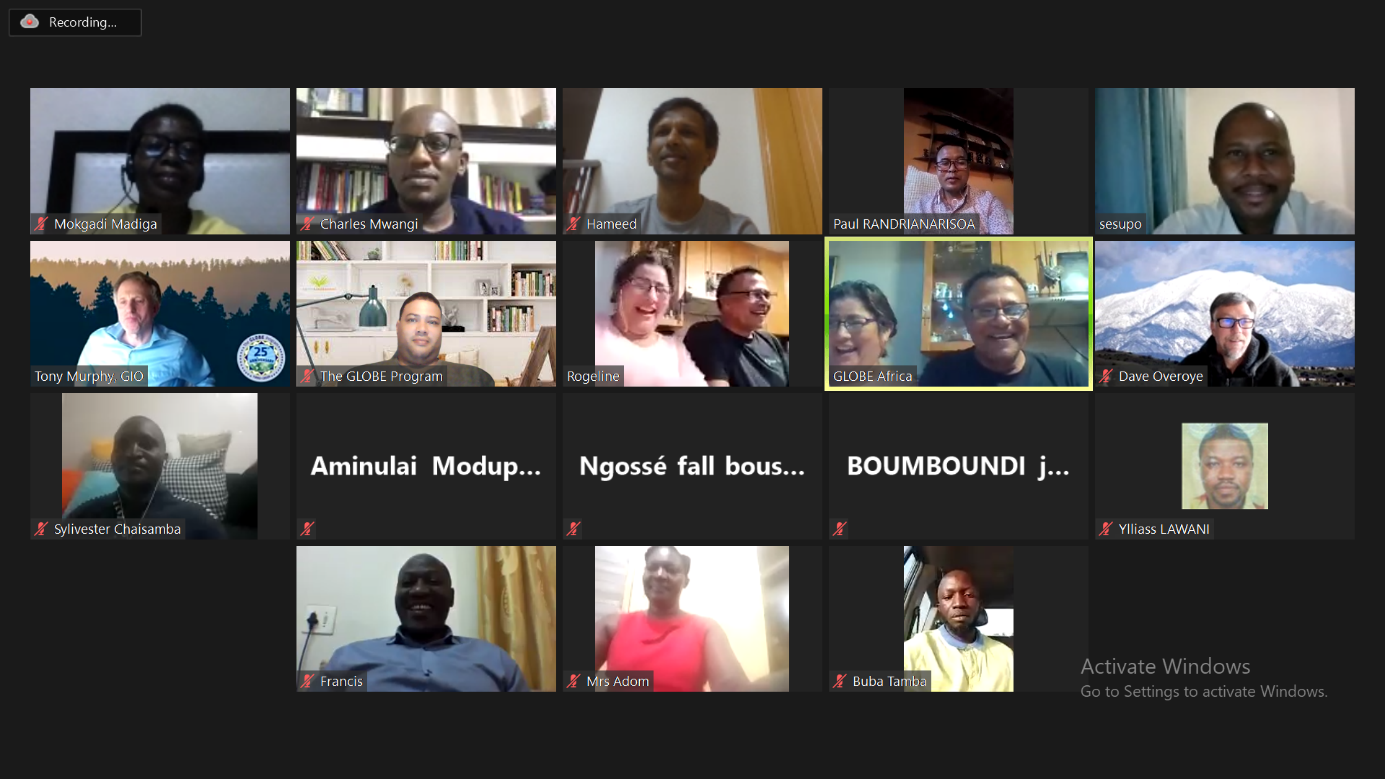
**The 16th GLOBE Africa Virtual Regional Meeting, 22 -25 March 2021.**

**GENERAL REPORT**



This year the 16th GLOBE Africa Regional Meeting was planned to take place in Mossellbay, South Africa as a face to face meeting. But Due to the coronavirus pandemic the GLOBE Implementation Office (GIO), the Africa Regional Coordination Office (RCO) and participants were all in agreement that this is a long shot from reality for now.

As it was the case last year, the decision was made to cancel all gathering, and to resort to a virtual Regional Meeting this year.

The meeting, which dates were 22-25 march 2021, including Zoom, WhatsApp and Padlet was scheduled. All information were put on the Africa regional padlet and participants were supplied with the link : <https://padlet.com/africaregionglobe/dyly7b9ew535mzae>

The Agenda topics were also placed, daily at 08:00 AM Johannesburg, on this padlet and the WhattsApp group (which were used as an open online meeting platform where topics resided for the whole duration as it is easier for people to respond to and make their comments/input).

Each day’s topic were:

**TOPIC Day 1** - Current challenges to active and sustained participation.

**TOPIC Day 2** – Current state of Education in your country

**TOPIC Day 3** – What would you consider an alternative or addition to the current overarching landmark research initiatives (Waterbodies, Invasive Alien Plants, etc?)

**TOPIC Day 4** – What would you consider a meaningful way to get the most from GLOBE Program in your country?

Dr Francis Wasswa Nsubuga and M. Ylliass Destin LAWANI were asked to monitor all inputs, respectively in English and in French. Both were urged to summarize and present those inputs during the zoom sessions.

Every day there were a Zoom panel discussion live session at 06:00 PM Johannesburg with inputs from WG members, relevant speakers and the panel that discussed the padlet/whatsapp input / feedback.

All participants were encouraged to participate and contribute. A portion of the session was allocated to French and English and consisted of these speakers from the region. The panel monitored the contributions and summarized, while discussions comprising of regional representatives that spoke to the input gathered during the day.

While space was allocated for country report out on the agenda, actual zoom time could not always allow for it. It was asked to the Country coordinators to send their country reports by mail to the regional office. Finally an electronic participation certificate was generated at the end of the meeting for each participant

The rational /anticipated outcomes of this 16th GLOBE Africa Regional meetings was an active engagement, rejuvenation, and meaningful participation beyond COVID-19.

Apart from Dr. Tony Murphy, GLOBE Implementation Office Director, Mr. Mark BRETTENNY the Regional Coordination Office Director, most of the Africa region country coordinators and representatives (representing 15 GLOBE countries), attended this event, according to the following:

|  |  |  |  |
| --- | --- | --- | --- |
| **Names** | **Designation** | **Phone number** | **Email addresses** |
| Tony Murphy | GIO Director | 303-497-2625 | [tmurphy@ucar.edu](mailto:tmurphy@ucar.edu) |
| David Overoye (SSAI Pasadena) |  |  | [david.overoye@ssaihq.com](mailto:david.overoye@ssaihq.com) |
| Hameed Sulaaiman | Science Working Group  Oman |  | [hanhameco@gmail.com](mailto:hanhameco@gmail.com) |
| BRETTENNY Mark | GLOBE Africa Coordination Office | 0027722737997 | [mark@globe-africa.org](mailto:mark@globe-africa.org) |
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| BUAH Berthy | Ghana Country Coordinator | +233 24 408 5614 | [bbuah45@gmail.com](mailto:bbuah45@gmail.com) |
| KAMBIWOA Lawrence | Cameroon Coordinator | +237 96149618  +237 77819751 | [lawrence96k@yahoo.com](mailto:lawrence96k@yahoo.com) |
| FALL Ngossé | Senegal Country Coordinator | +221771018677 | [fallngosse@yahoo.fr](mailto:fallngosse@yahoo.fr) |
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| AMINULAI Modupe | Nigeria Country Coordinator |  | [modupe\_aminulai@yahoo.com](mailto:modupe_aminulai@yahoo.com) |
| MOKGADI Madiga | South Africa Country Coordinator | +27790558844  +27829440036 | [mokgadi.madiga@dst.gov.za](mailto:mokgadi.madiga@dst.gov.za) |
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| SESUPO Lesole | Botswana Country Coordinator | +26773148188 | [lesolesesupo@gmail.com](mailto:lesolesesupo@gmail.com) |
| LAWANI Ylliass Destin | Benin Assistant Country and Alumni coordinator | +22997397176 | [ylliass@outlook.fr](mailto:ylliass@outlook.fr)  ylliassdestin@gmail.com |
| Sangay M.F. Faeflen | Liberia Country Coordinator | +231 886397595 | [sangayfaeflen@gmail.com](mailto:sangayfaeflen@gmail.com) |
| RANDRIANARISOA Paul | Madagascar Country Coordinator | +261331106321 | [randripaul@yahoo.fr](mailto:randripaul@yahoo.fr)  [randripaul@gmail.com](mailto:randripaul@gmail.com) |
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| Komla Amega | Working group  Ghana |  | amega010@gmail.com |
| Sylivester Chaisamba (TECNO Camon CX) | Tanzania |  |  |
| DAWDA |  |  |  |
| HASINA DES |  |  |  |
| Denise "Skye" Yost | GIO |  |  |
| Simon Peter Katongole | Uganda |  | Simon Peter Katongole <spkatongole@gmail.com> |
| Amy Barfield | GIO-IVSS |  | barfield@ucar.edu |
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| Desh Bandu |  |  | iesindia@gmail.com |
| |  | | --- | | Lebogang | |  | |  |  |  |
| |  | | --- | | Bonolo | |  |  |  |
| Dr Judi Sandrock | XINABOX |  | js@xinabox.cc |

The following GLOBE countries from the region did not attend: Guinea, Mali, Cape Verde, Tanzania, Ethiopia.

The meeting was coordinated by Mr. Mark Brettenny, and Dr. Tony Murphy was in attendance.

**Day 1** - Current challenges to active and sustained participation.

Mr. Mark BRETTENNY made the opening remarks of the meeting and communicated the agenda. He also thanked everyone who made contributions to the padlet during the day.

He introduced Mr. Ylliass Lawani by welcoming him at the meeting. Ylliass took the floor and greeted everyone. He translated and presented French inputs from the padlet to participants, as shown below in the annex. In general it is said that for an active and sustainable participation, it would be good to propose themes that involve the action of everyone wherever they are and whatever they do. These themes are sent and each member brings his contribution. It is also necessary to select schools or localities, to reinsert GLOBE learnings in the selected schools, and also and especially the intervention of the governments; involve people and make them responsible throughout the process by encouraging them from time to time until the completion of the GLOBE activities. Another participants expressed the empowerment of all GLOBE actors, to feel concerned, to be involved in the different activities, to be consulted in order to have their priority area.

After this Dr. Francis Nsubuga also translating English inputs said that current challenges to active and sustained participation in GLOBE are multiple as read on the padlet : the fact that there is no immediate financial benefit to active participation is an important factor impeding uptake of GLOBE activities; countries’ priorities and needs that are different (for example incentivized participation is not necessarily for the individual but for the benefit of the country); GLOBE is left with no resources to incentivize participation from Government budgets on the continent due to their multiple socioeconomic challenges ; also Teachers see it as extra load to their core duties and leave active students helpless until the interest diminishes.

Mark came back and talked briefly about the incentives for the individual and for the country

According to bilateral agreements and supporting in formulating proposals and funding.

Mark thanks Mr. Ylliass and Dr. Francis for interpreting the padlet for the day. Mark asks Skye (Dr Denise Yost) if she could represent Dr. Tony Murphy. Denise says she does not have the details for Dr. Tony remarks, but she thanks GLOBE Africa for holding the meeting.

Mark introduces Mr. Dave Overoye and how he is responsible for the continued evolution of the GLOBE program and its infrastructure. Mr. Overoye talks about he runs the data information system and the website and technology related to GLOBE.

Mr. Overoye talks about the changes to Data entry system and shows how the new app looks and works and walks participants through how to use it on desktop as well as on cellphones.

Mark thanks Mr. Dave Overoye and encourages the participants to practice in order to understand the Data entry system.

Mark also asks that a section be put on the padlet for Dave and other guests so that he can receive and answer any questions.

Then Mark asks the working group members to introduce themselves.

Mr. Peter Rugano introduce himself and gave his background and talks about the training he has done with teachers. He thanks Mr. Charles Mwangi and Mark for their support.

Marks thanks Peter and hands over to Mr. Komla Amega, who introduced himself and talks about his history. He thanks Ylliass and Mrs. Berthy Buah for introducing him to GLOBE.

Mark says he has created the heading for questions for Mr. Dave on the padlet and encourages people to ask questions

Mark asks three countries to give their country reports also by email

Mark requests that countries support the alumni participation and activities as the youth is the future of the program

Mark hands over to the Africa Regional Alumni Coordinator. Mr. Ylliass Destin LAWANI presented the regional alumni network, brief activities and requested that Country coordinators work closely with them as they are dedicated to do so. He recalled the work done by the evaluation working group in that regard, and thanks all African alumni who could participate. He expressed his gratitude to the GIO and its regional offices for their interest to alumni work. The support of Country coordinators is very important to their activities at a local level.

Mark Thanks Ylliass, and welcomes Amy Barfield and Sarah Parsons to give feedback about IVSS proposals and submissions over the last 5 Years.

Amy thanks Mark and introduces herself then hands over to Sarah Parsons. Sarah introduces the IVSS team and talks about the IVSS trends for 2016-2020. She also talks about the statistics and the impact it has on students. Amy took the floor and talks about how the program has grown over the years and how the participation in Africa region has grown. She also talks about the requirements to successfully have a research report in the IVSS.

Amy asks that any questions be posted on the padlet.

Mark thanks Amy and Sarah and asks Dr. Tony Murphy to do closing remarks.

Dr. Tony greets everyone and thanks the Country coordinators for their work over the last year,

Mark thanks Tony and everybody for joining the meeting, and closed day 1 session.

**Day 2** - Current state of Education in your country

Mark welcomes everyone to 2nd day of meeting. He also welcomes Dr. Desh Bandhu, Coordinator GLOBE Asia Pacific Region and thanks Tony and Dave for attendance.

Mark recaps on day 1 feedback from anglophone and francophone countries indicate a common problem of either funding or infrastructure and support from people who signed the bilateral agreement. He also indicated that the office is willing to help them formulate a strategy or proposal, but COVID-19 perpetuates the problem. After presenting the day 2 agenda and inviting participants to populate the padlet with questions or comments, Mark hands over to Dr. Tony Murphy.

Dr Tony Murphy talks about the program post COVID-19 and where it is going. Once people are vaccinated, it is planned to have meetings and workshops and freely collect data.

This year the annual meeting will be virtual due to COVID-19. There has been a set of modules developed on the mosquito habitat mapper app, they will be available to use to continue work on the mosquito project. Dr Tony says he is excited about the research papers on the mosquito project coming out of Africa. He would like to remind people that it is really important for GLOBE countries and for the program that opportunities to post their work on social media and talk about the impact of the program and what kind of protocols to be used, are seized. Dr Tony talks about changes coming down the pipeline, infrastructure for the trainer and mentor trainer process will be in place. The science protocol deactivation process from the working group is near completion. GLOBE have earth day coming up and it will be the end of the 25th earth and the beginning of the 26th year and GIO is hosting an event part of which there will be the drawing for the IVSS. He thanks Country coordinators for working with their teachers and students to get the research projects in. Mark thanks Tony and asks for any questions.

Mark says goodbye to Dr Desh and welcomes Dr Dave Overoye to talk.

Dr Dave Overoye says thanks to Charles who is leading the technology working group and talks about what is new and what is coming to GLOBE Technology. He talks about changes on the website, data entry and visualization and what is coming to the website. He goes to the padlet and answers the questions that were asked of him. Mark thanks Dr Overoye and asks that we add questions to the padlet.

Mark thanks those who sent their country reports via email and welcomes Ylliass to present day 2 inputs on the padlet. Ylliass says that French speaking participants presented the current state of Education in Senegal and Madagascar, all affected by the Covid 19 pandemic. In Senegal schools are open but many training and educational activities are suspended to avoid the gathering. They held a GLOBE training from March 17 to 19, 2021, limiting the number of participants to 10 and respecting the barrier measures including the wearing of masks.

In Madagascar they are in the midst of education reform activities. They have completed the development of the curriculum for the secondary or high school. There is a big change in the series : L, S and OSE. There is also a new discipline SES or Economic and Social Sciences. The future teachers of this new discipline are currently being trained. They have integrated the principles and elements of sustainable development in the school program. The curriculum for the 9-year basic education is being developed. Officers are working hard on this curriculum design work. Learners continue to attend school while respecting health barriers such as alternating recess to limit the number of people passing each other on school grounds. GLOBE activities seem to be slowing down a bit due to the recovery of time lost earlier. They are planning to visit GLOBE schools in the near future to assist the GLOBE teachers. Moreover, they have received measurement and observation equipment from the AQUEM project to reinforce the schools in developing science education and to promote GLOBE.

Mark thanks Ylliass and for all the great input from francophone and hands over to Dr Francis to do the Anglophone part. Dr Francis says he had noted that much of the comments about what has to be done is about teachers and country Coordinator’s catching up with time that was lost. Decisions being taken by government are slow and most of the teachers are catching up however it is providing an opportunity for GLOBE integration in the national curriculum as GLOBE does much online.

One of the strategic objectives of the program is to align the GLOBE program with national curriculum, it is an ideal time to find ways to do that.

Mark asks Charles to introduce himself and give his background. Mr. Charles Mwangi thanks Mark and introduce himself as assistant deputy country coordinator in Kenya. He is member of the technology working group in Africa.

Mark thanks Charles for what he is doing for the Africa region and always being available to assist people. Then Mark hands over to Dr Francis as a working group member. Dr Francis says he is a member of the education working group, and gave his background.

After thanking Dr. Francis for all his contribution to GLOBE program and to GLOBE Africa, Mark thanks all who sent their country report to him and hands over to Dr Tony Murphy to give the final words for Day 2 call. Dr Tony Murphy thanks the working group’s members from Africa for their continued work in pushing the program forward. He thanks also Dave and his team with the technology working group, and closed the day’s session.

Day 3 - What would you consider an alternative or addition to the current overarching landmark research initiatives (Waterbodies, Invasive Alien Plants, etc.?)

Mark starts by welcoming everyone to the 3rd day and a summary of the previous day and most feedback was to align GLOBE into the national curriculum.

Mark welcomes and introduces Dr. Hameed Sluaiman from GLOBE Science Working Group. Hameed introduces himself and starts a slide about how the student research can help the scientists and university research. He gives guidance to up africa IVSS Submissions. Then Mark talks about the topic for the Day and how participants can add more research initiatives that can work as celebrative initiatives.

Mark welcomes Dr Francis and ask him to do the translation from the padlet

Dr. Francis translates and summarize from the padlet talking about how we can add overarching initiatives and escalate current research topics to broader themes, as shown in the annex to this report. Ylliass took the floor and presented the French inputs of the padlet as shown in annex.

Mark talks about the zika projects end and informed participants that Yllias will be representing the Africa region on the ZIKA end event call and asks if anyone wants to contribute towards ylliass speech.

Mark talks about the invasive alien plant species and the importance of identifying projects that come with their own funding or that are self-sustaining. Also, that they have local relevance. He invites Dr Francis to speak about invasive plants and he talks about the benefits lost to alien plants (e.g., grazing space, water) and how to make it a sustainable project and raising awareness.

Mark thanks Dr Francis and for all contributions and asks all to make recommendations on to the padlet

After that Mark welcomes Dr Judy Sandrock from XINABOX (x in a box). Dr Judy Sandrock thanks mark and introduces herself and start talking about XINABOX. They have been running a STEM program across the world since 2015 and they focus on Space and use space as an inspiration. Judy is a Chemical engineer, and her focus is on environmental applications, eliminating pollution and rehabilitation. She used to work through mining and deforestation fighting from inside.

Mark thanks Judy for her contribution and asks for questions. Dr Dave Overoye says it is amazing and asks questions about the sensors parameters and if there was a way for the data to be sent to GLOBE. Judy said that they can get sensors that are up too standard and that they may be able to set up a dedicated MQTT server for GLOBE… She goes on to show how the graphs look and how the sensors look but it was ultimately agreed to have a separate meeting where the technical people could be involved. Dr Dave Overoye agrees.

Mark thanks Judy and Dave and it is agreed to have a Zoom session where all questions could be answered. Any questions are invited to the padlet.

Then Mark concluded the meeting.

**Day 4** – What would you consider a meaningful way to get the most from GLOBE Program in your country?

Mark welcomes everyone and summarizes the previous meeting regarding the IVSS and aligning GLOBE activities with national curriculum. Mark asks Dr Dave Overoye to elaborate about XINABOX. Dr Overoye says they will still have a meeting regarding the chips accuracies and parameters, also will the Data be available to GLOBE. And is NASA willing to fund the effort. Marks asks Dr Overoye to briefly update Tony about the XINABOX

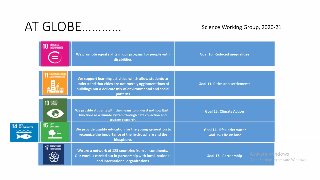
Dave explains about the different sensors they showed. Mark explains that there is a section on the padlet to ask any questions for XINABOX

Mark thanks everyone for contributing to the padlet and WhatsApp, and for emailing the country reports.

Mark ask ylliass to do his report on behalf of the panel. Ylliass greets everyone and start translating the padlet day 4as shown in the annex.

Mark thanks Ylliass and calls on Buba to report on the anglophone. Mr. Buba Tamba reads and comments from the padlet. Mark thanks Buba and calls on Dr Hameed to speak about Aligning potential IVSS projects with University student research.

Dr Hameed talks about local sustainable Development goals (SDG) and how to approach research topics for GLOBE students, how to use collected data to frame a research objective and how to identify an issue with environmental concern to the local community. He goes on to explain the 17 SDG and how GLOBE objectives meet these SDGs.



Mark thanks Dr Hameed and talks briefly about Identifying potential projects for IVSS and other research in the country, guidelines, and steps to follow which are relevant to the community and country and relevant to the strategic goals.

Mark hands over to Charles Mwangi who spoke about the challenges they face in Kenya trying to establish linkages in different institutions and to build consistency in the activities the students do, keeping the teachers and students interested. He talked about the automatic weather stations and the training they had to 3D print and assemble them. He also talks about mosquito research and how the weather correlates with malaria cases.

Mark thanks Charles and says he will add him to the padlet if anyone has questions for him.

Mark talks about sustainable STEM education and asks Dr Judy from XINABOX to speak about the synergy that exists between what they are doing as XINABOX and what GLOBE is doing and the potential funding opportunity that will ensure sustainability of programs on the continent. Dr Judy says she has been able to identify several potential sponsors who would be able to join forces and make sure efforts are coordinated. XINABOX has been appointed as implementation partners for the UNDP so all there programs are aligned to the varies Sustainable Development Goals and are able to access funding from the UNDP. She informed that they coordinate their efforts to have all of the regions and countries registering for the grants from the UNDP. They also have several corporate sponsors who are member of the UN sustainable Group and they have signed up to support the goals in countries where they operate. She briefly talks about the product and gives some ideas of having GLOBE groups and sustainability groups in schools.

And further to discussions between Tony, Dave and his team with XINABOX it was decided to wait with shipping the promised weather stations until NASA gives their approval for the accreditation of the instruments. It is pointless sending equipment that does not meet specifications.

Mark thanks Dr Judy and hands over to Tony. Tony speaks about the new developments and supporting participation with incentives reduced registration fees for teachers and country coordinators. The reduced rate for participation in the 2021 Annual Meeting are the following: 20 teachers from the region will be subsidized to participate. The cost to them is $25. CCs are asked to identify 2 deserving teachers and motivate their choice. They must also send their contact details by Sunday, 4 April 2021. The same courtesy was extended to the CC. In case they cannot personally attend, their duly appointed person (this person must appear in the country details in their country page) will be taking up the offer by Sunday, 4 April 2021. Mr. Tony talks also briefly about the different research projects around the world going into IVSS.

Mark then finished with his closing comments. He asks for a group photo to be taken. Tony makes closing remarks then concludes the meeting. All participants were happy to attend this virtual meeting.

# ANNEX

## GLOBE [AFRICA](https://padlet.com/africaregionglobe) REGIONAL MEETING 2021 - 22 - 25 March 2021

#### Topic 1

**Day 1** - Current challenges to active and sustained participation

* + *Good morning Africa's GLOBE stakeholders. There are multiple competing needs for most active people in the society, and increasingly one has to only deal with what is prioritized. For most cases the fact that there is no immediate financial benefit to active participation is a important factor impeding uptake of GLOBE activities. I will later give suggestion for overcoming this small barrier.* [PETER RUGANO](https://padlet.com/ruganopeter)
  + *Thank you for your input Peter. You are indeed right and also all countries have different priorities and needs.* [AFRICA GLOBE](https://padlet.com/africaregionglobe)
  + *Note: Incentivized participation - IVSS and other. also incentivized not necessarily for the individual but for the benefit of the country - Zika* [AFRICA GLOBE](https://padlet.com/africaregionglobe)
  + *Implementation of the programme is mostly driven by people who are full-time employees in other areas. The GLOBE programme is therefore attended to as a part time or added activity. Teachers see it as extra load to their core duties and leave active students helpless until the interest diminishes.* *With multiple socieconomic challenges faced by the continent, it is difficult for the GLOBE programme to be prioritised in Government budgets. The programme is thus left with no resources to incentivise participation.* *Mokgadi, South Africa*
  + *Morning dear all. The main challenge in Benin Republic is to reactivate GLOBE project. Only alumni association is trying to make it real*. *I'm Morel Marly Mensah from Benin*

**FRENCH INPUTS : Quels sont les défis actuels d'une participation active et durable ?**

* + *Bonjour*. *Il faut pour relever le défis, sélectionner des écoles ou localités (écoles, quartier, communes, marchés...) d'application, réinsérer les apprentissages de Globe dans les écoles sélectionnées, et aussi et surtout l'intervention des gouvernements. Merci*  [AFRICA GLOBE](https://padlet.com/africaregionglobe)
  + *Pour une participation active et durable, ce serait bien de proposer des thèmes qui impliquent l'action de tout le monde où qu'on soit et quoi qu'on fasse. Ces thèmes sont envoyés et chaque membre y apporte sa contribution* ANONYMOUS
  + *Pour assurer une participation durable et active de tout le monde il vaut mieux tout d'abord demander aux gens leur priorité c'est à dire les impliquer tout au début du processus. Ensuite il faudra les responsabiliser tout au long du processus et les encourager de temps en temps jusqu'à l'achèvement des activités.* *Paul RANDRIANARISOA de Madagascar*
  + *Pour une participation durable et active, il faut la responsabilisation de tous les acteurs, se sentir concerner, impliquer dans les différentes activités, les consultés pour avoir leur domaine de priorité.* Zongo, Burkina Faso

#### Topic 2

**Day 2** - Current state of Education in your country

* + *Given the current situation, the focus is on catching up on missed contact time.* *Public schools opened later than independent schools. Students in both schools alternate on face to face attendance. Schools are focusing on catching up with lost time of 2020. Mokgadi: South Africa*
  + *Hello, we are in the middle of education reform activities in Madagascar. We have completed the development of the school curriculum for high school or high school. There is a big change in the series: L, S and OSE. There is also a new SES discipline or Economics and Social Sciences. The future teachers of this new discipline is in training at the moment. We have integrated the principles and elements of sustainable development into the curriculum. The 9-year basic education curriculum is being developed. Designers are working a lot on this program design work. Continent learners attend school while respecting health barriers such as alternating recreation to limit the number of people who cross paths in the schoolyard. GLOBE activities seem to be slowing down a bit because of the recovery of time lost previously. ...* *Paul from Madagascar*
* **FRENCH INPUTS : Quelle est la situation actuelle de l'éducation dans votre pays?**
  + *la situation actuelle de l'éducation au Sénégal est marquée par la pandémie COVID-19. Les écoles sont ouvertes mais beaucoup de formations et activités éducatives sont suspendues afin d'éviter le rassemblement. Nous avons tenu du 17 au 19 mars 2021, une formation GLOBE en limitant le nombre de participant à 10 et en respectant les gestes barrières dont le port du masque* N*gossé fall bousso- Senegal*
  + *Bonjour, nous sommes en pleine activités de réforme de l'éducation à Madagascar. Nous avons terminé l'élaboration du programme scolaire pour le secondaire ou lycée. Il y a un grand changement en ce qui concerne les séries: L, S et OSE. Il y a aussi une nouvelle discipline SES ou Sciences économiques et Sociale. Les futurs enseignants de cette nouvelle discipline est en formation en ce moment. Nous avons intégrés les principes et éléments du développement durable dans le programme scolaire. Le programme scolaire pour l'éducation fondamentale de 9 ans est en cours d'élaboration. Les concepteurs travaillent beaucoup à propos de ce travail de conception de programme. Les apprenants continuent à fréquenter l'école tout en respectant les barrières sanitaires comme l'alternance de la récréation pour limiter le nombre des gens qui se croisent dans la cours de l'école. Les activités GLOBE semblent un peu au ralentissement à cause de la récupération du temps perdu auparavant. Nous planifions d'effectuer très prochainement des visites d'encadrement au niveau des établissements scolaires GLOBE pour assister les encadreurs. D'ailleurs nous avons reçu des matériels de mesure et d'observation de la part du projet AQUEM pour renforcer les établissements à développer l'enseignement de la Science et pour promouvoir GLOBE. La mission de descente concerne en quelque sorte l'encadrement des enseignants GLOBE à l'utilisation de ces matériels. Beaucoup reste à faire pour le redressement de l'éducation à Madagascar. Paul de Madagascar*

#### Topic 3

**What would you consider an alternative or addition to the current overarching landmark research initiatives (Waterbodies, Invasive Alien Plants, etc?)**

* + *New and overarching projects are needed in order to maintain momentum and opportunity.* [AFRICA GLOBE](https://padlet.com/africaregionglobe)
  + *Good morning. First of all I would like to add research on the importance of ecological balance with regard to biodiversity conservation. Apart from invasive alien plants there are also plants that are indicative of the degradation of the vegetation cover. But should the presence of these species be considered as always negative in the face of soil protection from erosion and so on. In short, I would like to apply a systemic approach to these research initiatives. Thank you!yes,* *Paul from Madagascar*
  + *It is also important that local relevance be taken into account when identifying projects* [AFRICA GLOBE](https://padlet.com/africaregionglobe)
  + *Local Sustainable Development Goals (SDG) should also be considered when identifying potential students' research topics.* ANONYMOUS
  + *Initially the water bodies research was so encampasing that i saw it as covering most of what need in africa. If one identifies a water body, is able to carry out all the protocols holding under hydrology. At the same time do a land cover protocol around the water body. In so doing you are able to see plants that can be classified as aliens or non invasive. Monitor there behavior and so forth. These three aspects transcend in difficulty and can be assigned different grades in a school. Water body is still my favourite and we have not exhausted it.* [WASSWA NSUBUGA](https://padlet.com/francisnsubuga)
  + *I think that we need to continue research on mosquitoes as most GLOBE countries in our region are in the endemic zone. We are more suffering from Mosquito borne deseases than other people. Our students will feel more concerned if they use GLOBE tools to investigate this issue* [GLOBE BENIN](https://padlet.com/GLOBEBenin)

#### FRENCH INPUTS : Que considéreriez-vous comme alternative ou ajout aux initiatives de recherche de référence actuelles (masses d'eau, plantes exotiques envahissantes, etc.) ?

* + *Paul : Bonjour. Tout d'abord je voudrais ajouter la recherche sur l'importance de l'équilibre écologique vis à vis de la conservation de la biodiversité. A part les plantes exotiques envahissantes il y a aussi des plantes indicatrices de la dégradation de la couverture végétale. Mais faudrait-il considérer comme toujours négative la présence de ces espèces face à la protection du sol contre l'érosion et ainsi de suite. En bref, je voudrais appliquer une approche systémique à ces initiatives de recherche. Merci! Paul de Madagascar*
  + *Les objectifs de développement durable locaux (ODD) doivent également être pris en compte lors de l'identification des sujets de recherche potentiels des étudiants.* ANONYMOUS
  + *Je penses qu'on peut ajouter à ces initiatives déjà une campagnes contre les ordures ménagères qui traînent dans des coins de rue et qui produisent d'énormes moustiques, des herbes et arbres sauvage qui poussent dans des maisons vides en pleine agglomération(ce qui permet la prolifération de plusieurs insectes dans les maisons voisines. il y aussi la qualité de l'eau de mer sur nos côtes, par exemple j'étais par hasard au bord de la mer aujourd'hui vers la cité, à ma grande surprise l'eau sent le pétrole, comme si les navires avaient déversé leur carburant dans l'eau. Enfin, je pense surtout qu'il faille trouver une solution pour nos caniveaux qui sont des sources permanentes de reproduction de moustiques.*  *Arsène Yatta-BENIN*

#### Topic 4

**What would you consider a meaningful way to get the most from GLOBE Program in your country?**

* *Monetary motivation to help country Coordinators to train, monitor and supervise GLOBE schools.* ANONYMOUS
* *There should be competition that ranks schools and countries on International bases. This will motivate teachers to constantly be on the project knowing that annual they will compete with other schools across the globe.* ANONYMOUS
* *Schools who submit projects for IVSS must be acknowledged by GIO and the Region even if they did not receive any stipends* ANONYMOUS
* *The GIO has left the implementation of the GLOBE agreements in Africa to chance. The program is kept alive by dedicated individuals. When the individuals retire or leave, the programme suffers. NASA should look into strengthening the bilateral relatioships with goverments in Africa using attaches in American embassies to remind the African goverments of the GLOBE agreements. There are various international programs that were succefully implemented, supported by goverment and remained sustainable because the two goverments were constantly in touch with one another. With the GLOBE program, there is a disjucture between the two governments that signed the bilateral agreement. The disjucture creates a gap that is then filled by enthusiastic individuals who keep the GLOBE program alive. While the enthusiasts will continue to knock on the right doors to keep the GLOBE program going i.e by raising funds, training more teachers, recruting more schools, etc, The GIO or NASA must go to the boardroom to rethink the strategy for Africa. Goverment to government link could open up many bottlenecks and create opportunity for sustainability of the GLOBE programme.* ANONYMOUS
* *I think capacity building/training on the different GLOBE protocols will for country coordinators will help in the sustainability drive for GLOBE. I also think based on annual country reports and action plans, countries should be sponsored by GLOBE and their governments to carryout their activities.* [BUBATAMBA](https://padlet.com/bubatamba)

#### FRENCH INPUTS : Que considéreriez-vous comme moyen efficace de tirer le meilleur parti du programme GLOBE dans votre pays ?

* *Paul : pour les connaisseurs GLOBE est toujours considéré comme force de proposition pour améliorer la qualité de l'éducation. Il faut aider le Coordonnateur à convaincre les nouveaux décideurs , qui changent tout le temps, à considérer l'importance de ce programme pour promouvoir la qualité de l'éducation. Nous somme convaincu l'importance du GLOBE sur l'éducation relative à l'environnement et à l'éducation à la citoyenneté. Ce qui manque c'est la communication au niveau national pour faire connaître le programme et l'implication de l'ambassade des USA semble inexistante dans ce cas. Il faudra à mon avis impliquer davantage la relation et collaboration du Coordonnateur au Responsable de l'éducation et/ou santé au niveau de l'ambassade. C'est ce que je vais faire très prochainement surtout après réception des lenses auprès de l'ambassade. Merci*. Paul, Madagascar
* *Pour tirer les meilleurs partis du programme GLOBE dans nos pays, surtout d'Afrique de l'Ouest Francophone, il faut garantir la continuité et la relation avec le Gouvernement central.* [HALILE FIDÈLE PARAÏSO](https://padlet.com/halilebenparaiso) -Benin
* *Mettre en place, un système qui permettra réellement d'encourager ceux qui font un effort pour l'évolution et la pérénité du Programme* [HALILE FIDÈLE PARAÏSO](https://padlet.com/halilebenparaiso)- Benin

#### QUESTIONS FOR AMY AND SARAH

Please add your questions and comments for Amy and Sarah

#### QUESTIONS AND COMMENTS FOR XINABOX

* *When are we receiving that weather stations you promised* ANONYMOUS

#### QUESTIONS FOR DR TONY MURPHY

#### QUESTIONS FOR DAVID OVEROYE

Please add your question or comment for David

* + *Will the new version take names and Email upon registration?* [WASSWA NSUBUGA](https://padlet.com/nwasswa)
  + *Do you a tentative timeline for this to be complete and available?* [PETER RUGANO](https://padlet.com/ruganopeter)
  + *At the point of choosing instruments e.g thermometer, is there an option for automated stations?* [WASSWA NSUBUGA](https://padlet.com/nwasswa)
  + *Will the modifications require updated verisons of phones? hope we will not run to shops David.* [WASSWA NSUBUGA](https://padlet.com/nwasswa)
  + *Will put all questions on the presentation for tomorrow...but for here:* ANONYMOUS
  + *New version will continue to require email to register (like the current system)* ANONYMOUS
  + *Timeline to complete - before Earth day!* ANONYMOUS
  + *Automated stations will need to use the "old" version of the forms..we currently support Davis and Earth Networks. There's a project going on to get the 3D printed weather stations into GLOBE* ANONYMOUS
  + *If GLOBE Observer works on your phone now, it should continue to work* ANONYMOUS
  + *Is the new version location free, i told you once how we could not pick coordinates at the boarder of Botswana, Zambia. Hopefully it take data from places that are not yet GLOBE member countries* [WASSWA NSUBUGA](https://padlet.com/nwasswa)
  + *unfortunately we are not allowed to accept data from non-GLOBE countries - but we are working with the state department to acquire better maps to minimize border issues.* ANONYMOUS