

# YST

## **SCIENCE FOR DEVELOPMENT**

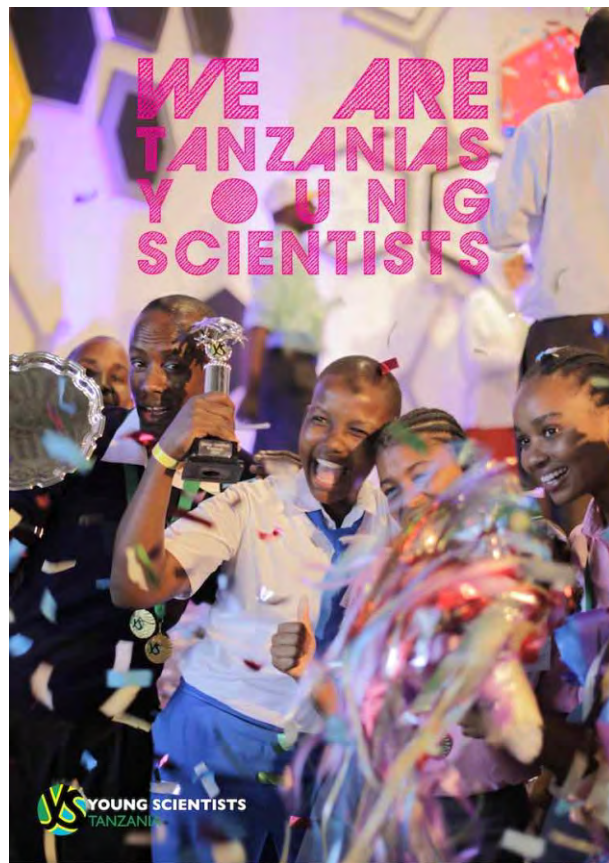
### **The 10th Anniversary**

History of Science for  
Development in Tanzania

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As YST Chairperson, I feel proud and privileged to be involved with Young Scientists Tanzania. In only 10 years, YST has become a national Science for Development education programme. On behalf of the Board, I would like to express gratitude to the Government of Tanzania, Ministry of Education, Science and Technology and President's Office – Regional Administration and Local Government (TAMISEMI) for supporting this innovative project.

On this our 10th Anniversary, I am particularly proud of the innovations introduced this year in delivering the Outreach Programme, Virtual Exhibition and Awards Ceremony. It is a remarkable achievement. Congratulations on being able to mitigate the challenges of the COVID-19 pandemic.

This transformative project would not have happened without the collaboration of great partnerships and generous sponsorship over the last 10 years. These relationships ensure that future scientists are developed and will be engaged in the socio-economic growth of the country.

I wish to thank the Karimjee Jivanjee Foundation in particular for their continued support as main sponsor of YST in 2020.

Finally, I would like to acknowledge and thank the following: YST Co-founders, YST Project Manager, YST Team, my colleagues on the YST Board, Regional Coordinators, YST volunteers, Science Outreach Team, YST Panel of Judges, Event Management team, PR team schools, students, teachers and parents. Each one has invested so much energy and passion and expertise into making YST - Science for Development such a remarkable success.



**Professor Yunus D. Mgaya**  
**Chairperson, YST Board**  
**Director General, National Institute for Medical Research (NIMR)**

## MESSAGE FROM PROJECT MANAGER

Young Scientists Tanzania (YST) transforms Tanzania.

Since 2011, YST has been delivering a comprehensive Science Outreach Mentoring Programme in secondary schools throughout Tanzania. This mentoring approach builds scientific capacity, confidence and engages our young people with early research methodologies, opportunities and trajectories. The annual YST Exhibition and Awards Ceremonies showcase the success of this transformational programme.

Establishing this unique model in Tanzania began in 2008. It involved many years of determined groundwork before the Science for Development model eventually got off the ground. On 11th July 2011, YST was officially registered and is governed by an independent board. The Science Outreach Mentoring Programme component was launched in August 2011 and on 6th Nov 2011, Prof Makame Mbarawa, Minister for Science, Communication and Technology officially launched YST at the first YST 2011 Exhibition in Mnazi Mmoja in Dar Es Salaam.

The exponential growth of this Science for Development model would not have happened without the collaboration of partners and generous sponsorship over the years. YST is grateful for the generosity of this ongoing support. In only ten years, this partnership and collaboration have made Young Scientists Tanzania the most successful National Science for Development model in Africa.

Thank you to the YST Co-founders: Joseph Clowry for the inspiration, tenacity and determination to drive and gather support for the Science for Development model in Tanzania and Dr Gozibert Kamugisha for his commitment, dedication and persistence as the Science for Development model has grown in every region in Tanzania.

On behalf of the Young Scientists Tanzania team and everyone involved from the grassroots upwards, we look forward to facing the challenges over the next decade. Along the way we have been fortunate to have the support of individuals, organisations, state-bodies, partners and volunteers. You know who you are and I extend my thanks to you all. As we face the future, we are confident. "Science for Development Works".



**Nabil Karatela,  
Project Manager,  
Young Scientists Tanzania.**

Young Scientists Tanzania-Science for Development (YST) is celebrating its 10th Anniversary in 2020.

This short history reflects the work that has been undertaken over the last 13 years to introduce, establish and embed the Science for Development education model in secondary schools across Tanzania.

YST consists of two complementary components, a national Science Outreach Mentoring Programme and an annual Exhibition and Awards Ceremony. These components work hand-in-hand to deliver a transformational impact in Tanzania and a Science for Development model that can be transferred to any developing country.

In 2020, YST faced many challenges posed by the COVID-19 pandemic. Many innovative strategies were applied to restructure and deliver YST 2020. The YST Digital Mentoring Framework allowed the student research to continue and the YST Digital Judging Framework facilitated the remote judging of the projects. The use of digital technology over the years, allowed Young Scientists Tanzania to leapfrog, restructure and deliver these new innovations in 2020. The YST 2020 Virtual Awards Ceremony, Judging and Exhibition has led the way in innovation.

Our appreciation and thanks are shared with the Tanzanian Government, Combat Diseases of Poverty Consortium, Maynooth University, Ireland, sponsors, people, schools, teachers, and above all, secondary level students of Tanzania, without whom we would never have realized this project. Special thanks to Pearson Foundation who provided the initial incubation funding to embed the Science for Development project in Tanzania and to Dr Tony Scott for all his encouragement and support over the years.

Finally, thank you to our Project Manager, Nabil Karatela, Chairperson of Judging, Dr Brendan Doggett, YST team, Judges, YST Board, Regional Coordinators and YST Volunteers.

Asante sana.



**Co-Founders:  
Dr. Gozibert Kamugisha and Joseph Clowry,  
5<sup>th</sup> November 2020.**

## SOWING THE SEEDS FOR SCIENCE FOR DEVELOPMENT IN EAST AFRICA

The introduction of the Young Scientists Tanzania-Science for Development Model, combining a capacity-building Science Outreach Mentoring Programme with an annual Exhibition and Awards Ceremony was inspired and led by Joseph Clowry, Education Officer, Combat Diseases of Poverty Consortium (CDPC), Maynooth University, Ireland and Science/Development Education teacher, St. Mary's Academy, Carlow (1998-2008). The key focus of his CPDC role was to develop and promote the concept of Science for Development in secondary schools in Ireland. Workshops, seminars and discussions were held to support and engage schools in research trajectories that could impact the lives of people living in poverty and to link their research with the Millennium Development Goals. He also developed an innovative Science for Development Outreach Program for twenty-six East African researchers studying at the University between 2008-2012. The researchers worked with science for development workshops and mentored projects for SciFest, BT Young Scientist & Technology Exhibition and Young Social Innovators competitions.



### **Dr. Gozibert Kamugisha with Sr Stanislaus on Science Outreach in Ireland 2010**

The piloted Science for Development model proved inspirational for all the East African researchers and Irish students. A symbiotic, catalytic and transformational relationship developed, based both on the programme content but specifically through respective cultural, historical and life experiences of the diverse participants. The impact of this exchange of experiences informed the scale and scope of research undertaken by several Irish students entering the Young Social Innovators, BTYSTE and SciFest.

As a result, the East African researchers recognised the potential a similar science outreach model could have in developing a much needed science culture in their own respective countries.

In 2008, the first two researchers to actively engage in the CDPC Science Outreach Programme were Dr. Kalule John Bosco and Dr. Brenda Nabitula, from Uganda. One of their mentored projects 'A Study of the Health Benefits of Probiotics' by students from Colaiste Lorcan, Castledermot won first prize in the Intermediate Biology Section at BT Young Scientist 2009 and another project "Living in Poverty", a collaboration between Colaiste Bhríde Secondary School, Carnew and Dunboyne College, was the overall winner of Young Social Innovators 2009. Science for Development was taking its place as an important theme in development education.

At the first executive meeting of the Combat Diseases of Poverty Consortium, January 2009, following a discussion on the progress of the Science for Development model in secondary schools in Ireland, the CDPC African Advisory panel supported the initiative in exploring the possibilities of introducing a similar outreach model in East Africa.




## **SOWING THE SEEDS FOR SCIENCE FOR DEVELOPMENT IN EAST AFRICA**

Baseline research was undertaken in Tanzania by Joseph Clowry to assess the scope and scale of science teaching, its quality and its needs. The research confirmed that a similar science for development outreach programme could prove effective in East Africa. The research however, also indicated that if such a model were to be established, it would require a high profile science exhibition to promote, generate interest and showcase the capacity building objective of the science outreach work.

In May and July 2009, Clowry travelled to Tanzania, Kenya and Uganda to investigate the implementation of the Science for Development Model to East African CDPC partner countries and assess the available support for the initiative.

In Tanzania, Prof Eligius Lyamuya, Muhimbili University, Dr. Gozibert Kamugisha, Dr Jacqueline Mgumia, Dar es Salaam University and Titus Mteleka, Retired Director General, Science and Technology, were key proponents of the proposal to combine a Science for Development outreach programme with a science Exhibition. High-level government meetings were organised and the potential of transferring the model to Tanzania was discussed and outlined in detail. Meetings were held with Tanzania Country Directors for Concern Worldwide, Children in Crossfire and Oxfam Ireland. All the consulted stakeholders and NGOs supported the introduction of this model in Tanzania. Mr Clowry was granted a research visa by the Commission for Science and Technology (COSTECH) to study the feasibility on the introduction of the Science for Development model in Tanzania. Meetings were also held with potential sponsors from the private sector.

Gozibert and Clowry began working on all the logistical strands required to embed the proposed science for development outreach programme in Tanzanian secondary schools. Diverse international and national science fairs were then studied to evaluate if they could complement the proposed outreach programme. Amongst others, Scifest South Africa and Kenya Science Congress (Kenya Science and Engineering Fair) established in 1996 and 1962 respectively were researched as potential models.



## YST SCIENCE OUTREACH MENTORING WORKSHOPS BEGAN IN AUGUST 2011



### YST Science Outreach Mentoring workshops began in 2011

Following these developments in Ireland and Tanzania, Joseph Clowry met with Dr. Tony Scott, Co-founder of Young Scientist in Ireland on 30th June 2009, to explore if Young Scientist Ireland would consider permitting the use of their template for the exhibition component of the evolving Tanzanian model.

After the presentation, Scott confirmed support in principle for the use of the Young Scientist template in Tanzania for the proposed exhibition component. Clowry and Gozibert then pressed ahead with work on the project for a further eighteen months. When all the elements were in place for the Science Outreach Mentoring Programme, further discussions were held with Dr. Scott on 14th January 2011 on the margins of the Young Scientist Ireland exhibition in Dublin, to which potential sponsors were also invited. Formal permission was subsequently granted on 20th April 2011 by YSTE Ltd to use the Young Scientist model as a template for the Tanzanian Exhibition.



**In 2014, Dr Garib Bilal, Deputy President Tanzania presents award to Joseph Clowry for his YST work. In 2018, Dr.Scott presents him with Inaugural Founders Award for his work in Tanzania and Kenya.**

## YST SCIENCE OUTREACH MENTORING WORKSHOPS BEGAN IN AUGUST 2011

Incubation funding from Pearson Foundation was secured and preparations in earnest began for the launch of the Science Outreach Mentoring Programme and the first Young Scientists Tanzania Exhibition in 2011. The Pearson Foundation funding supported the establishment of YST as an NGO in Tanzania, the pilot science outreach work and the first YST exhibition in Tanzania. Michael McGarvey, VP Africa Schools, Pearson, London was crucial in securing these funds as he advised and supported Pearson's Foundation and Affordable Learning Fund to deliver sustainable development projects and sponsor innovative new school models in Africa.

On 11th July 2011, YST was officially registered and is governed by an independent board. Shortly afterwards, on the 28th August, the Ministry of Science, Communication and Technology officially requested YST to be launched at the inaugural Tanzanian Science Week which coincided with the 50th Anniversary of Tanzanian Independence celebrations.



**Dr. Brendan Doggett and Titus Mteleka on YST Science Outreach programme in August 2011**

The Science Outreach Mentoring Programme component was launched in August 2011. YST Science Advisors, Dr. Brendan Doggett, Dr. Gozibert Kamugisha, Titus Mteleka and Joseph Clowry scheduled mentoring workshops and seminars for selected schools in Dar es Salaam and Coast regions to showcase the potential of the model and mentor the research projects.



**YST holds first press conference in Alliance Francaise, Dar es Salaam, November 2011**

Prof. Makame Mbarawa, Minister for Science, Communication and Technology officially launched YST on the 6th Nov 2011 in Mnazi Mmoja in Dar Es Salaam. Eric Gregory, Pearson Foundation and the late Lorcan Fullam, Irish Ambassador to Tanzania were special guest speakers at the launch of the first Young Scientists Tanzania Exhibition.

# YST LAUNCH AND FIRST EXHIBITION 2011

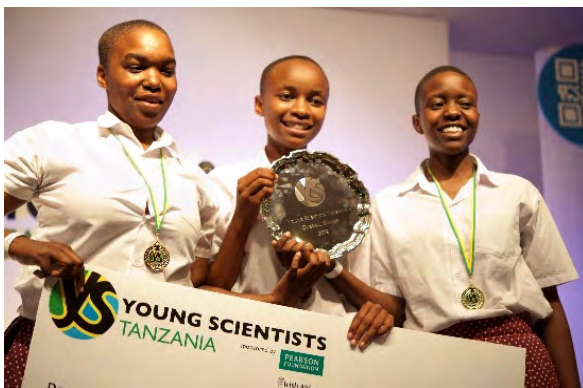


## Launch and First YST Exhibition, 6th November 2011 in Mnazi Mmoja

Four schools, Oyster Bay, Bethsaida, Kenton and Kiroma S.S. presented projects. Each school presented projects from each of the four categories. **Elizabeth Shitundu from Kiromo Secondary School, Bagamoyo was awarded YST 2011 winner for her project “Desalination-water is life”.** Following the launch, on 7th November 2011, Late Lorcan Fullam The Irish Ambassador to Tanzania, extended Irish Embassy funding to YST and the Karimjee Javinjee Foundation announced their gold sponsorship for the Technology category in YST 2012.

Work began immediately on preparations for the 2012 exhibition. A five-year strategic plan was developed. Pearson Foundation became the main sponsor for YST 2012. The main objective of this sponsorship was to allow YST to grow and expand the outreach programme to ten regions across Tanzania. YST recruited ten Regional Coordinators and workshops and seminars were organised in the regions. From four schools in 2011, one hundred schools from across these regions were selected to present their research at the YST 2012 Exhibition, held on 23rd October 2012, in the Diamond Jubilee Hall, Dar es Salaam.

**Aisha Nduku, Monica Shirima, Nengai Moses, Kibosho Girls Secondary School, Kilimanjaro, were the overall winners with their project “A study of industrial fertilisers and increased nitrates in water in the Moshi region.”** As part of their prize, they travelled to Ireland in January to attend BTYSTE 2013.



**YST 2012 Winner: Aisha Nduka, Monica Shirima and Nengai Moses**

## YST 2012 AND 2013 WINNERS

In addition to Pearson and the Irish Embassy in Tanzania, COSTECH, Self Help Africa, Concern Worldwide, Children in Crossfire, Oxfam Ireland, Karimjee Jivanjee Foundation and ESB International supported YST in 2012. Prof. Makame Mbarawa, Minister for Science, Technology and Communication, was special guest at the Awards Ceremony. Dr. Tony and Pauline Scott were special invited guests in recognition for the support and advice YSTE Ltd had extended to the exhibition component in Tanzania. Dr Scott complimented the exhibition, "should I have had closed my eyes, I would have thought I was standing at the exhibition in Dublin". Fionnula Gilsanan, Irish Ambassador to Tanzania, Michael Doorly, Concern Worldwide, Dr. Jamie Saris and the late Dr. Noel Murphy, Co-Chairs of the CDPC were also special guests.



**2012 Winners: Monica, Aisha and Nengai in Ireland with Michael Doorly, Concern Worldwide and Christian Mbaya at BTYSTE**

In 2013, the YST Science for Development outreach programme was extended from 10 to 16 regions across Tanzania. A further six Regional Co-ordinators were recruited. YST 2013 was another great success. **Jafari Ndagula and Fidel Samwel from Ilongero Secondary School were the overall winners at the exhibition with their project "A Drip Irrigation system using recycled materials."** January Makamba, Deputy Minister of Science and Technology, was special guest at YST 2013. In 2013, the Karimjee Jivanjee Foundation agreed to offer university scholarships to the annual overall winners and two further special education scholarships each year. This generous arrangement continues to the present day.



**2013 Winners: Jafari Ndagula and Fidel Samwel with January Makamba, Deputy Minister of Science and Technology**

At the YST 2013 exhibition, BG Tanzania announced they would become the major sponsor of YST 2014 and they increased their sponsorship from gold category to platinum. YST is grateful to Colm Kearney and Kate Sullam from BG Tanzania who worked hard with YST to deliver this much-needed support. The Irish Embassy in Tanzania also continued their sponsorship of YST in 2014, along with several other gold and silver sponsors.

In 2014, the grass-root science for development continued and YST extended the Science Outreach Programme to 22 regions in Tanzania. A further six Regional Co-ordinators were recruited and workshops were held for all twenty-two regions. The Awards Ceremony was televised live on national TV. Dr Garib Bilal, Vice President of Tanzania was the Guest of Honour. **Dhariha Amour Ali and Salma Khalfan Omar from Lumumba Secondary School, Zanzibar were overall winners with their project “Changing Attitudes to control Flies in Tanzania.”**



**2014 Winners: Dhariha Amour Ali and Salma Khalfan Omar with Dr Garib Bilal, Vice President of Tanzania and Adam Prince, BG Tanzania**



**2014 Winners: Dhariha Amour Ali and Salma Khalfan Omar with Former President Mary Robinson and Minister Joe Costello - Ireland**

In 2015, YST became a truly national competition. The YST Science Outreach Programme was extended to all 30 regions in Tanzania. This marked the first time participants came from every region in Tanzania. All participants had benefited from direct mentoring by 30 regional coordinators and each region presented projects at the national YST exhibition. The retired President of Tanzania, Ali Hassan Mwinyi was the special guest at the awards ceremony and he praised the remarkable progress and success of YST. Emma O’Kelly and Colm McCaughey from RTE, Ireland reported from the exhibition. **Edwin Luguku and John Method, Mzumbe Secondary School, Morogoro were overall winners with their project “Reducing the use of plastic bags in Tanzania.”**



**2015 Winners: Edwin Luguka and John Method with retired President of Tanzania, Ali Hassan Mwinyi and Late Hatim Karimjee**



**Emma Kelly and Colm McCaughey (RTE) make a documentary about YST**

In June 2015, Dr. Vincent O'Neill, Irish Ambassador to Kenya requested Joseph Clowry, YST Co-founder to support and assist the introduction of the Tanzanian YST-Science for Development model in Kenya. Following a visit to Kenya by the YST Co-founder, Mr. Garvan McCann, Irish Embassy in Kenya, attended the YST 2015 Exhibition to observe the judging, exhibition and awards ceremony. YST continued this support, and advice to Kenya for a further three years, involving over ten visits to Kenya by the YST Co-founders to build the necessary capacity there. YST shared all the branding, templates and guidelines of the Tanzanian Science for Development model with Kenya, particularly focusing on the Science for Development mentoring Outreach component.



## YST Co-founder facilitated Science for Development workshops for teachers from 8 Counties in CEMASTE, Nairobi, Kenya

In 2016, YST continued to expand and grow as a national competition and outreach programme. The Julius Nyerere, International Conference Centre, Dar es Salaam was chosen as the new venue for the annual exhibition. Schools from all 30 regions in Tanzania participated in the YST Science Outreach Programme and the national exhibition. **Nadhra Mresa and Diana Sosoka, from Mtwara Girls Secondary School were the overall winners with their project "Poverty Is No Longer An Issue For Women In Mtwara Region?"** Prof. Mbarawa, Minister for Science, Communication and Technology was special guest at the Awards Ceremony.



**2016 Winners: Nadhra Mresa and Diana Sosoka with Rio Ferdinand and Prof. Joyce Ndalichako, Minister for Education**

A delegation of eight from Kenya attended the YST 2016 Exhibition in Dar es Salaam to learn about the Tanzanian YST Science for Development template and model, observe the YST judging, exhibition and awards ceremony.



**Kenyan delegation attend the YST 2016 Exhibition and Awards Ceremony to learn about the Tanzanian YST Science for Development model**

In 2017, YST continued to build capacity in the sciences in all regions through the Science for Development outreach programme. Prosper Gasper and Erick Simon, St Jude's Secondary School, Arusha were the overall YST 2017 winners, with their project "The use of Mobile Networks as a Fire Alert System." Prosper and Erick represented Tanzania at Expo Science in South Africa and won a Gold medal for their project in the Technology category. They also attended BTYSTE in Ireland in January 2018 as guests of Ei Electronics, Shannon, Ireland and Board YSTE Ltd.



**2017 Winners: Prosper Gasper and Erick Simon with Anne Ahern, Head Teacher, St.Mary's Academy Carlow, Ireland**

For the third successive year, a delegation from Kenya attended the YST Exhibition in Dar es Salaam to learn about the YST Science for Development model, YST Governance and observe the YST judging, exhibition and awards ceremony. Meetings with the YST Board and Tanzanian Government Officials were arranged.



**Delegation from Kenya attend the YST 2017 Exhibition and Awards ceremony**

In 2018, the profile of YST grew in all regions across Tanzania as the number, standard and quality of project applications submitted increased from each region. Prof. Joyce Ndalichako, Minister for Education was special guest at the YST 2018 Exhibition. In 2018, Karimjee Jivanjee Foundation became the joint main sponsor of Young Scientists Tanzania along with Shell Exploration Tanzania. **Farida Kwingwa Mnyazi and Wilhelmina Martin Msoma, Msalato Girls Secondary School, Dodoma** were the overall winners with their project “An exploration of salt content in the herb “Mbigiri” and its suitability as animal feed”. Funded by Siemens Africa, Farida and Wilhelmina represented Tanzania at Expo Science in South Africa and won a silver medal for their project in the Agriculture category. They also attended the BTYSTE 2019, in Ireland, funded by Ireland Embassy in Tanzania.



**2018 Winners: Wilhelmina Martin Msoma and Nasra Kwingwa Mnyazi with President of Ireland, Michael D. Higgins**

In 2019, the YST outreach programme and exhibition maintained the success of previous years. Minister Joyce Ndalichako was special guest at the Awards Ceremony. **Philipo Barde and Nasra Bakari Mpochi, Chief Dodo Secondary School, Manyara, were the YST 2019 overall winners with their project “Is Kivumbasi (Ocimun Canum) a solution for bee keepers.”** Funded by Siemens Africa, Editha and Nasra represented Tanzania at the Expo Science Exhibition in Johannesburg, South Africa. They won a Gold medal for the project in the Agriculture category.



**2019 Winners: Nasra Bakari Mpochi and Edith Philipo Barde**

In 2020, following the outbreak of COVID 19, the Karimjee Javinjee Foundation became the sole main sponsor of YST-Science for Development. YST faced many challenges generated by the COVID-19 pandemic. From January 2020, work began on restructuring YST activities to mitigate the effects of COVID-19. News of the spread of the Corona virus in China led YST to conduct the first outreach programme to all regions in early 2020 and a digital platform was developed for all students to submit their applications online before the closing date, 13th March.

The YST Digital Mentoring Framework allowed the student research to continue and the YST Digital Judging Framework facilitated the remote screening and judging of the projects. Digital technologies transformed the mentorship programme. Our focus on digital technology over the years allowed the YST to leapfrog, restructure and deliver these new innovations. Celebrating the 10th Anniversary of YST in 2020 was a remarkable achievement. COVID 19 had turned the world upside down but through resilience, fortitude and foresight, YST withstood the challenges of this pandemic. YST 2020 was broadcast on National TV on the 1st August 2020. The YST Virtual Awards ceremony was also streamed on Facebook/Twitter and Instagram. **Glory Joseph Kiroche and Martha Samwel Machumu from Nganza Girls Secondary School, Mwanza were the YST2020 Overall Winners with their project “The Investigation and analysis of Hydroponic fodder as the best solution for animal feeding and health.”**



**Glory Joseph Kiroche and Martha Samwel Machumu from Nganza Girls Secondary School, Mwanza. YST 2020 Overall Winners**

In Tanzania, Young Scientists Tanzania consists of two complementary components, a national Science Outreach Mentoring Programme and an annual national YST Exhibition and Awards Ceremony. These are the two important components that work hand-in-hand to deliver the unique transformational impact in Tanzania.

Unlike other international Young Scientist Science Fairs, the mentoring of teachers and students is a key focus and bulk of the work of the YST-Science for Development approach. YST Science Advisors and Regional Coordinators conduct regional workshops for students and teachers from all thirty regions in Tanzania. The workshops introduce teachers to context-based, learner-centered scientific research and scientific methodologies. They build capacity for enthusiastic teachers and students to generate project topics relating to Science for Development and Sustainable Development Goals.

The Regional Coordinators (all professional science teachers) are recruited by YST in each region to deliver the workshops and liaise with all the schools in their regions. They organise the local regional logistics associated with the outreach programme and exhibition. The coordinators visit schools to support and encourage the students to undertake research outside the formal curriculum. The teachers and students are provided with a digital and hard copy of the YST project poster template which highlights sections representing key stages in the research process: introduction, method, results, analysis, conclusions, recommendations and abstract. This method breaks down project work into less intimidating blocks. Students are encouraged to use the YST Factfile that clarifies the rules and regulations that govern the YST exhibition.



**Teacher and students workshops**

As research progresses the students are encouraged to digitally forward any queries or research data, to the YST Science Advisors and Regional Coordinators. Requests for further information, mentoring or advice is checked and the YST team liaises with the teacher. This method of communicating and transferring data, requesting information and sending draft poster templates to schools works smoothly once teachers and students became used to electronic communication. The team of YST Science Advisors and Regional Coordinators, advise the students and ensure the student projects make the progression from a research idea to a formal application to present their research at the Annual exhibition.



## **YST Regional Co-ordinators at in service training workshop**

Following these mentoring visits, students submit a formal four hundred-word project proposal along with a completed application form to YST before the agreed closing date. All project applications are screened by a panel of YST Judges. The selected projects receive further mentoring. The YST judging guidelines are shared with all teachers and students for transparency and to provide the necessary guidance on the preparations required before students present their projects at the exhibition in Dar es Salaam.

YST liaises with regional coordinators or directly with teachers in some instances via school visits, phone and email communication.

Delivering the science for development model is a major financial challenge. YST provides transport, food and accommodation for the Regional Coordinators, teachers and students when attending the workshops throughout the year. YST also provides all transport, food and accommodation for all participating teachers and students, Regional Coordinators and volunteers attending the annual exhibition.

In the four-week lead up to the exhibition, YST recruits forty volunteers to assist in the YST Management team. These volunteers work on accommodation, catering and transport logistics for all teachers and students while travelling from their regions to Dar es Salaam and when attending the exhibition in Dar es Salaam.

YST volunteers are stationed at bus stations to meet and greet every student on arrival in Dar. Nothing is left to chance. The students and teachers are accompanied safely to their hotels. The volunteers continuously supervise the students and teachers when they are in Dar es Salaam.

YST award four Karimjee Jivanjee Foundation university scholarships each year. To date, thirty-five students have been awarded third level scholarships by YST and KJF.



## **Hatim Karimjee presents Karimjee Javinjee Foundation Scholarships**

Tanzania will soon have a population of 60,000,000 +. In order to reach all schools in Tanzania, YST plan to expand the Science Outreach Programme, Exhibition and Awards Ceremony in each region. The Tanzanian model of combining the quality Science Outreach Programme with the YST exhibition is a model that works.

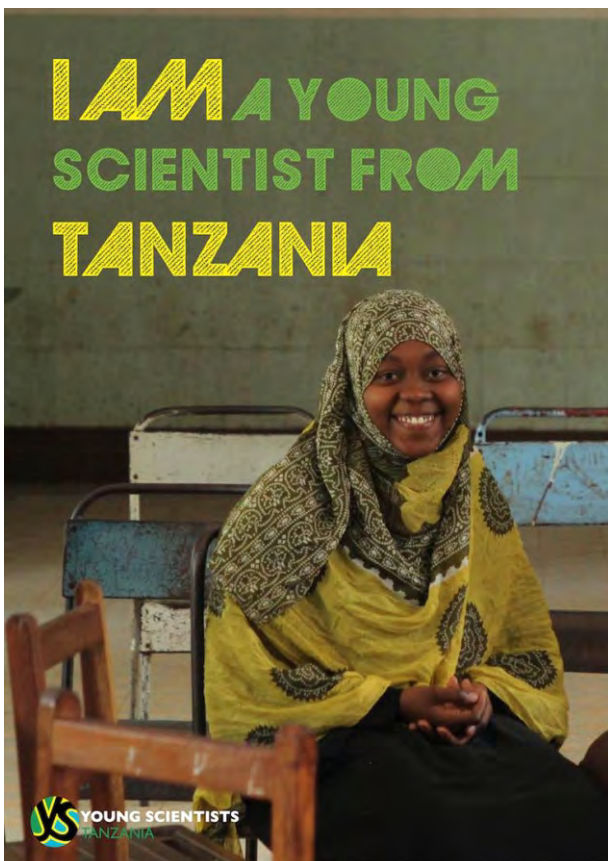
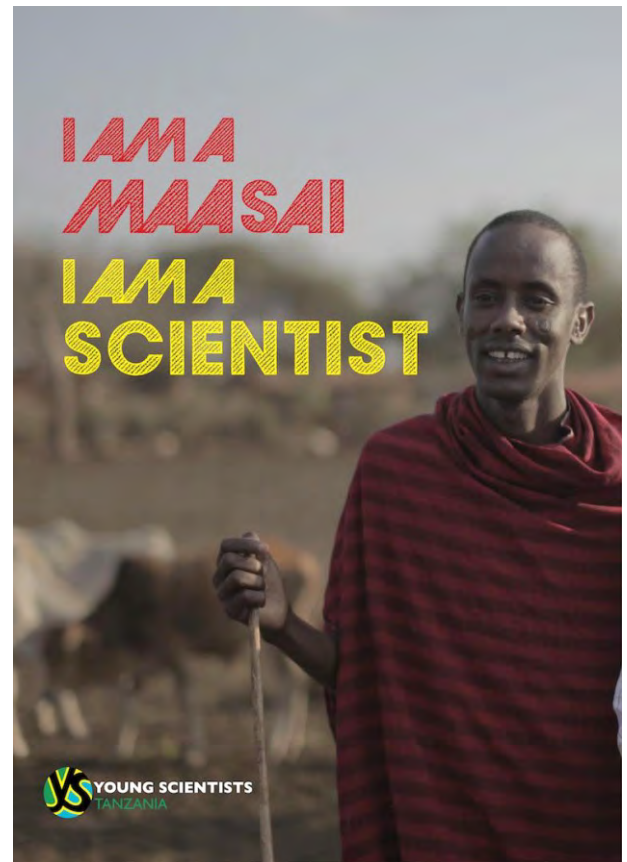
In 2020, YST faced many challenges posed by the global COVID-19 pandemic. Many innovative strategies were applied to deliver the Science Outreach Mentoring Programme, Virtual Exhibition and Virtual Awards Ceremony. News of the spread of the Corona virus in China had informed YST to conduct the outreach programme to all regions in early January 2020 and a digital platform was developed for all students to submit their online applications before the closing date, 13th March. Projects were screened remotely by the YST judging panel. 140 projects were selected to participate in YST2020. These projects were mentored remotely during the months of April and May. The development of appropriate software, a digital platform and the restructuring of YST activities mitigated the effects of COVID-19. The judging process, Exhibition and Awards Ceremony was organised remotely via the YST digital platform.

Right from the start in 2011, YST embraced mobile and digital technology and through our extensive mobile network logistics managed to reach schools in all regions. This network led to a grass-root driven science for development movement. The use of digital technologies, mobile apps and social media played a central role in transforming the mentorship programme and allowed access to the science for development model.

The YST Digital Mentoring and Judging Framework ensured the completion of the research and the judging of the projects. Our focus on digital technology over the years allowed the YST to leapfrog, restructure and deliver these new innovations.

## ***Science for Development Works***

**WE ARE YST!**



Young Scientists Tanzania is an independent, not for profit, charitable organisation. The Board has a key pivotal role in setting and delivering the strategic objectives of the organisation, as outlined in the YST Strategic Objectives, Memorandum of Association and Articles of Association of Young Scientists Tanzania. At any one time, the Board has a maximum of 10 members. Board members serve for a 5-year fixed-term. The Board consists of representatives of Universities, Academia, NGOs and Private Sector.



**YST Board with Minister of Education, Science and Technology,  
Prof. Joyce Ndalichako**

### **YST Board Members - July 2019**

Professor Yunus Mgaya (Director General - NIMR)- **Chairperson**

Dr. Gozibert Kamugisha - (Lecturer of Sociology - UDSM)-**Secretary**

Professor Sylvia Temu (Professor of Accounting- UDSM)-**Treasurer**

Professor Eligius Lyamuya (Professor of Microbiology & Immunology - MUHAS) -**Emeritus Board Member**

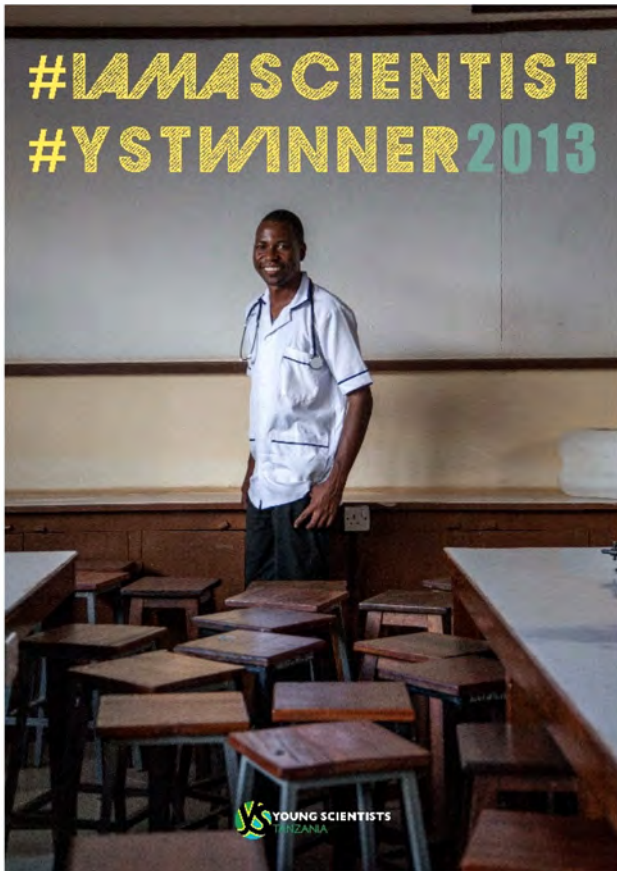
Dr. Emmanuel Balandya (Lecturer Department of Physiology - MUHAS) - **Member**

Dr. Angelina Bijura (Asst Prof in Science & Maths Education - AKU) - **Member**

Professor Evelyne Mbede (Professor of Earth Sciences - UDSM) - **Member**

Joseph Clowry – **Honorary Member**





YST WINNERS 2011-2020







# THANKS FOR BELIEVING: SCIENCE FOR DEVELOPMENT WORKS

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Suddenly you were gone. From all the lives you left your mark upon.

**Rest In Peace**

**Dr Noel Murphy**

**Prof Fr Michael Kelly**

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