

**Summary and Outcomes of the Workshop held at EARTH University
Transforming Higher Education Project
February 4-6, 2019**

**Transforming Higher Education in Agriculture: The Experience of EARTH University and Best Practices
Across GCHERA's Global Network**

Higher educational institutions have the unique capacity and responsibility to rapidly produce the changes required to form the leaders the world needs. To achieve this vision, universities should make a change in their educational paradigms. This reality has been recognized by the Kellogg Foundation which is partnering with the American University of Beirut, The Global Confederation of Higher Education Associations for Agricultural and Life Sciences (GCHERA) and EARTH University on this project aimed at university transformation.

Under the "Transforming Higher Education" Project that FAFS is leading, an Orientation Workshop was organized at EARTH University in Costa Rica from February 4th till 6th, 2019. The primary goal of this workshop was to share and learn from innovative experiences from EARTH University and from across the GCHERA network as a means of stimulating university transformation processes. The secondary goal was for interested GCHERA participating universities to make firm commitments to the project's goals of university change.

The Objectives of the workshop were the following:

1. Each Institution will leave the workshop with a commitment to changing their own educational systems.
2. Learn and assimilate the Project's goals and expected outcomes.
3. Gain greater understanding of the Key Elements of Success.
4. Learn from other educational innovations congruent with project goals and the Key Elements of Success.
5. Identify transformation experiences which can be incorporated or adapted to each institution's own conditions.
6. Discover and understand EARTH's academic model.
7. Create a sense of partnership among the participants around the project's vision of university transformation.

Outcomes and Commitments:

During the workshop, all the field visits, presentations, workgroups and discussion were focused around the five key elements of success practiced at EARTH University: Experiential/Participatory Learning, Community Engagement and Student Learning, Social Entrepreneurship and Business Development, Ethical and Value Based Leadership and Dialogue and Conflict Resolution. There were also experiences shared by other invited universities on transforming their educational models as well as the visions of the three pilot universities.

The participants learned from the EARTH University experiences and the complexities of creating a truly innovative student centered learning system. They also learned from a multitude of programs and efforts aimed at creating innovative transformations in higher education from around the world. These experiences will be critical to helping each institution improve on what they are doing and to confront the challenges during the change processes.

The following institutions participated (38 participants) and shared their experiences and commitment to the project vision of university transformation:

Project Partners:

- 1- American University of Beirut (Lead institution)
- 2- GCHERA
- 3- EARTH University
- 4- W.K. Kellogg Foundation

Pilot Universities:

- 1- University of Quisqueya, Haiti
- 2- Technological Institute of Conkal, Mexico
- 3- Technological Institute of Higher Education of Calkini, Mexico

GCHERA Members and Other Institutions

- 1- Zamorano University, Pan-American Agricultural School, Honduras
- 2- Purdue University, USA
- 3- Iowa State University, USA
- 4- UniLaSalle University – Beauvais, France
- 5- Australia National University, Australia
- 6- RUFORUM, Uganda
- 7- Ashesi University, Ghana
- 8- Wageningen University, The Netherlands
- 9- University of Costa Rica, Costa Rica
- 10- University of Commercial Sciences, Nicaragua

The most important result of the workshop was a commitment to participation in the project and the implementation of university change at each of the universities present at the workshop. The final day, presentations were made by the pilot universities and AUB on their commitment to implementing change and the first elements of their Change Agenda. AUB considers that it is critical that they demonstrate their commitment to change as the leaders of this project. In addition, each of the pilot universities laid out in details, areas where they will focus their change process.

The Transforming Higher Education team will work closely with each of participating institutions on their change agenda and will continue to stimulate and support the transformation of higher education. We will work closely with the pilot universities to ensure that their processes are successful and with other

universities globally through GCHERA and beyond to continue to promote the building of innovative, student centered educational systems aimed at educating future ethical and value based leaders with the skills to contribute to meeting the challenges of the 21st century.

Other invited universities pledged commitment to implementing changes at their institutions, some of which they already begun and others they plan on proposing to begin discussions at the highest levels within their institutions.

Commitments Session

Jose Zaglul (Moderator):

There are several challenges when it comes to change in our academic models, one of the main problems is the requirements of tenures, so we should give incentives, faculty members will be excited about it and they will change.

At EARTH, we have learned from our experience, we used to lose 250,000-300,000 \$/year in the banana farm, now we make net profit about 1 M\$... we became better at entrepreneurship, we learned a lot by doing.

Students should learn how to respond to the challenges of the community with the instruction and knowledge they are given at the university. The students are happy to be introduced to the theory and the practice, they love to go out to the community and work with them.

We should make commitments in our own universities, what are the things that we will try to change when you go back to your university, what effort are you going to make and hopefully a role to create certain impact and change.

If we can show even in one department, one unit, and we can show a change in the next few months or year, maybe we can encourage other departments to change, maybe we can get more fundings to continue with this and get other institutions or organizations on board.

So each university is invited to present now what is it to take back and how it can be applied in their university and how it is going to change and we will follow up... if we put this ball to roll, we will make an important change.

AUB (Rabi Mohtar – Dean of Faculty of Agriculture & Food Sciences):

The motto used to be “learn by doing”, now it is “enjoy while doing”
We truly believe that the Change in our education curriculum can change the world.

AUB faculties, schools and centers are committed to transforming student learning experiences to change communities.

We have a taskforce represented at this meeting from schools and centers and from the general education initiative. The later has one task force on experiential learning. AUB delegation shall coordinate this pledge with the task force to ensure integration of these recommendations with AUB existing structures.

Our recommendations are as follows:

AUB is committed to all five keys elements of success and will specifically focus on community engagement, experiential learning and social entrepreneurship.

Our recommendation is to conduct these through

1. Implementing capstone experience across campus
2. General education course: proposal for: a new course looking at social responsibility and engaging with the community
3. Reform AREC (AUB's Agricultural farm – Advancing Research Enabling Community) as a hub for innovations and community engagement across all faculties

Technological Institute of Higher Education of Calkini (Mario Chuc Armendariz - Coordinator of the Academic Program Sustainable Agricultural Innovation and Silvia Almeyda Saenz – Academic Coordinator)

At this moment we mark about six commitments to start this. Our first commitment to be able to grow and develop is to work with the area of agronomy with the career of Engineering of Sustainable Agricultural Innovation. For this, we are going to review the program, which is framed according to the national technological code) of Mexico and according to this, with the five components of the program that is being framed here, we are going to make the pertinent changes. This is a first commitment, to work with the program.

In second place each one of the subjects that is programmed for the Engineering degree, establishes a manual of practices. Within this practice manual, there are some that are done in the laboratory, and there are some that are done in the field, and we are going to try that each and every one of the units, for the topics and sub-topics, that contain the subjects that are given, both basic and specialty topics, we will try to do it experientially, we will try to do them, do field and laboratory practices, do it experientially. That's what we have perceived, that, we have practiced it already in a certain way. Well, we are going to increase the number of practices, we are going to increase from 40 to 50% that we realize to 60% of practice and 40% of theory, of five hours a week it will be 3 hours of practice and 2 of theory.

Likewise, we will work with the modification and update of administrative schemes for the adjustment of grades of 60 and 40%, that is, currently, we rate our students with different ... the four-part grade is established. And the practical part is only provided 30%, then we will try to change this administratively so that 60% is qualified to practice, maybe you can already remove some of the exams that are departmental, and You can work a little more with them on their qualifications.

We are also going to create a model to develop community work.

Silvia Almeyda Saenz:

This model that we will create is for the student to develop their skills in the community according to the need of it. Let's update the learning model. Each year we have a project presentation, we call it a proactive project where the student develops his own project and presents it to a jury. This time we are going to look for the projects to fit the needs that the community has.

Finally, we will work for human resources. We will work on the ethics and values part especially with the students that we have, the honesty part, the student and the administrative one so that they speak only one language.

From our side, these are the commitments that we are going to proceed in the Sustainable Agricultural Innovation department.

Technological Institute of Conkal (Luis Latournerie - Director)

Our institution is committed from the first day. We are part of the National Technological Institute of Mexico (TecNM) that is a group of 254 Institutes nationwide. The educational model of the TecNM is based on competencies. Each technological institute may include some particularities in the curricula based on the regions of influence.

The educational model of EARTH University, which we had the opportunity to know these days as part of the workshop, is very good and allows us in the case of the Technological Institute of Conkal to address some small problems we have, given that in some cases students and teachers participate in corruption for lack of honesty. In this sense, the implementation of ethical values and the resolution of problems through dialogue, among other aspects, will allow improving the quality education that is taught in the institute. In general, we commit ourselves to adapt the model of the EARTH University in the institute in the following conditions:

It will start with new students entering the agronomy career in August of this year. For this, a group of professors will be defined, including the three that accompany us in this workshop, as well as Dr. Jose M. who is the academic assistant director, who will be trained with the EARTH University model. The relevant changes will also be made in terms of class schedules and field or laboratory practices.

The educational model of the institute contemplates an integrating project that is carried out transversally to the career, this in particular has not had the expected impact. In the integrating project, the objectives will be modified to be an entrepreneurial project focused on business formation. The students will have 4.5 years to complete their project.

Another change that will be included will be in the field semester (16 weeks), the students in their last semester go out to do what is known as "professional residence". This will include the social component so that they are in contact with the communities or with companies, in which they will be in direct contact knowing and seeking to solve the needs that they have.

In general, it is what the Technological Institute of Conkal is committed to be working on or to modify in the coming months, in order to start implementing it in the next semester that starts in August of this year. The particularities in each case will be met as required.

University of Quisqueya (Jacky Lumarque – Rector and Gael Pressoir- Dean of Agriculture and Environmental Sciences):

Why am I here, the reason has to do with the history of our university, we are a small university (~3,500 students), it was a results of corporate social responsibility to build this university as a partnership between the business community and the academia.

So it is in our DNA that this is an entrepreneurial university and everything we have been doing since the beginning is towards entrepreneurship.

We are not a standard university, with all the challenges in our country, our role should not be limited to delivering diplomas and graduate. We have to be engaged with the society and mobilize our expertise and knowledge to the community. We are really engaged, we have partnerships with the municipalities, with the government, the parliament and we are active with the private sector.

Although we have been doing this, when we saw the 5 elements of success of 5 pillars of this project, we wanted to know more and be engaged.

We have been working towards this, however the earthquake that happened 9 years ago destroyed everything (no buildings, no classroom, no cars, nothing...) at that time, 6 students from the school of medicine came to see me to facilitate their travel to neighboring countries to continue their studies. But Haiti was in need to all the medical care, so it is the biggest school of medicine now.

We established 2 tents in the parking lot, and more than 200 people from the neighborhood came to get medical care. The 6 students became 44... the university had then another role to play, we cannot teach, we cannot transmit knowledge but why not going out to the community and assist them.

We figured that we were not well prepared for the role we have to play with the society, we are good at teaching science but we are not preparing citizens to face the real life. From this day, we started organizing our work around these 5 pillars.

The most important difficulty is faculty members, because this present destabilization for them, we are asking them to change the way they interact.

The challenge for us is how to integrate these 5 dimensions on our organizational structure, in our curriculum and in our culture.

We have been discussing with Kellogg Foundation to assist us in redesigning their university strategy to systematize what we have been doing informally. So when we knew about this project and we decided to come here to learn, and we discover that EARTH, AUB, GCHERA and Kellogg are proposing, maybe not the answers, but at least the direction and inspiration.

Therefore, we are requesting this consortium to come to us and assist us to redesign our strategy plan.

Gael:

And the end we say that we are fully committed at Quisqueya to these 5 elements of success.

EAP-University of Zamorano (Jeffrey Lansdale – President)

Academia must not only talk about sustainability issues but also become academic centers of the renewable route. While we participate in this forum, we have gone out of light several times. If we had renewable energy instead of depending on the national energy source, it would not have happened to us. So let us all work to convert our institutions as worthy examples of the generation of renewable and sustainable energy.

I think what is important here has been the connectivity between our institutions, but between our institutions through us. Let us do what needs to be done to keep that alive, keep the flame on. Examples: Zamorano has a fund for young scholars from Haiti and also from Mexico, from two zones in Mexico, Yucatán and Chapas. We need your help to find these young people who can return to work in their institutions as instructors, teachers, etc.

For example, Dr. Gael from Haiti complained to me, "Zamorano is stealing teachers from us!" And it is true, a phyto-improver, Rafael Colbert left their university to work at Zamorano. And I answered Dr. Gael: Well, what if we offer you two master's scholarships to study at Zamorano, win-win, right?

I think we have had the opportunity to see this brochure (A5) that also tells us about this collaboration between five universities that Tiny was telling us about since Wageningen is one of those five, they have "raised the bar", they have put up high what is the challenge for all of us. But it is an example, now, if these five institutions built that alliance we can also go out and form these alliances, we have to do it. The resolution of the world's challenges requires partnerships between the academic institutions.

Zamorano opens the doors for internships, but it would be internships in both tracks. We want to know their institutions as they can get to know Zamorano. From this forum, I take the idea and commitment to propose a master's degree in Zamorano focused on leadership and social work, where Zamorano graduates and other universities will put into practice in schools and communities the knowledge and skills acquired during their university studies. We have to identify opportunities to have a greater impact with youth in rural communities.

On another note, we are here talking about the transformation of university education. However, we have neglected secondary education. It is where we are losing a lot of students. We talked with Ian Maw today when he started agricultural education in the United States it began at the secondary level, and we have neglected that. So I think we will be transforming university education focusing also on improving the quality not only quantity, but also coverage of secondary education.

We neglect health either. I have a presentation, one day I will gladly present it, it is called, "The suicide of the human being". Nobody, nobody puts a gun to us to eat churros and to take Coca Cola. In Honduras, of a population of 9 million, more than a million Hondurans have been diagnosed with diabetes, and in your countries you surely have similar problems, so part of our responsibility in academia is to ensure our health and that of others.

And finally innovation. Innovation! Innovation! And Innovation!

At the presentation of Dr. Robert from Australia he has something about "Innovation Hub", it is a presentation, if you want to see it talk to Robert. The universities of Wageningen, Purdue, Iowa State have

also raised the issue of innovation, we must take advantage of their experiences in innovation, it represents a great opportunity for us to share that because the institution that does not innovate has serious problems.

Finally to everyone who has contributed to the success of this forum, thank you very much.

Purdue University (Marcos Fernandez - Associate Dean & Director, Office of Academic Programs, College of Agriculture)

It is encouraging to be here; we need the encouragement we get from one another. I will go back to Purdue and first share with my academic leadership, especially Dean Karen Plaut, who is committed to excellence in education. Purdue is an institution that still cares about the educational mission, about developing the next generation. My role there is to make sure this happens to the best of our abilities.

Secondly, every time I come to EARTH, I continue to be impressed by the students, the maturity, the professional presence, the cordiality they have, I know that there is a selection process that helps it, but you can tell it is nurtured, it is expected, it is advanced here and that's an area that we will continue to build on at Purdue because we are nowhere near where we need to be.

An area where I think we can do more about is to assure in terms of budget cuts, what happens is that everyone takes the easy way out. Mostly by collapsing more and more hands on courses to pure lecture or delivery course. Because the type of education we are discussing here is an expensive education in the eyes of those who fund it. At the same time, I believe it will be more expensive if we turn our backs on this generation and provide a different opportunity to have to learn and grow. So I want to ensure that hands-on experiences are readily available early. I don't want a student to say all these other universities wait till their senior years to have hands-on experiences, we are not like that at Purdue. So we will do whatever we can so it is not the case.

Another area I will mention, is that at one faculty meeting we were discussing the infusing of digital AI and data science in all our curriculum and how this momentum is going to happen. And I brought up what happens at ethics. They didn't have an answer. Part of what I will do is try to reinfuse the discussion of ethics across the curriculum at Purdue and maybe I will lead that as a faculty member next year when I am not the associate dean.

Australia National University (Robert Dyball - Senior Lecturer, Human Ecology Program Fenner School of Environment and Society)

ANU has community service as part of its enrolment criteria along with grades. Therefore, we are doing the different components in different degrees, but we need to find a way to find to increase the value of the program to the student but it is unclear how to do it.

The structuring we have at our universities is different from what EARTH has, but what we will try to do is to find a champion, and work around administrative (deans, directors) and other obstacles to foster change, and find willing partnerships to produce results (in terms of increasing student numbers for example).

What we should do after this workshop is a critical analysis of home institutions vs EARTH principles and the elements of success and see what can be done. Much of what we see here, we do at our institutions, but we could better evaluate and assess the impact, then report to increase profile of this kind of activity. At ANU, I will be auditing existing undergraduate offerings in these areas, and will touch basis with my colleagues to put together new master's degrees of food system security for example. There are many possibilities to apply many of these elements of success and principles and I know I will have resistance from the business and economics school - we have to think about how to go about that. I will encourage students to enterprise their own farms and use their skills to develop these farms. Also, we have to create diagnosis of situation for the students to use to identify different needs of the community and try to change the mindset of the students.

RUFORUM, Uganda (Anthony Egeru - Ag. Deputy Executive Secretary, Programme Development and Implementation and Program Manager-Training and Community Development)

We already have a commitment at RUFORUM to transform higher education; it is within our Vision 2030. We already have a well structure direction to move. Now this project here is working with the pilot universities and with other universities present here. The issue is how we scale it up and how we take this to many more other universities. And certainly through the different convening events, and you are all invited to join, we have one in December (2-6). We will continue to propagate the news or the music of community engagement and entrepreneurship and providing platform for sharing of best practices.

Ruforum is a learning platform. It is an engagement platform. So we continue to strive to continue providing this platform to all universities and actors (wherever in the world) so you are all welcome to this interaction space. And at any one point where there is a need, we are happy to provide connection.

When we have initiated this very good idea (like this project), and we have the vision and direction, please do continue to help us to get there. So we will be coming with requests, please be available to help us.

We have about 8 staff from different universities and the secretary on RUFORUM that will be here at EARTH in March as part of the transformation of higher education (One university in Senegal, 2 in Uganda and one in Kenya). We are supporting this initiative and is part of the expansion of transformation of higher education.

We are available to offer support to the pilot universities and to everyone.

Ashesi University, Ghana (Abdul Mahdi - Dean of Students and Community Affairs)

When the president of Ashesi asked me to represent him at this workshop, he said you will feel at home at EARTH.

During this workshop we started hearing about morale, community engagement, ethics, leadership... Most of the things we are hearing here, we are doing at Ashesi. At conferences like this, when we share our practices and we actually encourage the spread of ideas and how to engage with the community.

In a yearly conference we have (educational collaborative), we are discussing that with the 2050 increase in population and demand in Africa, what are the responsibilities lie on academics. We are going to double in population, so what role are we playing in this?

The change has been difficult; Ashesi couldn't be accredited for 16 years. Because for example the accreditation board from Ghana will come and say you need to have 80% on the Final exams, while we do continuous assessment. The only way we could get accredited is that the fact that our students out there were so good, and everyone outside Ghana recognized what we are doing to the point where the noise was too loud to make the change.

The change we are discussing here is not going to be easy, there will be a lot of resistance, but if little by little we are able to do it, because this change is needed and it is going to happen, whether you like it or not, the train is moving and you will have to get on that train.

Wageningen University (Tiny Van Boekel - Professor, Department of Food Sciences and Agrotechnology)

Wageningen University is already committed to what we discussed during this workshop and transforming higher education is what they try to do constantly. What we learned about EARTH's model and their achievement is impressive and inspirational.

Last week we had a discussion on how to incorporate ethics in our curriculum and the challenge of resistant faculty members was mentioned... so it is rewarding to see how EARTH has been doing it and they will do it.

My role will be to share this experience with my executive board to tell them what is happening and I will try to connect what we have done with the A5 initiative, as we need to learn from each other, strengthen and strengthen each other's.

One suggestions that something was not discussed a lot but might be implicit about the role of students, student must be much more empowered not just talking to students but it is also giving the power to change.

In Wageningen University, it is a habit that every bachelor and masters program has a program committee consisting of 5 faculty members and 5 students so they have equal power to make decisions related to the curricula, and in many times when debates happen, student tends to be right, they can even chair the committee...

So if possible in your institutions, give power to your students and you will get help to get over the resistance of your faculty members

(Jose commented that at EARTH, students and faculty members decide on the content of the course, and what they want to learn at the end, so empowering the students is important).

Closing Comment by Jose Zaglul:

We are all committed, and we have just formed a network. So we would like to have everyone send a note a month from now regarding your commitment and not stop here with good wishes. (Rabi mentioned the newsletter that will keep us all informed and connected)

Closing Comments by John Kennelly (President of GCHERA):

It was a privilege to have such a team organizing this event and EARTH University hosting us, and seeing everyone committed. I feel that this team is now all of us, and I feel privileged to have each one of u as members in this team where all of you have the same attributes in terms of positive thinking, wanting to get things done, wanting to make a difference...

When we listen to the stories, what they have endured in Haiti, or others where they have limited resources and I compare to Canada, to the US, we have all the resources we complain that we can't achieve and can't do things.

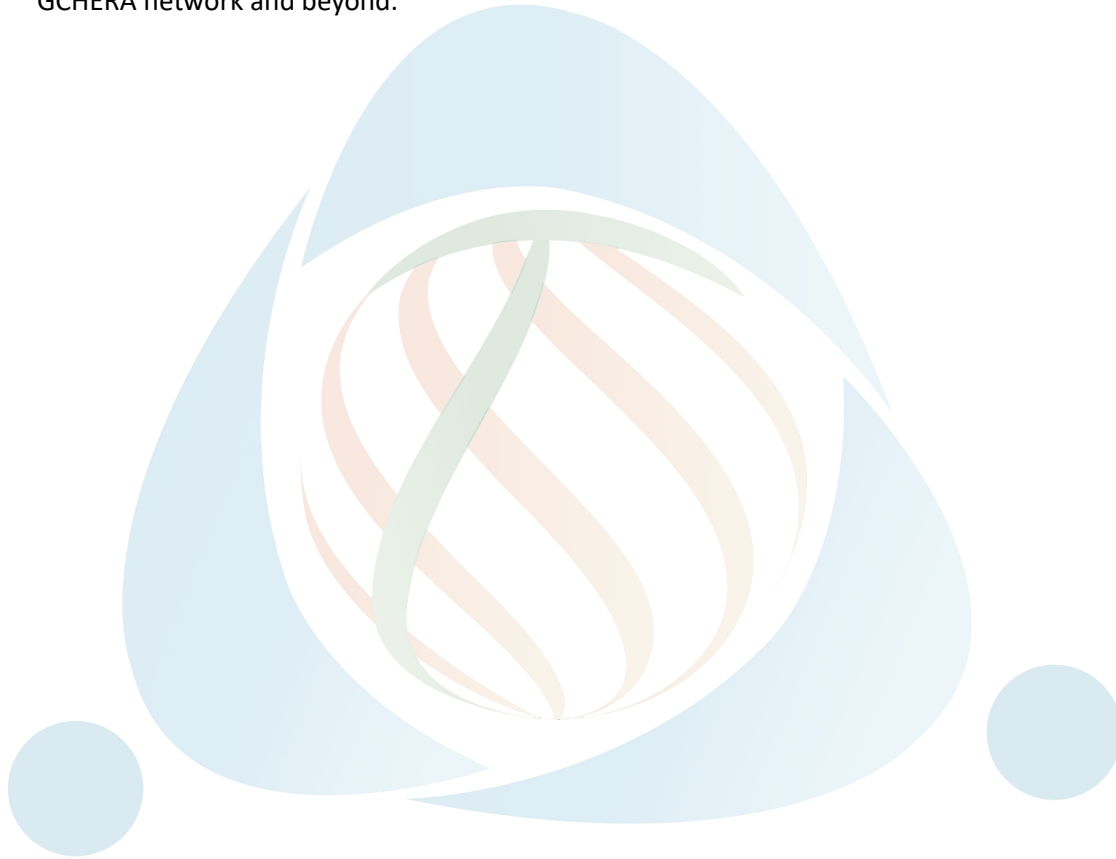
However, when I see what you have accomplished under the different circumstances with these limited resources and the energy, the passion that you bring, the examples that you have given, and the challenges that you have overcome inspire us to even work harder to achieve the things we have committed to do by coming here. It has been about 5 years since I became the president of GCHERA and I must tell you that in many ways it has been a lonely journey because GCHERA says we have a global network of 900 universities but I don't know whether anyone is listening. When you are a president and you have different associations, sometimes you feel nothing is happening and you have to measure impact. And this is the best example, in the 5 years I have become president of GCHERA, of an initiative that I feel very confident that it is going to grow and prosper.

So my commitment, as part of our family now, is to work with you and to work with our GCERA network to continue to grow and help getting additional resources to expand this network. Already, I was in India last week, there is a group there that has shown the same passion as you have shown here, they are looking for resources as part of a South Asian Network to have another one of this project, and there are couple of other examples of institutions with same interests. Therefore, I am leaving here after feeling empowered that we have a common North that we all want to travel in, we know which direction to go and we know that together we will get there, and I look forward to be with you on that journey.

Upcoming Events and Follow-up

1. Advisory Board meeting in New York, March 15th, 2019 to evaluate advances and next steps of the project.
2. GCHERA Conference, Bucharest, April 24-26, 2019. At this conference, there will be keynote presentations by John Kennelly on GCHERA, José Zaglul on the projects Mission and Objectives, someone from a leading U.S. university on their transformation processes and the reasons for change; TANU University, India, on the process of change that they have initiated with the support of the project through GCHERA; and TAP (Tropical Agricultural Platform-FAO's Program) on Facilitating Capacity Development for Agricultural Innovation which shares many of the elements of success that are at the core of the Transforming Agricultural Education project. Then there will be a break-out session which will explore the change process with interested institutions, where TAP will share their methodology for defining the Change Agenda, and other universities will share their recent experiences including the American University of Beirut as the lead University of this project.

3. Development of Change Agendas by each of the pilot universities. This is a process that began with the Orientation workshop held at EARTH University and will continue through several processes over the next three months, ending with the development of the Strategic Change Agenda and the action plan for the implementation of the Change Agenda over the next several years.
4. Discussion of a meeting to be held at the American University of Beirut was initiated to be a follow-up to the Orientation Workshop to review advances made on the commitments by each of the participating universities. This will tentatively be held in September as part of the initiative to promote greater change across the GCHERA institutions and the idea of inviting potential donors to support the Transformation Process initiated under the process to spread further across the GCHERA network and beyond.



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