far as environmental

matters were concerned. I raised substantial amounts of money from donors by writing project proposals and encouraging staff to solicit for funding for various urgent needs. I even attracted international investors to bring business to Kenya.

- g) My interactions at many international environmental meetings resulted into a number of conferences being held in Nairobi and this attracted foreign exchange earnings for the country.
- h) I set various committees to tackle specific environmental tasks like marine and coastal pollution and degradation; wetlands committee to investigate the damage here; water towers committees to check on deforestation and land degradation; e-waste, compliance and enforcement committee; legal committee; finance and audit committee; solid and management committee.
- i) I introduced a vigorous environmental and social impact assessment and audit section which was composed of professionals from the whole country.
- j) I started giving licences for ESIA and EA experts at a fee to be able to assist NEMA in checking the mushrooming unapproved structures. The group was left on its own to regulate itself, but registration had to be done by NEMA after they had undergone basic training courses.
- k) I drafted the curriculum for environmental and social impact assessment and audit and gave it to some institutions to use as a guideline for training. We had to source out this service as NEMA did not have enough staff to undertake the training courses. I gave the curriculum to the universities and private training colleges. This was part of the requirement before one was registered as an expert in environmental assessments.
- l) I constituted a team of NEMA staff and lead agents to draft the state of environment reports which were a statutory requirement.

As has already been alluded to, the first report was produced in 2004, and thereafter annual ones have been compiled. They were supposed to be tabled in Parliament by the minister, but none of them did so.

By law, state of environment reports must be produced annually detailing all factors which affect the entire Kenyan environment. I personally chaired the meetings which drafted the reports as they tackled each sub-theme. The board was fully aware of the proceedings and we normally launched the reports in big Kenyan hotels at the coastal city of Mombasa.

I usually invited great personalities to launch the reports. The minister was invited and charged to table the 300-odd copies to parliament. Again, all the media houses were invited and made clips of the most damaging pollutants to present to the public. This was a major milestone for which I was proud. Launching of state of environment reports was the loudest and most popular

technique that I used to issue alerts on the degree of pollution and degradation of our environment. All the funding to meet the expenses of committee members' allowances, publications, reproduction of copies, travel and accommodation were generously met by the United Nations Environment Programme (UNEP).

We used to write annual proposals to cover the costs which ran into millions of shillings (approximately US\$600,000). This was a generous funding agreement which allowed me and my team to meet the requirement of producing the reports for all the period I was in NEMA. I really appreciated the support accorded by the UNEP.

- m) I usually held public hearings whenever there was a dispute in the construction of a project, sub-division of a ranch, diversion of a river or establishment of residential estates.

The law required that if there was any aggrieved party on any development, the two parties meet on the disputed site under the chairmanship of the district officer to debate on the pros and cons of the project in question. I used to announce publicly the intended hearing specifying the site, venue, date of hearing and time.

By law, I had to post the announcement in public places and in well-read, circulated dailies in Kenya. This had to be done 21 days before the date of the hearing. During such meetings, I had to arrange for security escort in case the meetings became volatile and the groups became unruly. I had a few such cases but I used some diplomacy to calm the groups down.

The final report and judgement was to be drafted by me, with a clear specific recommendation as to whether the project should proceed or not. The aggrieved party could then proceed to seek redress from the high court. I made many unpalatable and sometimes good decisions during and after the public hearings. I received many threats after delivering judgement. I usually held top management meetings before drafting the final letter. I kept the board informed of all the major decisions. I also copied the ministry headquarters for information.

Invariably, unsatisfied parties made their way to the minister's office for intervention. This was where the environmental mess started if, indeed, the minister overturned my ruling. This often happened but I could not be cowed or change my well-searched decisions.

- n) I facilitated the acquisition of Global Environment Facility (GEF) for 77 programmes. The facility is based in Washington DC and gives funds to individuals and organizations to tackle specific environmental issues which the country considers important. NEMAs the – director-general was the focal point for Kenya and I had to vet the proposals for funding. Many NGOs, CBOs, and individuals benefited from this generous funding.

GEF is one arm of the World Bank's facilitation to assist small-to-medium environmental concerns. I was always to review and recommend the proposals which in turn assisted my work to be visible and practical.

- o) World Environmental Days were dates set aside to make people aware of the environmental needs. UNEP set aside several dates for specific purposes to celebrate, or perform relevant duties in accordance with the theme and purpose. They were in the calendar of events and funds were set aside to meet the expenses. Successful meetings were held all over the country, with one major one attended by the minister to mark the ceremony. I do recall that we had about 20 similar commemorative days. Meetings were held across the country but the major ones used to be located in areas where I thought pollution was rampant.
- p) Designated UNEP environmental calendar for creating awareness includes:
- World Day to combat Desertification;
 - International Biodiversity Day;
 - World Environment Day;
 - International Day for Biological Diversity;
 - Convention on the Conservation of Migratory Species of Wild Animals;
 - Convention of International Trade in Endangered Species (CITES);
 - Convention in Biological Diversity (CBD);
 - World Water Day (WWD);
 - World Wetlands Day;
 - Earth Day;
 - World Habitat Day;
 - World Oceans Day;
 - Clean up the World.

During these occasions, we invited dignitaries from all over the country to join us in celebrating the events. We mounted big road shows and drove through towns and cities to make an impact. There was no effective way to display the role of NEMA other than going public. Kenyans were made aware of the environmental dangers they caused. The objectives of the authority were being felt in all the corners of Kenya. I was confident that I had scored high on publicity and public awareness.

- q) Mainstreaming the multilateral Environmental Agreements was a task I took up soon after I reported to NEMA. My role was to study and understand all the protocols, agreements, conventions and even statutes which Kenya had acceded to and domesticate them. This was not a mean task. I realized that hundreds of agreements had been signed by various government agents and needed to be implemented by several government ministries and agents. I selected those which were directly related to environment and mainstreamed them into our programmes. I assigned members of my management to take up specific agreements and advise on how best to implement the requirements. What was amazing was that

nobody knew where the agreements were housed or who was responsible for their implementation.

The Attorney-General (AG) held some, while Ministry of Agriculture claimed others. My ministry headquarters also wanted to implement some. Wildlife Service housed others and Treasury kept a few. It was and still is confusing to know who is responsible for what.

Under normal circumstances, the authority should be the custodian of all the multilateral environmental agreements (MEAs). The documents deal with environmental matters and would have been discussed and ratified by Kenya. I just never understood why the confusion. We had a representative from the AGs Office in the board but, according to my judgement, the individual was wanting and never assisted in any way even in matters legal.

My legal officer, Prof. Francis Situma, was more versed in legal matters than the AGs' representative. Nevertheless protocols like Kyoto, Montreal were housed in NEMA and I domesticated them in our annual programmes. For example, climate change issues had my full attention and I had a large support staff headed by Ms Emily Massawa. This was true for a few other conventions to which Kenya was a signatory.

The confusion was not helping any agency but curtailing the implementation of the requirements. Under normal circumstances, all protocols and similar ones should be held by the attorney general's office with copies to relevant bodies for implementation. I was not sure who had what document and at what level of implementation it was.

- r) Another milestone which I considered vital for the public was to come up with a quarterly publication. Just like I did in JKUAT where I introduced Agritech News, a magazine from the office of the Vice-Chancellor, I did the same at NEMA. We published the NEMA news magazine which covered environmental matters countrywide. It was one of the finest communication write-ups that I ever came up with. My public relations office headed by Mr Titus Mungou and Ruth Musembi formed an editorial board, of which I was the chairman and Mr K.S.A Buigutt the chief editor.

I knew the importance of timely communication. I knew that knowledge is power, and that our quarterly magazine would reach a reasonable number of readers. The NEMA magazine covered topical issues on environment and all the hotspots of Kenya as far as pollution was concerned. My parent ministry followed suit and started theirs despite the fact that we used to cover their events in the NEMA magazine.

The last quarter of December 2004, for example, highlighted both pictorially and by articles Prof. Wangari Maathai, the Nobel Peace Prize Laureate. The title of her article was "A Thunderous Homecoming for Nobel Peace Laureate". I

was privileged to work with Prof. W. Maathai. I knew that documentation and publicity of my work was the only way to get to the Kenyan community.

- s) We trained judges, lawyers and advocates on environmental matters. Inadequate and poor judgement of environmental cases was one major contributor to environmental pollution. I solicited for funds from a donor and supplemented what we got from the Treasury and mounted countrywide training for judges, lawyers and magistrates. I tasked my legal services department to get funding from the Institute of Law and Environmental Governance to conduct several symposia. This initiative was an astounding success as we held meetings in Kenya's major towns, specifically to train the legal fraternity on the seriousness of the environment. I covered the EMCA 1999.

Act requirements and my staff delved in the penalties for offenders. The last symposium we held was in Mombasa for five days where the chief executive of the judiciary himself, Evan Gicheru, attended together with over fifty of his learned friends. The theme was, "Do not Delay Environmental Cases, says Chief Justice".

This was one of my happiest moments, to see cases expedited and appropriate fines apportioned to offenders. They were mesmerized when I took them through various concepts such as multilateral environmental agreements, suitable development, the precautionary principle, the polluter-pays principle and the application of the concepts. We further discussed the EMCA and its essential characteristics. I was emphatic when I discussed practical concerns related to health, life and the environment, hence the slogan, "Our Environment, our Health". I coined the slogan and it was approved by the board. It was brief and understandable.

The parting words at this important symposium were imploring the group to treat environmental cases with extreme urgency as they affected national health and life. Delayed decisions could jeopardize people's health and life, as well as cause irreversible damage in many cases. These were the words of Hon. Justice Evan Gicheru who stayed for the whole duration of the symposium. As usual, the media houses covered the proceedings extensively. Kenyans knew the importance of protecting our environment.

- t) I summoned organizations to submit their environmental audit (EA) reports. This requirement which had been ignored for years was to ask industries to declare their environmental compliance. I took this matter up with the urgency it required. The law, Sections 58 and 68 of EMCA, 1999 Act asks for the submission of the annual EA. The deadline is usually 31 December of each year. It was gratifying that after advising the affected groups, reports were submitted in thousands.

I gave a long list of categories of those who were supposed to comply and they came up with good reports on how their firms were complying with the law. I had a mammoth task to have the reports reviewed and the stakeholders informed of the outcome. I had to hire and outsource the reviewers. I also used several interns to review the reports using specific guidelines per category. We wrote to every respondent acknowledging receipt of their reports and advising accordingly. The requirements for environmental audit reports sounded awareness to those would-be polluters.

Reflections

Public awareness was my target and I accomplished that. I used past experience to ensure that Kenya and other countries knew of our concerns on pollution. The popularity of JKUAT nationally was translated here. I was cautioned many times that NEMA was not a second campus of JKUAT, but an intricately entwined parastatal to the parent ministry where the PS and the minister were the supreme decision-makers.

The continuous interference with all aspects of operations was nowhere closer to any I got at the university. In fact the chief executives of Kenyan public Universities have immense managerial, academic and decisive powers. My powers in NEMA were monitored and seen as retrogressive to the workers. Any decisions made by my officers and myself were suspect.

Prof. Wangari Maathai, the Nobel Peace Prize Laureate, and who was the assistant minister, worked with me very well. She would call me into her office and consult with me on actions to take on issues she considered needed consultations. I enjoyed working with her and we travelled together on several occasions on fact-finding missions. The ministers had their own personal agenda and politicized environmental matters.

The sad picture of the degradation and loss of biodiversity in Kenya is a worrying trend. It will be a sad day when our future generations will only read about the riches of Kenya's lost natural treasures. The past generations shall only be blamed for their naivety, ignorance and incompetence in the management and protection of the lost resources. The ever continuous increase of solid waste both on land and coastal areas is a matter which needs utmost attention. The occurrence of environmentally-related diseases in Kenya is invariably correlated with the pollution of our towns and cities. NEMA tried to educate the masses on the inherent dangers of pollution. The laws are provided but lack firm execution. My tenure in NEMA was very eventful.

I interacted with those who wanted to cut corners and have their demands met in the shortest time possible. Others were firm believers in the rule of law for our environment. The highest organs of the land were not committed to the conservation of our environment.

The annual, hyped tree-planting excises were showcases which never promoted or enhanced environmental conservation. The fact is that many of the seedlings which were planted annually were scorched in the sun and dried up for lack of care. The survival percentage was negligible countrywide. But this was considered the most important day of Kenya's calendar day of events. The sporadic clean-up days are never sustained either. Despite a designated World Environment Day, no serious follow-up is sustained to ensure compliance. The residents resume normal pollution practices unabated.

Water wars in Kenya are not new. A case in point is the wrangles of an Island in Lake Victoria where one community, which believes they own the island, is being asked to purchase residence permits. Senior government officers who are supposed to resolve the problem claim that one community owns the island and another one owns the waters that surround the island. These are trans-boundary conflicts which point out the crucial importance of water and its resources. The growing population demands water. The rivers, lakes and ocean are being polluted. Loss of marine life and continuous degradation of the coral reefs, mangrove swamps, and other aquatic ecosystems will affect future generations. The rising temperatures have caused a reduction in water flow.

When one talks of Maasai Mara, holiday memories come into mind. One thing I know clearly is that no matter how many times one visits the world-famous wildlife sanctuary, any subsequent trip offers cherished memories! The world views the conservancy as an inexhaustible pit of wild game. Those views have led to the construction of lodges and tented safari camps in every part of the sanctuary. This has caused the destruction of the fragile ecosystem. This is not necessary and I view the trend as destructive and selfish. The proprietors use terms like eco-friendly to simply convince the licensing authorities who may not have knowledge on the effect of human traffic in parks.

Until and unless the highest authority of the land takes a serious and continuous participation of conserving our environment, Kenya will stay a nation with its rich biodiversity diminishing. Our coastlines will no longer sustain the pressure and the terrestrial ecosystem will never hold the ever-increasing population.

International Linkages, Travels and Conferences

My Travelling Experiences

I enjoy travelling and interacting with different people from various cultures. I also enjoy visiting scenic places around the world. I recall one writer saying that the world is a big book and those who do not travel, read but the first page (paraphrased). Another great travel writer, Paul Thoreau, said that "*tourists do not know where they have been and travellers do not know where they are going*". These are loaded statements. I would like to illustrate the importance of travel and the

unique experiences specific to the traveller. Despite making contacts and adding new people in the list of collaborators, I had an opportunity to sit back and reflect on my job and enjoy interacting with new cultures.

I was able to learn that under our skin colour, native costumes, religion, different languages, tolerance of diversity, and eating habits, we all share core beliefs and it is only cultural differences that separate us; differences that should be celebrated and not feared. In my travels I relish them. I also learned that travel has shown me that we all love our homes, families and the country for what they are and not what they could be.

People notice this after cross interaction with many varied world cultures. It is not easy to sit in front of a television and judge others on the opposite side of the world, based on the unknown presenters and reporters. It is only the traveller who takes time to investigate such things for him or herself in order to dissipate ignorant impressions of others.

I was able to tell the good and the bad of the Nigerian, British, Comorian, Egyptian, Libyan, Japanese, American, South African, German or Zimbabwean culture. One understands the diversity of people's value system.

These conferences added value to me. I learnt a lot from my counterparts and the problems were very similar in the universities. I even encountered the ugly face of the apartheid regime in South Africa. During my many travels outside Kenya, I had an opportunity to undertake a consultancy service in the Comoros Islands. I used to bid for consultancies in my area of specialization and I won one which was advertised in the local dailies. Three of us won the consultancy but I was the only black, the others were Dutch nationals. We were to meet at Moroni, the capital city of the Comoros.

I was excited to travel to these remote Islands off the east coast of Africa. My colleagues were to join me there from Amsterdam. I was booked on Kenya Airways from Nairobi to Johannesburg and would then connect to South African Airways to Comoros. This was in 1983. I boarded the plane one early morning at Nairobi, alighted at Johannesburg for my connecting flight to Moroni, the Comoros capital city.

My morning flight from Nairobi was beautiful as I flew over the great Mt Kilimanjaro which was covered by snow (not there now), and over Lake Malawi to the industrial gold city of Johannesburg. It was a bright sunny day with no clouds. My four-hour flight was memorable. The Kenya Airways staff knew me as I was their frequent flier member and was booked in first class. I had no clue as to what I would encounter in South Africa.

As soon as I cleared my luggage and was ready to proceed to the transfer lounge, a white attendant told me that the flight to Comoros had already left and I was to wait for the next flight, 12 hours later. I was disoriented for a while and asked if he meant what he had said. He confirmed it.

The young man was polite and responsive. He requested me to follow him. I had been warned not to surrender my passport for stamping or else I would not travel to many countries thereafter. He gave me a piece of stamped paper for a visa. As we walked through the alleyways, I sensed something.

He was leading me with my luggage to an isolated waiting lounge. I never panicked but reminded him that I was travelling first class and had rights and privileges attached to it. That could not be so; the Johannesburg to Moroni leg was economy class. He showed me a new ticket.

I was taken to a large waiting lounge with two television sets. Both of them were broadcasting South African propaganda items. I found two black ladies also waiting. The young man told me to wait there for the next 12 hours, eat there and use all the facilities within until somebody came to give me further guidance, as to when my flight would take off.

History repeats itself; so goes the adage. I recalled my colonial experience at the Barclays Bank in 1970. Was I in for jailing or segregation? Perhaps the latter. It dawned on me that the lounge I was put in was for blacks only and we could not get out to even visit the duty-free shops! I had not planned a stop over here.

I sat pensively and started counting hours as repeats of South African propaganda blared from two TV sets. There were other people who waited there both blacks and whites but for a shorter duration. I was saddened by the turn of events. We were served lunch with white waiters who must have been told to watch over us. Later at 4 pm, tea was served, and dinner at 6 pm. It was indeed a prison-like set up.

I had not carried with me any books or local dailies which I had perused earlier in the morning. I convinced myself that all would be fine and I would accomplish my assignment. I did not have the capacity and means to call my dear wife, Esther, in Nairobi and tell her of my temporary predicament. I suffered quietly, but bravely.

The scheduled 10 pm flight was announced and I was relieved. My anxiety was over as I was ushered to the aircraft by another person. The Johannesburg airport, then the Jan Smuts Airport, has very powerful lights. We walked to the plane as if it was midday. One could pick a needle from the ground. I walked to the hang of the plane and checked my luggage in as I carried my briefcase aboard.

I was the only black man in the whole plane. The rest of the passengers were all whites who stared at me as I settled down in my assigned seat. I travelled economy class. I was not bothered that I was the only black aboard. What bothered me were the constant stares!

This was not my first time in an all-white group. I had been in the US and UK but never noticed such behaviour. The crew appeared nervous and kept talking to themselves with quick eye glances at me. I also put on a stronger face and ensured direct eye contact with them.

My appearance in the aircraft caused confusion, agony, disbelief and anger to the passengers. The crew did not know what to do but kept on consulting one another as the aircraft was in motion taking off. I was not bothered an iota by this. I maintained my stony face and felt very relaxed. Just before take-off, an unusual solution was arrived at. To move me.

I was politely requested to move to another class, the first class. Due to the few occupants in that class, the crew decided to move all passengers who were less than twenty in number to join those in economy class so that I could be segregated to the first class. I obliged. All of first-class privileges and services were now accorded to me as the economy section steamed with white passengers. It was packed.

I was now locked up in a private comfortable cabin served with several attendants and I had an excellent four-hour night flight to the Comoros. In fact it turned out that the crew in my cabin became so free and friendly that we shared jokes and even chatted about cultures.

Indeed, I asked them why I was here alone. Of course I knew the answer but I wanted to be told the real story of apartheid. I had several glasses of South African wine and slept over the agony and psychological anguish. That was apartheid in practice and its ugly face in 1983. I developed a defensive disposition and totally fearless attitude for overcoming fear. I had to feel supreme confidence in myself and move on.

A bold act requires high degree of confidence and bravery. I knew that if I became overly sensitive, I would have been overwhelmed and would have lost my mind. My work would then have suffered. I was going to make substantial amount of money on a consultancy. I therefore needed a clear and focused mind.

I created a forward momentum and avoided verbal confrontations. I was tactful right from the waiting lounge to the Comoros Islands. It was crucial to know how to deal with a unique environment. I had to deal with the adversity and confront the unknown.

We landed in Moroni safely. The whites alighted first as I was still being entertained by the crew as we passed time. I knew well that it was a delay tactic and by 1 am, I was on my way to my hotel where my colleagues had been booked. They had travelled by Sabena Airlines from Brussels and, of course, with no hitches. I was happy to see many friendly Comorians of all races going about their daily business.

I slept soundly and reflected on the past 24 hours the following day, as we embarked on our project. I knew that it was the height of apartheid in South Africa. The struggle for independence was at its climax. The minor clash I had with one Mr Bird in Barclays Bank in the 1970s was nowhere comparable to the South African regime. I even reflected on my Animal Science lecturer, one Mr Raphael Mitchell, who wanted to give me a lower mark after scoring a high

mark in his course. But still his action was easily sorted out after he realized that I would make a fuss about it.

We continued with our research work, hopping from one island to another in a military chopper. One of the four islands which constitute the beautiful Comoros was still under the French colonial government. The residents were divided; some wanted continued occupancy of the island while others were vehemently opposed to it. Grand Comoro (Ngazidja), Anjouan, Moheli and Mayotte make up the country.

Mayotte is regarded as not part of the country and retains ties with France. These islands constitute an archipelago of volcanic origin in the Indian Ocean. They had a population of approximately 500,000 people, with a total area of 2170sqkm. The information was important for us to advise the government about the planting densities of trees and where the project would be feasible. We finished in one week and I returned home via the same route I had travelled.

Surprisingly, the SAA flight this time was full of black and white travellers to Johannesburg. I was delighted that I would fly back in a more relaxed manner than previously. I realized that there were specific flights and times for both races to travel together.

When I told this story to my colleagues in Kenya, they were amazed at the. I recalled my having turned down a job offer to work with Monsanto Company in South Africa soon after my PhD graduation in 1978. My decision to decline the offer was justified and I would not have had peace in a country which was evidently racist.

Reflections

Extensive travel allows one to make new contacts and they keep chief executives well informed. They learn new techniques of managing their organizations. They open avenues for new ideas. I viewed all the linkages that I had initiated to have been beneficial to my university then. Whatever lessons I learned became additional treasure in the management of JKUAT. It was through these linkages that I was able to secure scholarships for staff development and later on produced persons of integrity to eventually take up leadership of several public and private universities in Kenya. Many of the mentees are now leaders and managers in their own right. When I reflect at my human resources contributions, I feel satisfied that my little role in practical involvement of staff training and appropriate mentoring bore fruits.

My encounter with apartheid was a lesson in itself. I did not know the extent of racial injustice and its magnitude. I learnt a lesson which I hope to narrate to generations to come. Every bad event has a lesson or two to learn. I later forged excellent relationships with several South African white academic colleagues with whom we developed meaningful programmes. The USHEPiA project which

assisted my PhD staff training had its headquarters at the University of Cape Town. I later made several visits using South African Airways (SAA) and fondly remembered my unique trip to the Comoros Islands.

The trips and contacts I later made as director-general of NEMA were even more eventful than previous ones. These were group meetings with different agenda.

My tenure as the director-general of NEMA exposed me to local and international meetings which were unique in objectives and outcomes. To seriously address Kenya's pollution and degradation trends, I had to get to the hotspots and try to give solutions. Some of the areas which I visited were so degraded that any corrective measures would be costly.

I advised the authorities on the dangers of invasive weed species which were spreading all over the country. I advised on the physical removal of the water hyacinth weed from Lake Victoria when it had occupied only a small section of the lake at Hippo Point. But my advice was not taken seriously. I had been to Jinja Dam and seen the Uganda military scooping the entire weed from the lake to dry land for disposal. The operations were done under the close supervision of President Yoweri Museveni whom I found there giving directions. I thought it was an excellent move to deter further spread of the hyacinth weed on the waters.

The weed is now a menace on Kenyan waters, despite concerted efforts and exorbitant amounts of money spent to study alternative use for it. The weed can be used for other purposes, but its spread is so fast that it cannot be contained. My fear is that secondary vegetation is now invading the same area where the weed has inhabited. We have another weed, hippo grass, which is colonizing the area very fast. Lake Victoria is still threatened by the hyacinth weed despite the professional advice I had given on several occasions. In addition, the washing of vehicles along the beaches is contributing to the survival of the weed.

The other weed that has colonized our dry areas is the *Proposisjuliflora*. Commonly known as Mathenge in Kenya. *P. juliflora* was introduced to Kenya as a greening plant in semi-arid regions of the country. It does beautifully there. My travels exposed me to the menace it had caused to pastoralists. Currently, thousands of hectares of land have been invaded by the weed. It is a threat in Ethiopia, Djibouti, Somalia, Southern Sudan, Eritrea and Kenya.

There are impressive projects which are being used to reduce it but, again, its rate of spread is too fast to be contained. There are uses such as charcoal burning, wood carving, and energy production among others. This is encouraging, but reduced forage where the plant is prevalent is an economic concern for pastoralists.

My visit to the heavily infested areas with *Proposisjuliflora* was disheartening to say the least. The negative effects far outweighed the positive ones. Another

hotspot which I visited and advised the local authorities to negotiate for quick remedy was Wajir County in Kenya's arid and semi-arid region. Wajir town is a sprawling beautiful setting punctuated with short scattered acacia trees. It is a water-scarcity area but has a high water table (landscape). Very little agricultural activities take place here. The locals grow mainly vegetables and short-cycle crops.

The major environmental problem I witnessed here was lack of a sewerage system. The residents have no common waste treatment facilities. They rely on ferrying wastes to a distant common open site and dumping it there. When I visited the town, I tried to negotiate with the local authorities to write a proposal and seek donor support to construct a modern environmental sewerage treatment plant. I had thought of using the treatment to allow for fertilizer production through dehydration and processing.

Due to shallow water tables, pit latrines are not used. I never got to discuss the proposal because of other reasons. I hope somebody took it up to alleviate the miserable conditions of the town residents. Ferrying night soils in a bucket every so often was such an unsightly procedure that I thought something urgent needed to be done. A few houses, like where the district commissioner resided, had modern toilet facilities. I had to spend my two nights in the government house.

Environmental Hotspots

There were several environmental hotspots which I personally took on as the director-general of NEMA. It is not possible to enumerate all of them in this book. The calls and e-mail letters we received at the headquarters were responded to promptly. Action could be given in the same way or I could request my field officers to make follow-ups. The press could also pick areas which needed attention and call me directly. I was accessible and received calls on a 24/7 basis. I also attended to all my e-mails and got back to customers promptly. Responding to customers was my long-term habit which I still carry on up to this day.

I was instrumental in the setting up of the Nile Basin Initiative (NIB). This was a trans-boundary venture which was externally funded and housed in my NEMA offices. The main purpose was to set up management systems for the River Nile. The idea was to have all of the then 10 countries use this forum for solving the problems associated with the River Nile waters. The riparian countries included Tanzania, Rwanda, Burundi, Uganda, Kenya, Southern Sudan, Northern Sudan, Ethiopia, Djibouti and Egypt. Are the riparian states 10 or more?

My board appointed the first environmental officer to head the section. The lady we got did an excellent job in coordinating programmes for the riparian countries. To date, NIB is a strong trans-boundary set-up which tackles issues associated with the best uses and practices of the Nile waters. It rotates in various countries as needed.

Part of my responsibility as a DG NEMA involved international meetings, environmental governing Councils, conference of parties, meeting of parties, protocol negotiations, drafting of international agreements and many more; all fell under my office. They were in our calendar of events. Many staff and board members also had their opportunities to represent the country whenever need arose. I recall my board chairman attending many of these meetings and could come home with a different view on how we managed Kenya's environmental issues.

International Negotiations

The trips were either headed by the president, the minister for environment then, and the chief secretary at the time or me. I was in the lowest cadre of leading delegations, but I wrote all the technical papers for presentation. I actually led and guided the team from bottom up. In any case, technical papers and negotiations are usually conducted by technocrats who deliberate on issues and provide appropriate answers. I also had a competent paper drafting team headed by various section heads according to subjects. I, however, followed them up to ensure quality papers were produced.

Among the meetings I attended were those held in New York, Geneva, Tokyo, London, Buenos Aires, Dar-es-Salaam, Kampala, Paraguay, Bonn, Berlin, Bangkok, Hong Kong, Tripoli, Sirte, Mauritius, Arusha, Addis Ababa, Johannesburg, Paris, Prague, Del Monste, California and Montreal. Some of these meetings were headed by the Head of State of state which involved unbelievably large delegations. I never witnessed so many joyriders like those I saw at the UN General Assembly in New York City. Sometimes I wondered what necessitated some politicians to leave their work in Kenya and travel outside for weeks in the guise of joining a president in a ten-minute speech delivery.

A case in point was when the former president, Mwai Kibaki, had to personally attend a UN Governing Council in New York. I was officially invited to provide technical back-up on environmental matters, and I was number 25 on the official list of invitees. I was booked in the same hotel, the World of Astoria, an expensive classic hotel where Head of States of state stay. This was because I would be needed at any time to provide expertise before the president would deliver his ten-to-fifteen- minute speech. I was working closely with the Kenya's special ambassador to the UN, Prof. Judith Mbula Bahemuka, who was a colleague at the University of Nairobi and is now a Chancellor at the University of Eldoret. She was our representative in the Assembly and did everything possible to make our stay comfortable.

I was surprised when parliament back home raised the question of the numbers of delegates who travelled to New York! The taxpayers were also up in arms as to why 90 people accompanied the president. It was indeed true! Only 25 of us were officially cleared to accompany the president due to various security and technical

assignments. When I got the full list, I honestly saw no reason why the other 45 joyriders had been present. This was when I knew that my nominal roll number was 25 and that my name was the last on the official list which had been cleared prior to our travel. The extra baggage, I think, had to pay from their ministries to avoid embarrassment.

During our stay in New York, my colleague, Prof. Bahemuka was so useful to us in providing information for Kenya to support certain aspects of the negotiations. She was so kind to us and invited the Kenyan delegation to her official residence in Rochester, on the outskirts of New York City. Among the many trips I made, Bahemuka and Amina Abdala who was then posted in Geneva, now a cabinet secretary, were the only individuals who had been so accommodating to the Kenyan delegation and who always invited us to their residences.

It did not matter how many times I went to these stations, the two would always extend Kenyan hospitality to us. Somebody might argue that it was their obligation to extend invitations whenever anybody showed up in their stations. That is not true. They are not obligated. They were there on duty and working as all of us were. I thought it was their character which I very much admired.

Cabinet ministers usually led delegations to represent Kenya. I had a chance to compare and internalize the capacity of our people in international negotiating meetings. We could have as many as 190 different countries to discuss an environmental issue like the Kyoto Protocol. Many a time, they could not sit in the plenary hall long enough to follow the proceedings. They could only show up at specific periods when they knew that their country was to deliver a statement.

This was also true to many African countries. The heads of delegations just disappeared for hours and days, leaving juniors to man the country's desks. My ministers, indeed, would not sit long enough to appreciate what other nations were contributing. Instead, the technocrats were put on their country tables taking notes, and would later brief the heads of delegations who could not even understand the jargon that had been used in the papers. There were times when they would miss completely and surface at the reception parties in the evenings.

This was not the case with other countries. China, for example, would oscillate in adopting positions; one time it would declare itself a developed country. It had to survive by taking advantage of positioning itself strategically. The staff from China were so many and their head of delegation used to stay the whole duration and intervene in almost all negotiations. Other countries had their heads of delegations sit throughout the proceedings.

I learnt one vital lesson which I always tell my family and students; as much as possible, sit through any meeting you attend. There is always something to learn. One needs to listen to others as one would like to be listened to. It is common respect and good human behaviour. I personally love to stay through meetings if, indeed, I attend them.

Such perseverance is also a good example to be emulated by the youth. There are university seminars and conferences where chief executives also disappear after opening meetings and workshops.

The Montreal Climate Change Conference of Parties Number Six (CoP6) was an episode to tell. I was requested to lead a one-man Kenyan delegation to Montreal in Canada. The reason was that my minister then, Stephen Kalonzo, would not attend as he was busy campaigning during the referendum on the new constitution.

I attended the conference and found other Kenyans there from various NGOs. I requested them to join me and form a visible Kenyan delegation led by me. I was the highest-ranking government officer there. The Kenyan High Commissioner was also present to give us logistic and protocol support. My main agenda here was to woo all the 190 countries to support us in holding CoP7 in Nairobi.

One of my officers, Mrs Emily Masawo, had given me the historical perspective as to why we needed to hold the conference in Kenya. We had requested for it several years earlier in a similar meeting. Two major deficiencies were noticed which would work against us.

One, the minister himself was not present to push for it through networking. Two, Kenya was viewed as unsafe as we were going to have elections for the referendum in 2005. It was now my duty to clear the air and plead to the parties. I did a lot of lobbying through the East African countries, African countries, Small Island States and the Far East.

We had to do the lobbying either during the breakfast meeting, dinner or during specific country or regional meetings. I learnt to mobilize heads of delegations for a purpose.

Meanwhile, Senegal very much wanted to host the conference. I recall that in one African countries meeting I had exchanged some bitter but friendly words with the Senegalese head of delegation when he was pushing for support to his country.

I had fully convinced Nigeria, our big brother, to support us. Their leader of delegation respected my request and vouched for Kenya. I had earlier in another meeting in Geneva supported them fully regarding hosting an African centre to manage hazardous wastes. They reciprocated and had high regard for me. I had also worked in Ibadan and remembered the good old days. I had respect for the Nigerian team as they always took pride in their tyranny of numbers to shut down small countries.

I had done enough lobbying and networking. When we got to decision-taking, I remember Mauritius and Thailand supporting Kenya to host the next conference of parties. I read the statement on behalf of the country. Canada supported us, and even Tanzania, through their minister of environment. We were actually endorsed to host the 7th Conference of Parties (CoP). I recalled one fact; courage is the ultimate career mover!

I returned home happy and confident only to be asked by my minister:

“Who authorized your bid to have CoP7 come to Kenya?” Of course, I knew Treasury would cough out some initial money for the meeting. The net return far outweighed what Treasury would have spent. I wrote the report and handed it to the permanent secretary to brief the minister on the course of events toward the conference dates. I had to be in the committee of implementation.

I knew too well that they would not turn down the meeting. The country would benefit as the UNEP headquarters was located in Nairobi. We already had a meeting venue. We needed to beef up security, book hotels and clear litter from the streets. I envisaged that such an international conference would promote trade, business and tourism, and open up new avenues for country-to-country collaboration. That was eventually realized after the meeting was held.

I learnt some lessons from these practical experiences. First, some of the ministers who normally led negotiation teams contributed very little to the meetings. Many, especially from the African continent, did not actively participate in the proceedings; instead they went off to run their personal errands. Consequently, the countries lost in negotiations.

Secondly, attracting any meetings to one's country was a negotiated affair. It was a give-and-take game plan. It was horse-trading: “scratch my back, I scratch yours,” as the saying goes. I learnt the technique and practice of public relations during any meetings I went to, whether local or foreign. What I detested most was to be involved in some shady discussions where matters had to be handled in a non-transparent manner or there was allusion to corruption.

If I supported a good idea for an organization or individual, I also expected similar treatment in return. It was a tit-for-tat in a good cause that was beneficial to many. I also learnt that attending, listening and finally participating in meetings gave me an advantage in any negotiations. I got fully informed of the matter at hand and could make informed decisions.

Every person has his price to pay for any decision made. Interpersonal relationship and genuine support of others far outweighs material gifts.

My previous positions as Vice-Chancellor, chairman of KARI, IUCEA, JAB, AICAD and KENET exposed me to enough intrigues that any negotiations, national or international, had a firm basis for me to refer to. Whenever I made a mistake, I quickly rectified. This act itself was a lesson for me. I was one of the eight African members who represented the continent in the United Nations Convention on Climate Change (UNFCCC) in Bonn, Germany, for three years, 2003 to 2006. We were part of those implementing the Kyoto Protocol. This was a powerful committee which vetted compliance soon after the ratification of the protocol. It was in these meetings that I learnt even more of the technique of tolerance in decision-making.

All the 40 of us from across the world had to agree unanimously on an issue before making a decision.

The decision had to be by consensus and not by voting. Every persuasion technique had to be employed to convince the opposing side to agree on an issue and avoid voting. I found this approach to be very useful in disciplinary matters where judgement was usually based on interviews and defence mechanisms. The chairman had to be a tolerant person who allowed the expression of divergent views.

I also learnt the fundamental problem which affects decisions, especially those that relate to the African continent was the number of experts who attend conferences. Meetings usually run well past midnight. The more difficult ones could run as late as 3 am, and even continue into the next day. The end results are exhausted negotiators. What other countries do is to come up with a large contingent of experts to attend to complicated matters in shifts. The USA, Japan, Germany, UK and China, for example, would come with enough negotiators to attend the meetings in shifts and brief each other appropriately. It was a relay for them, while a country like Kenya could afford one expert only who could easily retire early during negotiation time.

I do recall that I was unable to keep up with the talks we had in Canada on equitable access to benefit of natural resources. I retired to my hotel after long negotiations only to come in the morning to the plenary and receive shocking clauses in the document which were contrary to what had been agreed upon. Documents were doctored to suit certain groups of people or countries.

The truth is that certain crucial information could be included, excluded or altered in the late hours of the night and resolutions passed. It was also vital to have lawyers in such meetings. I recall a number of flawed decisions which would have been difficult to alter after they had gone through final drafting stage. One could look out of place if one participated in the final drafting and then start shooting questions in the plenary. You would be politely reminded that you were one of those who drafted the final communiqué and would therefore not be allowed to contribute.

These meetings were very enlightening. They opened my faculties and made me a tough negotiator and a competent manager. Indeed, character building was a continuum. I listened to one pastor in August 2013 during an SDA camp meeting in Nairobi. He made a very far-reaching statement which I thought could be useful to our youths.

He said that in his high school, their motto was, "Character comes before career". He was referring to the fact that an individual must be a person of integrity from the very beginning before he/she chooses a career. The pastor, Richard Brooks, was emphasizing the quality of a Christian in serving the nation. Integrity was a virtue that called for uprightness and Christians had to display it in their careers.

This was true in both local and international negotiations. One had to be absolutely clean in any dealings which could affect one's family or the country. The reality of life was that institutions and governments had to be headed by persons of the highest integrity. One will always be referred to in good or bad memories. The discipline and culture of a country was dictated by individuals who ruled and governed them. The youth would invariably emulate what their elders did.

The Gains

My travels for NEMA brought in funds for environmental concerns. My interactions with friendly nations and subsequent proposal writing assisted us to source funds for specific tasks. The foreign country ambassadors who resided in Kenya assisted in chosen environmental projects as long as we put that money in specified tasks.

Many ambassadors and high commissioners selected to fund sectors in agriculture, environment, water, afforestation, and urban problems, all of which are factors that affect the environment. It was through my interactions and Kenya's visibility in environmental issues that donors like the EU, DFID, JICA, IDRC, UNDP, UNEP, DANIDA and many others extended tremendous support to Kenya regarding environmental efforts.

We requested the British Environmental Agency to second some staff to train my staff on how to prosecute offenders. We were able to train prosecutors and vigilantes. The several Global Environment Facility (GEF) projects which were funded had my blessings. They complemented our efforts towards public awareness and participation. Funds for collecting information on the state of environment report were provided by the UNDP.

The fencing of Mount Kenya resources was also partially sourced by NEMA; so were those for the rehabilitation of the Mau Forest. Donors had confidence in the proper management of their funds and trusted my leadership just like JICA, which I had conducted projects with for over thirteen years, had entrusted its resources to me. There were times when the country was not favoured in borrowing money. But our projects went on uninterrupted and we were able to meet the expectations of the donors. We never had any audit queries in our financial management. By the time I left NEMA, there was substantial external funding for a number of projects.

Teamwork and timely communication on available opportunities are vital for successful implementation of programmes. I thought that one role as a leader was to shape the authority (NEMA). I worked around the clock to show that NEMA was operational. I raised it up and it became the envy of many. The authority's name had permeated in all corners of Kenya. Its roles were well

understood and Kenyans started to discard the destructive habits which resulted into environmental pollution and degradation.

I rejected or approved several projects without favour or fear. I knew deep down my heart that for every decision I made, whether positive or negative, somebody somewhere would be affected. So what would be the solution? The law was there. It protected that somebody and me. I therefore made some decisions notwithstanding the consequences. My strongest leverage was that staff and the board were on my side on any decision I made. That was my shield.

Liberal Sharing of Information

My joy in NEMA was to share information freely with my staff and board. I was even more thrilled when I shared academic information with the scholars in Kenya and outside. Unlike other institutions where bureaucracy and protocol are followed to divulge non-sensitive information, NEMA believed in publicity and free sharing of information.

Some African countries had not embraced environmental concerns when I joined NEMA. Other than Uganda, Kenya's neighbour, several countries regarded pollution and degradation as a department within a larger ministry. However, the EMCA 1999 Act, gave the director-general authority to act.

I recall some countries sent delegations to my office to enquire how we were running NEMA. Delegations from Zimbabwe, Ethiopia, Somalia and Rwanda visited me. This is because we had made contacts in various meetings and Kenya was well noticed during the deliberations. Despite the bad environmental conditions in Kenya, I portrayed a positive image and took time to explain and freely highlight the good things that NEMA was doing. Some information was accurate I must admit. But some, like deforestation, was understated. I portrayed a positive image nevertheless.

As each of the countries' delegations visited NEMA, we discussed freely what our role was and how best our Act was functioning. On paper, the Act was, and still is, the most comprehensive piece of legislation. I was proud of it. After detailed explanation of what we did, I would happily furnish the delegations with copies of the EMCA 1999 Act. I would further stress the need for respective countries to enact a law which would safeguard the environment. I even advised them to involve universities to mainstream courses on the environment in their syllabi.

I emphasized the need to have a Head of State of state to be personally involved in enhancing the environment. This advice was taken seriously by Rwanda and it is one of the cleanest countries in Africa. My academic generosity was evidenced during these interactions. In any case, I knew that trans-boundary environmental problems were common.

What was good for Kenya could be great for Ethiopia. Furthermore, multilateral environmental agreements affected all African countries. I shared our pride and popularity. I also gave them my first report of the state of environment, 2004.

I do recall that while I was Vice-Chancellor at JKUAT, the Vice-Chancellor of Kigali University of Science and Technology, Prof Silas Lwakabamba, visited me. He wanted to see our academic programmes.

He told me that JKUAT's programmes were well established and known outside as the best in the region. He flattered me and we had a long conversation on the same. As a good friend and colleague, I freely shared the syllabi, explained to him the marketability of each course. I even pointed out any weaknesses about particular courses. He was most appreciative.

As if that was not enough, he requested me to give him a few staff in the technical subjects to go and start the programmes for six months as he organized himself. I cautiously accepted the request. Little did I know that I would lose some due to the higher offer he gave them. I quickly trained and hired others to replace those who had left JKUAT. I did not regret their departure as I considered this as normal brain circulation within the East African sister states.

I knew of the story when Prof. Silas Lwakabamba of Rwanda was bragging in Harvard that "*if anyone wanted quality trained lecturers, go to Michieka*". After a while, I took my first-class graduates and trained them to take over. Although it took a little longer to get the full compliments of staff, we still maintained the quality I had jealously protected.

Now, Rwanda has staff who manage the environmental docket. In Rwanda, the Rwanda Environment Management Authority office is enjoying the best, enhanced and protected environment. The Head of State of state, President Paul Kagame is in charge, and clear instructions are posted and announced for the locals and visitors. It is a big crime to litter in Rwanda, for example. When I look back, I feel proud that whatever I shared contributed somehow to the well-being of other people. Most African countries have their laws on environmental agencies or authorities enacted by parliament. After all, the requirements are similar, although they differ in the implementation processes.

Tribulations at NEMA

No job is done without stress. No successful major undertaking is free of blame. Human nature is critical and usually fault-finding. My three-year tenure in NEMA (2003-2006) were marked by enhanced environmental awareness. Its articulation caused all those who did not know that there was an agency in charge of their environmental health to be curious. The NGOs were fully involved in environmental matters. Universities and schools started mounting several units in environmental courses; local governments doubled their efforts to control pollution.

I raised funds for research and for curbing pollution and land degradation. As a manager, I put together a working team of staff who knew their work and could defend with zeal any decisions we made.

The problems of NEMA arose merely because it had come of age and somebody who could be more accommodating to manipulation was sought. The available funds which I assisted to raise attracted the powers-that-be. Issues on environment were clear and anybody could talk about them.

Many proprietors were aggrieved when their projects were rejected due to various reasons. Those who were supposed to move environmental agenda forward were at times affected by the outcomes. They would then pick on the NEMA management and tarnish its name. No minister, for example, tabled the state of environment reports to parliament. We supplied information for the whole country and delivered the required 250 copies to the clerk of the National Assembly. We hoped that a minister in charge of environment would take the responsibility of tabling them in parliament.

Instead, the 250 copies gathered dust in the shelves of parliament. It was work done in futility, energies spent in agony! It was taxpayers' money and donor funds spent in vain. The country continued to be polluted and degraded.

Only very few National Environment Council (NEC) meetings were held. I recall attending only two during the entire period I was at NEMA. This was the ultimate policy body as far as decision-making was concerned.

It was, by law, a minister's supreme organ to endorse or reject deliberations which were brought to the NEC. The NEC would endorse or otherwise advise on controversial decisions I would have made.

I was left to deal with the board which also had no ultimate answers on technical matters. Again, the NEC was a dead outfit. Decisions we made at a lower-cadre level needed the NEC's blessings, failure of which, we were left at the mercies of the community. I nevertheless took the leadership risk and continued to implement decisions which were made by my technical staff bodies. The board was supportive but there came a time when nobody wanted to venture into decision-taking for fear of being sacked. Occasionally, there would be differences in decision-making, creating sharp divisions amongst board members and the technical staff. I usually laid facts as they were and requested for unbiased decisions.

The EMCA 1999 Act was clear on approval or rejection of projects. We used to have court litigations on decisions we made. The budget was not enough to undertake expensive cases once the authority was taken to court. We won many cases but lost a few. Luckily, we had competent lawyers who prepared well before the hearings.

I received several court summons. I delegated my legal officers, Prof. Francis Situma and his deputy Ms Ann Angwenyi, to handle them. Despite the good

training we held for field officers, many projects which would normally undergo environmental impact assessment escaped our scrutiny, resulting into unnecessary litigations.

All the events which affected NEMA created public awareness. They were a blessing in disguise, and Kenyans learnt that licences for any project were a necessity.

They had to seek them before embarking on their implementation. I still pushed on the environmental agenda without relenting.

The assistant minister for environment, Prof. Wangari Maathai, was very supportive. On several occasions, the assistant minister would also confide in me the frustrations she faced even from the minister and other political operatives when it came to enforcing the environmental laws. She therefore appreciated the difficult terrain I was working in and the similar frustrations that I faced. She, however, encouraged me to follow the law despite resistance from well-to-do developers who wanted to undercut or circumvent legal approval procedures.

In fact most of the major decisions I made and were later challenged in a court of law were upheld. It was not my nature to reject progressive projects, but any that posed an environmental danger were turned down outright. It was through this hard stand that eventually saw NEMA control some project developments in fragile areas of the country.

Many Kenyans appreciated the work we did. Many NGOs and community-based groups formed coalitions to fight pollution. Several bodies came up as garbage collectors, conservationists and experts. I am not implying that there were no formalized groups to fight pollution and land degradation; there were individuals and even ministry sectors; but NEMAs stand strengthened and encouraged them. What they did not know was that there was a powerful Act, EMCA 1999, which carried immense powers to guarantee a safe and healthy environment for all.

Problems surfaced when laws were put in place and demanded compliance. The well-to-do developers termed our actions as an impediment to development. That was when trouble started.