

UNYUNYIZI NEWS

National Irrigation Authority



Chief Executive Officer
Mr. Gitonga Mugambi

Chief Editor
Mr. Daniel M. Nzonzo

Editor
Rhoda Mbuvi

Writers
Rhoda Mbuvi
Daisy Chanzu
Johnbosco Obonyo
George Maina
Shirleen Kuria
Brendah Rajwayi

Photographers
Brendah Rajwayi
Daisy Chanzu

Graphic Designers
Brendah Rajwayi
George Maina
Shirleen Kuria

In this Issue:

- Editor's Note
- Word from the CEO's Office
- The process of rice planting
- It begins and ends with you
- Post-harvest Management
- Highlights
- Opinion Nook
- Misconceptions about the Authority
- Dialogue Corner
- A tree at a time
- One Kenya, One People, One Destny



Mr. Daniel M. Nzonzo- Principal Corporate Communication Officer

Welcome to the fourth issue of 'Unyunyizi News,' a quarterly newsletter for the Authority.

In this issue, we take you through the process of planting rice, challenge you to take responsibility in surviving floods, talk on post harvesting and get some life insights from Eng. Vincent Kabuti the Deputy General Manager in Research and Planning at the Authority. Further, we enlighten you on two out of the seventeen national values: patriotism and national unity. The issue also captures some of our highlights and gives you a sneak peak into our 'End of year performance Review'.

In our continued segment of 'your opinion' on our quarterly posed question, we document some of the feedback on "the importance of embracing irrigation in Kenya" as promised. In the next issue, it will be an honour to read and document some of the small or big things you are doing to contribute to the food security basket. We look forward to that feedback on our social media pages as well as email; communication@nib.or.ke.

Enjoy your read.

Word from the CEO's Office

The Authority's responsibility is to provide that basic of the basics, irrigation water. We empower people by providing irrigation water for sustainable farming through development, rehabilitation, modernization and promotion of irrigation water and drainage. This aims at ensuring that they take initiative and ingenuity to access food, establish a viable livelihood and contribute to the economic growth in Kenya.

The Authority is continually expanding and developing projects through provision of irrigation infrastructure for abstraction, conveyance, distribution and application of sustainable and reliable irrigation water for the various irrigation projects. This can be seen through the Household Irrigation Water Storage programme that continues across the country as well as Riamukurwe Irrigation water Project which is nearing completion amongst others.

The quarter had a lot to offer. Firstly, we were honoured to host H.E the President in Mwea Rice Mills as well as have the PS, Water Sanitation and Irrigation inspect one of our projects, Riamukurwe Irrigation project, during an inspection tour of the irrigation and water projects in Nyeri County with which he was pleased. In addition, the recent cabinet reshuffling by His Excellency the President of the Republic of Kenya Uhuru Kenyatta saw Sicily Kariuki EGH. become the Cabinet Secretary for Water, Sanitation and Irrigation.

The Authority is also striving to see serious food production in its schemes/projects in order to expand beyond what is envisaged through the use of modern farming methods such as the Water Rice Saving Culture (WRSC) as well as efficient agricultural machinery like the combined harvesters.

This note will not be complete without mentioning the high court's ruling in favor of the Authority in a case against Public Procurement



Mr. Gitonga Mugambi- CEO National Irrigation Authority

Administrative Review Board (PPARB) on High Grand Falls Dam tender row worth Kshs. 200 billion. As a result of the ruling, the Authority is tasked to do a detailed design review and do re-tendering of the contract. With this, we look forward to the implementation of the project for with its completion will come not only irrigation water but also electrical power.

In line with the Authority's Vision: "Water to every irrigable acre", we see a very bright future and are committed to implement irrigation projects country wide and deliver them diligently.

By Daisy Chanzu

Has it ever crossed your mind where the rice you consume comes from or how it's processed? Think no further. This column focuses on the step by step rice planting process from a simple rice seedling at the nursery bed to a sumptuous rice meal.



Farmers in Mwera Irrigation scheme working on their rice fields

Step 1 Grain assertion: one has to ensure the rice seedlings used are certified. This is for quality and high yield rice production. It is a privilege for the Authority to be the only certified organization producing certified Rice Seeds through the Mwera Irrigation Agricultural Development center.

Step 2 Land Preparation takes a period of 3-4 weeks. It is characterized by the following; flooding of the rice field either through irrigation or rain-fed (this is to soften the soil and avoid unwanted weed growth) followed by ploughing of the land (the soil is turned over to bury weeds and incorporate the previous crop into the soil). Ploughing can be done either manually or mechanically. The harrowing process is then done twice at a week's interval. Harrowing smoothens the soil, achieves better tillage and improves the rice plant growth process. Immediately after harrowing, leveling follows (can be done manually using an ox and wooden plank/leveler or mechanically), which ensures even water distribution in all parts of the field.

Step 3 Plant Establishment can be done through the following two methods:

- **Direct Seeding-** first the seeds need to be pre-germinated, this is accomplished by submerging the seeds a prior 24hrs, then incubating the seeds for another 24hrs. One can now evenly broadcast the seeds throughout the field. To have a good seedling germination, the field

is drained between 0-9 days after sowing.

- **Transplanting-** in transplanting, a small portion of the field is set out and prepared as the seedbed. This can be done simultaneously or before land preparation occurs. The seedlings are grown between a period of 16-21 days depending on the variety and region. During this period the water is kept between a depth of 3-5 cm to maintain a fine texture for ease of uprooting. The uprooting process is done by holding 2-3 seedlings close to the root then gently pulling them out towards oneself. At this stage it is important to maintain high water levels to prevent wilting. The seedlings are now termed ready for transplanting which can be done either manually or mechanically. After the 16-21 days period, 1-2 seedlings are transplanted in rows of 20 x 20 cm spacing at a water depth of 2-3 cm.

Step 4 Water, Nutrient and Pest management: for irrigated rice, the water levels vary depending on crop growth and development stages. The standard rice water level is 10cm during the land preparation stage which is reduced to 3-5 cm at the transplanting stage depending on the seedling height. About 21 days after transplanting, it is advisable to drain the water so as to apply fertilizer efficiently. The Nitrogen, phosphorus and potassium are applied during the transplanting period, referred to as the first top dress. This ensures weed, disease and pest control where applicable. During tillering, water depth reduction is encouraged as it enhances tillering. Water levels should be gradually reduced to hasten maturity and maturation. Before harvesting, about 7-10 days there should be no water in the fields.

Step 5 Harvesting: the crop is cut when 80-85% of the rice grains are straw (yellow in color). The ideal time to harvest mature rice is about 130-136 days after sowing when late, 113-125 for medium and 110 days for early maturing varieties. During dry seasons the approximate time is 28-35 days after heading.

Step 6 Processing: this is also referred to as milling. The main objective is removal of husks and bran layers to produce pure edible rice as the end result. Rice milling can be achieved using either; one step milling, two-step process or multistage milling. Afterwards the rice is packaged and ready for consumption. Rice planting is indeed a process but one gets to truly reap major benefits. Mahatma Ghandi couldn't have put it any better when he said, "If you give me rice I'll eat today; if you teach me how to grow rice, I'll eat everyday."

It begins and ends with you

5

By Rhoda Mbuvi

It's so unfortunate that we are from the recent floods and many might have not recovered from the effects caused yet; lost life, damaged infrastructure, lost crop, diseases from contaminated water; all leading to economic hardships. I know there were many calls to the Government to rescue; calls that went unanswered. Is it hurting? How much pain? Could you have done something about it? Could it get better? Let us engage, will we? What can we do?

As much as floods are a natural calamity, it is not realistic for the Government to fix everything. We can do something. Did you know floods have some benefits? They recharge ground water, make some soil more fertile, provides the much needed water in arid and semi-arid regions and kills pests in the farming land among other benefits.

To start with, we can harvest this water for dry times in dams, water pans and tanks among others. The Authority is currently implementing Household Irrigation Water Harvesting Project in which 9,769 household water pans have been constructed countrywide translating to 13.2 million m³ of water stored. Over 80% of the water pans have water at full capacity from the ongoing rains. As the Government does its part, I challenge you to do your part too.

Among many measures that one can put in place before the onset on meteorologically predicted flood season, farmers can be keen to:



Crops destroyed by floods

- Cropping flood friendly crops for instance rice or fruit trees and avoid cropping flood prone areas.
- At all times have an insurance cover against your farm investments.
- Have farm inputs especially chemicals safely kept.
- Have movable irrigation systems relocated to higher grounds.

Charity begins at home. If only we fixed our homes. "Every drop of water makes the mighty ocean". Every effort towards taking action kills the blame syndrome.

Post-harvest management

By Brendah Rajwayi



Harvested maize being transferred to a lorry from a combine harvester

Your produce is promising and you cannot wait to enjoy the fruits of your labour. In fact, you can already see yourself paying that fee, those pending bills and even settling your debts. You are overjoyed, but in reality you end up sleeping hungry while all your desired harvest rots away. There are so many other Kenyans in your situation. Actually, Kenya has been ranked at position 86 out of the 117 countries that were considered with a score of 25.2% level of hunger in recently released Global Hunger Index 2019 report.

It matters a lot how you handle your crop returns between its harvesting to the point it gets to your plate because poor

post-harvest management comprises everything from yield quantity to its quality. Over the year, the importance of post-harvest management has been established as activities strengthening chain that produces, transports, and processes food and all other related products that give sustenance to nations.

Post-harvest management call actors to focus on preserving quality, quantity, and safe produce because it directly affects the market price of the produce and its consumable suitability. This means having to ensure that moisture, contaminants, and insects will not affect the quality of our harvest.

Therefore, in your next cropping, do not plan only planting and weeding, but also be keen on maintain good farming practices before and after harvesting. To ensure a food secure and healthy nation as well as grow nation's economy, it is high time you considered proper post-harvest management practices. This way, it would be possible to consume safer food and export the harvested produce.

"Kenya has been ranked at position 86 out of the 117 countries that were considered with a score of 25.2% level of hunger

Highlights



1. The PS, State Department of Irrigation Mr. Joseph W. Irungu on an induction tour of the Mwea Irrigation Scheme and Thiba Dam site to familiarize himself with the activities meant to ensure continuous rice production in line with the Big 4 Agenda.
2. The Deputy President H.E Hon. Dr. William Samoei Ruto visited the Authority's stand during the Sanitation Conference held at KICC between 28 and 31st October, 2019. He was received by the C.E.O, Mr. Gitonga Mugambi and Chairman Hon. Eng. Joshua Toro.
3. H.E Mr. Ryoichi Horie; Japan's ambassador to Kenya, visited Mwea Irrigation Scheme on December 9, 2019. Mr. Gitonga Mugambi; the the Authority's CEO hosted him, and took him through the different activities done in the Scheme, Thiba dam and Mwea Irrigation Agricultural Development (MIAD) Center. H.E Mr. Ryoichi mentioned that the Government of Japan is committed to support Kenya in achieving the Big 4 Agenda; Food security and nutrition included.
4. H.E President Uhuru Kenyatta (center) inspecting the process of milling rice in Mwea Rice Mills. During his visit,

- he gave funds to support the rice farmers in Mwea.
5. PS, Water Sanitation and Irrigation Joseph W. Irungu (2nd left) and the Authority's CEO Mr. Gitonga Mugambi (2nd Right) inspecting the water system at Riamukurwe Irrigation Project.

2019 End of Year Performance Review

7



"Coming together is a beginning, staying together is progress and working together is a success."
Henry Ford.



8 Misconceptions about the Authority

“The Authority supports individual farmers.”

National Irrigation Authority in pursuit of delivering its statutory and constitutional mandate, implements numerous irrigation projects across the Country. According to the Irrigation Act 2019, smallholder irrigation projects owned by communities are required to form an Irrigation Water Users Association (IWUA) or informal groups for purposes of scheme development and management. In the event that the persons are unable to form one after the commencement of the project, the Authority may

compel these persons to form one or arrange one for them in order to offer their services.

The association/group then writes a formal request/proposal after which a feasibility study is done to assess if the land is viable for the irrigation projects. The project is then initiated if the land is viable.

Through these projects, the Authority contributes to the realization of the Big Four Agenda towards achieving food security in Kenya.

OPINION NOOK

Looking back at the last issue, the question was on what you thought of the Authority when you first heard of it, all your responses were highly appreciated. We have yet again sampled some of your views on your say about the importance of embracing irrigation in Kenya and as pledged they are featured below. Do enjoy.

“Hizi vitu za grammar mingi jamani mimi sijui, lakini si ni food security tu”
Amo

“Ensures self-sufficiency in terms of food production as well as serving as a source of income”
Kim

“Honestly sioni importance yake cause rain gets the job done all the same”
Moria Azenza

“Two words, food security”
Diana

“I think inasaidia sana especially zile dry areas with questionable soil types so ni source of food cause of the water supply”
Michelle

“Irrigation is the ying to agriculture basically the in thing since it creates the possibility of annual multiple cropping which means enhanced production and productivity”
Munene

“Irrigation is a façade”
Maryline

In the next issue we would love to hear your thoughts on what you’re doing to contribute to Kenya’s food basket? Kindly leave us your thoughts on any of our social media handles.

We empathise with the staff who lost their loved ones during this period. May the care and love of those around you provide comfort and peace to get you through days ahead.



Seeing opportunity in everything⁹

By Johnbosco Obonyo

In a candid conversation with Eng. Vincent Kabuti who is the youngest Deputy General Manager (DGM) at the Authority, he describes his life and work experiences as well as accomplishments.

Who would you say Eng. Kabuti is?

I am a 39-year-old man, married to one wife and blessed with one child. I am also a civil engineer by training and an Irrigation engineer by profession. I graduated with a distinction MSc. Water Science and Engineering, Hydraulic Engineering, Land and Water Development from Unesco-IHE, Delft, Netherlands. My undergrad Bsc. in civil engineering is from JKUAT.

My 15 years at the Authority started at Ahero as an irrigation officer, later to a monitoring and evaluation/ budgeting officer to now DGM (Research, Planning and Strategy) at the Head Office.

How would you Compare schooling in Kenya and Netherlands?

JKUAT is a crazy place (laughs) and quite challenging. They pushed us to the limits. I owe all my knowledge in engineering to Kenya and my technology advancement which was something I was pumped up about. Netherlands was a different ball game; the experience was amazing because I got to see irrigation from the “eyes of the world”. As a country, we are so far behind in terms of irrigation and there is so much to be done. Going forward, we need to embrace technology and invest in data collection to advance irrigation practices. It was quite interesting in terms of gaining experience from my colleagues from fifteen different countries of the world and got to see what the Dutch had to offer.

Are you a morning person or a night owl and why?

While schooling I used to be a night person until traffic happened when I started working at Head Office.

I'm interested in your morning routine, tell me about it?

I wake up at 4am, pray, go to the gym and come to work.

You must have someone who influences you?

Yes. Our able CEO Mr. Gitonga Mugambi. He has given me a chance to explore my potential, has a good understanding of this institution, and because of that I got a lot of exposure, the knowledge I required, a clear vision of the Authority, built my network and much more. He is a very challenging man and has not shied away from asking the hard questions which you cannot get away with. He is a great person who does not hold back what he knows. I'm so grateful for who he has inspired me to be.

What advice would you give the 25-year-old you?

Embrace technology.

What is the best professional advice you have ever been given?

“You have to keep reading, you cannot appear less knowledgeable in the current world and always listen to your boss.”



Eng. Vincent Kabuti

What is your current read and best read?

I'm currently reading Good to Great by Jim Collins, my best reads are Execution, The Discipline of Getting Things Done by Lawrence Bossidy and Ram Charan and Digital Fortress by Dan brown.

What is that one project or accomplishment that you consider to be the most significant in your career?

They are so many, from scheme expansion to irrigation act, to ISO certification to excellence in performance contracting. When I joined the budgeting team the budget was around 400 million, by the time I went to further my studies in Netherlands we were at 13 billion. Coming back the budget had gone down to 3.7 billion and now we are at 7 billion, aiming at 30 billion every financial year. I Pride myself in every essence of this institution and being part of creating a great institution.

How do you manage stress?

I smile. I believe if you don't get stressed you don't get to reach your capacity. When stressed you find yourself pushing to the next level to find solutions.

“You give your best when you reach the end and make a difference”

“A smile takes away everything.”

What are the best traits of your top performers?

My team are go getters and courageous Lateness and not taking simple instructions are a no.

When it is all done and you retire, what next?

I'd love to teach. I love making an impact. Take a case of impacting knowledge to forty engineering students who will in turn initiate and implement forty projects. What a joy!

If you were not an engineer, who would you be?

A chef. It is just like being an engineer, you are tasked with a simple thing: to create, and you have to do it with love or else you will have a terrible outcome.

Parting shot?

There is a lot to be done but a few to do it. Be part!

A tree at a time

By Daisy Chanzu

Forest, just a six letter word one may argue. However, is there more to this word? Perhaps a deeper meaning and more than meets the eye. A large area dominated by trees make a forest. Forests in turn help us breathe, make the earth cool, make it rain and fight floods these are just but few of the many benefits. Planting a tree and another gives the next generation free air and so much more.

As we speak, we are experiencing alarming climate change effects in Kenya from drought to famine, floods, rivers changing their course, longer dry seasons to unexpected dry periods, the list is endless. Remedies you ask, one word forests!

“When we plant trees we plant seeds of peace and seeds of hope.”

There are no better words to describe the art of tree planting than those spoken by the late Nobel Peace prize winner Wangari Mathai: “When we plant trees we plant seeds of peace and seeds of hope”. There is simply no better gift to coming generations than this. To top it all, as the Swahili saying goes “haba na haba



PS, Water Sanitation and Irrigation Joseph Wairagu MBS distributing fruit tree seedlings in Mwea

hujaza kibaba” therefore it’s very important to remember that every single tree you plant is a step in taking Kenya to great heights environmentally. Achievement of the Big 4 Agenda on Food Security and Nutrition is achievable with flowing rivers and other smart ecological system practices. It begins with planting a tree.

The Government through the Authority and other public institutions is continually implementing the national strategy for achieving and maintaining over 10% tree cover by 2022. Over 4,000,000 fruit seedlings (Macadamia, Avocado, Cashew nuts and Coconut) have been planted in our various schemes: Mwea Irrigation Scheme, Mwea Irrigation Agricultural Development (MIAD) center, Ahero Irrigation Scheme, Perkerra Irrigation Scheme and Bura Irrigation Scheme. More than 720,000 seedlings are ready for distribution to different farmers across the country with more than 450,000 already distributed.

Having Complaints about our services and you have no idea what to do?



Do not eat your mind up...

WE'VE GOT YOU COVERED!



Report your complaints to our offices or email us on our complaints email: complaints@nib.or.ke. You can also drop a letter to our address or reach us on phone and we'll take account and follow them up.

We care for you and want to serve you better. We pride in seeing Kenya becoming a food secure nation as well as ensuring that you are content



United Patriots!

By George Maina

Believing you read our last newsletter, I can be sure you are acquainted with the seventeen national values you are expected to uphold as a Kenyan. In this issue, we delve into patriotism and National Unity.

A patriotic person loves their motherland. They are loyal and devoted to it. Are you one? Do you think it is worth it? Yes, it brings a lot of peace, love and Unity.

Some ways in which you could demonstrate your love, loyalty and devotion to Kenya are Paying taxes, protecting national resources and working hard to build Kenya. We should be proud of our brand Kenya and protect it.

National Unity is a state of oneness. It results from shared values, vision, purpose and aspirations irrespective of the ethnic, cultural, economic, religious or any other superficial status, while recognizing diversity. It is a choice to work as a team in tackling the challenges that face us as a nation.

To have a good country we need citizens to be patriotic and have National Unity. This reflects during interaction in our daily activities which promotes peace, good working



environment and a common destiny as Kenyans.

This can be attained through different actors in a person's social life. From family level to communities, institutions, state organs, governments etc. Each actor is a carrier of this values. The family mentors and nurtures children into effective, functional and useful members of the society who uphold national values while the government has an array of administrative and legal mechanism to enforce national values.

"One Kenya, One People, One Destiny"

♪ ..MAY WE DWELL IN
UNITY, PEACE AND LIBERTY,
PLENTY BE FOUND WITHIN
OUR BORDER... ♪



Photo Courtesy: The Standard

What are you doing as a patriotic Kenyan?



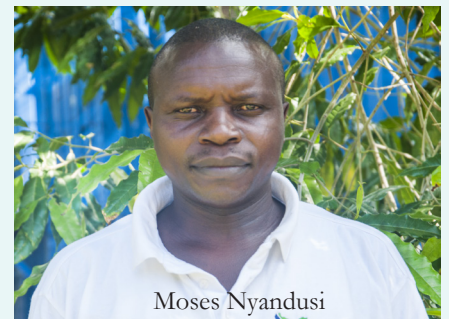
Grace Kuria

I love taking care of the environment hence I show my patriotism by keeping it clean and planting trees.



George Ochieng'

I am farming on the small piece of land I have to contribute to the food security basket in my country.



Moses Nyandusi

I get to work very early and leave late to ensure my bosses find a conducive environment to work in hence contributing to our vision of ensuring water to every irrigable acre.

Contact us

Unyunyizi House, Lenana Road, P.O BOX 30372-00100,
Nairobi, Kenya.

Mobile Number: 0711 061 000, Landline: +254 0202711380,
+254 0202722821, Fax: 2711468, 2711347,

MISSION

Provide water for sustainable farming through development rehabilitation, modernization and promotion of irrigation and drainage for improved livelihoods, food security and economic growth in Kenya.

VISION

Water to every irrigable acre



enquiries@nia.or.ke, communication@nia.or.ke



National Irrigation Authority-N_I_A



National Irrigation Authority -N_I_A



N_I_A_Kenya



www.nia.or.ke

