

Closing/graduation ceremony of the 43rd Six-month session of GRÓ GTP, Thursday October 20th, 2022

by Guðni Axelsson

Distinguished guests, colleagues, friends and GTP fellows. I've been the Director of the GTP for almost three years, which corresponds exactly to the period GRÓ has been operating, and I think the old Icelandic saying, "allt er þegar þrennt er" which corresponds roughly to the English saying, "third time is a charm", applies quite well to these three years. I had barely taken over the helm of the program in early 2020 when covid struck and our main activity, the Six-Month Training had to be postponed. This also applied to our short courses on-site in El Salvador and Kenya and the El Salvador Diploma course we support. Apart from supporting MSc- and PhD-students our main training activity was online in 2020. Last year, 2021, was also heavily affected by covid, but we were eventually able to organize the Six-Month Training after a minor delay. Together with our collaborators in Kenya we were also able to hold a short course there late in the year, but all activity in El Salvador was postponed again.

This year, I'm happy to report, we've been able to resume full and normal operations, even though covid still affected us to some extent as well as the tragic war in Ukraine, mainly in connection with international travel and housing in Iceland to some extent. So, this third year is a charm, both for GRÓ GTP and me as Director.

This year 23 fellows have taken part in the Six-Month Training. They come from 12 countries on 4 continents; 4 from S-America, 4 from N-America (actually Central-America), 2 from the Caribbean, 7 from Africa and 6 from Asia. The greatest number from a single country comes from Kenya, or 6 fellows. We added a new country to our roster this time, Peru with two fellows, following Columbia, which came in new last year. We're very happy to welcome Peru, which has both potential resources and a market for geothermal heat.

Four of our eight study lines were offered this time around, that is chemistry of thermal fluids, environmental science, geothermal utilization as well as project management and finances. The largest group took part in the project management line, or 10 participants. It should be noted that 4 of the fellowships were financed by power companies in Kenya and the Philippines, while the rest of the fellowships were financed by the Ministry for Foreign Affairs in Iceland.

After the completion of this year's Six-Month Training, that is as of today, 766 scientists and engineers from 65 countries have completed the training in 43 years. Gender equality has always been a matter of attention for GTP with the percentage having slowly been improving through the years and we achieved almost full equality in 2021, but unfortunately, we suffered a small setback in this regard this year, only reaching about 40%.

But even though we are closing the 43rd Six-Month Training session of the Geothermal Training Programme, the activities of GTP are more varied than that, as you all know. At the moment 10 elite former Six-Month fellows are pursuing MSc-degrees at Icelandic universities with our support and 7 are working on their PhD-projects. Of these 17, 8 are women and 9 are men. This year 5 students have already completed their MSc-studies and one student, Xavier S. Musonye from Kenya, defended his PhD-thesis with flying colours in May. With those completing this year, 80 students have now obtained an MSc-degree with GTP support, and 5 successfully defended their PhD-theses.

To complete this brief review of our activities in 2022, I must mention all the activity that's ongoing on location in developing countries this year, which reflects a dramatic increase from the last two years. The tenth Geothermal Diploma Course in El Salvador, which is a five-month training program aimed at Latin-America, operated in cooperation with the energy company LaGeo and the University of San Salvador, is soon coming to an end. The 12th El

Salvador short course was run in September, focusing on the future of geothermal development in Latin-America and the 18th short course for Africa will start in Kenya during the middle of November, with the essential support of KenGen and GDC. In addition, we're organizing a 2-day pre-congress short-course for the ARGeo geothermal conference starting in Djibouti at the beginning of November. And as if this were not enough, an ARENA geothermal short course will be conducted here in Reykjavík next week, involving several participants from Arctic countries. Finally, I should mention the two online courses we operated in April and September, a medium we plan to develop further in coming years. We are very happy that all this activity was possible.

I would like to use this opportunity to thank the Government of Iceland for its continued financial support, which has been the backbone of our activities for 44 years and for 43 Six-Month Training sessions. I would also like to thank the Ministry for Foreign Affairs for their role in this through the years and GRÓ, our mother centre, for its support. We have high hopes for the future, with GTP as part of the GRÓ-family. I would also like to sincerely thank all the teachers, that is lecturers and supervisors, that have contributed to the training this year – the number is probably greater than 80. Your unselfish and dedicated input is the pillar of our activities and the key to GTP's success. I'd especially like to mention our neighbours, the ÍSOR-staff, teachers from engineering firms, from the two universities and from energy companies as well as independent actors. Last but not least, I'd like to thank the permanent staff of the GTP, Ingimar, Fríða and Vigdís, as well as our assistant Alexander, for their devotion and extremely hard work at times, which has been essential for our success.

I'd like to complete this by turning to you, dear fellows, you are the centre of attention today. First, I'd like to say that in our opinion you, the class of 2022, has been a very closeknit, happy and dedicated group. I believe you've all benefitted greatly from the

training; in a general sense from the various lectures and assignments and more specifically from your project work. I know that you'll now be able to apply your newly acquired knowledge for the benefit of your home-country. I also hope that your stay in Iceland was to a large extent enjoyable and memorable; I for one certainly enjoyed interacting with you and I can especially mention the week we spent travelling back and forth to the North – that was lots of fun!

Congratulations, all your hard work and sacrifices have and will pay off. I, and the GTP staff, wish all of you a safe journey back home, a happy reunion with your families, success in your professional careers and a long healthy life ahead. Don't forget to stay in touch with us, that's becoming easier and easier with the help of the ever-growing internet and social media. We also hope to see all of you again at some point in the near future.

Thank you and stay safe!