now officially okay then first and foremost and i think the most important question uh can you introduce yourself uh yeah sure so my name is kim maran lampe i um work at udl as an assistant professor uh now for exactly three years and my background is um adsorption which means the removal of contaminants um via the um their let's say attachment to surfaces technical surfaces such as solar materials designed to attract these type of pollutants um and they're the pollutant group i'm looking into um is most the uh organics such as yeah pharmaceuticals pesticides or pfas and um um yeah so i'm doing this in my research group i also have a strong group on nanoplastics so it's also an organic pollutant and um yeah i'm having a couple of phd students five now and master students working on

those topics and uh i have an angie student working on the agricoles project so that is a project um where i wrote the proposal together with boris and many others it has a work package description and i'm very excited to work on these tile drainage pre-treatment solutions so where my expertise in removing pesticides is handy because that's one of the goals is to remove this pollutant to allow the infiltration of the water into the soil and to remove the nitrous cultic acid that comes from it acting in a way to reduce the rat poison though and leading to an unpolluted aquifer okay yeah maybe that's sufficient all right um and with this background and then this introduction how would you uh say you are connected to the issue of drought or in salinity in in groundwater or just climate change more generally oh in fault cases uh

well um i am indirectly connected i mean i do on my when during the plant contact process or for my plant activity we also had other participants from our village of liv rendezvous or yujing who also wont be accepting the plant of my family um uh yeah they they pointed out that i'm needed and well where they up until that point though kids are like this island behind so i would say because um with the pre-treatment solution we enable the other solution yeah and that is due to regulation and you are not allowed to infiltrate um water that contains these amounts of pesticides into an aquifer even though it's a very saline aquifer i think from the regulation standpoint it doesn't make a big difference at that point and so um by removing the uh pollutant of concern we can um infiltrate that type of water which means we can enable a climate resilient agricultural solution and i'm currently not involved further than that so that is my point of connection and there for salinity uh it's it's a

similar point of connection so by allowing infiltration we can infiltrate this sweeter water but not sweet that's not the right the right word that fresher water that is not that saline to create this fresh water lens that then allows the reuse of that water for um the irrigation of crops which don't tolerate a very saline water so the same story as for the other part okay cool um and in your day-to-day work um i'm guessing besides um teaching obligations as we all have um how do you so in your day-to-day work how does a normal day in in your research part of your job look like um well um when i come to the office i usually um make a list of priorities if i don't have one

from the previous day and those this list of priorities uh includes um items for the upcoming i would say weeks maybe up to like longer longer plans shorter plan and there um like i can give an example for this period of the year which is a period where i do not teach um so um i have items on that list that are preparations for consortium meetings i have to write reports for that i have to prepare for that i have to prepare for that i have to prepare for that i have to prepare for that i have to prepare presentations i'm preparing contributions to conferences and of course i'm supervising five phd students on many master students so i have regular meetings with them and i need to catch up um and also um and involved as a lab head for one of the labs that we have so have meetings uh and their thought approach how to improve structures and workflows

um and also um and involved as a lab head for one of the labs that we have so have meetings uh and their thoughts um and their thoughts and um you're frozen so i'm not sure if you're still connected i am maybe you can yeah uh give me a okay is my voice clear or is it also laggy uh it's it's coherent okay if it gets worse shout okay um hopefully it fixes itself um yeah okay uh and so so there are aspects of conferences aspect of our consortium meetings then um a lot of tasks that are around um organizing future research so acquiring funds so looking into contributing or writing proposals is a big thing we just finished another one so that's over uh so i'm going to not do anything on that line within the next month and um then of course making connections having this kind of meeting with the lab head for one of the labs that we have so that's a big thing i'm going to

to explore um let's say future options to collaborate or so i'm meeting other people that write grants that want me to contribute um or want to explore if it makes sense to collaborate so there are these they kind of tasks that are on the side that are not currently productive but hopefully will lead to it's like sowing the seeds for future crop harvest um and i do take some time to do that and i'm going to do that in the next month or so so i'm going to take some time as well and then um i'm reading and looking at theses i'm in committees of other people's thesis defenses and these kind of things um and then the bigger things here it's also what is also and then there is the personal like the career track which i'm in so that requires to um do a self-development so i just finished the utq and so i had my interview and my final document to prepare so that was uh two weeks ago so that's also over so there are

also like the personal development things and evaluation moments that have to be prepared and although i'm not teaching currently i am preparing um the teaching uh which is in quarter four so i became module manager this year so i have to organize the schedule make everyone happy take decisions and they're trying to align everyone on new methods for teaching for example or things we want to try out and there are lots of external partners that come in to be contacted early on so there's this kind of organizational thing let's say and um also we are recording um online um education course so the way i'm recording myself and i give lectures myself but i also have to organize other people's lectures and coordinate what they are going to teach about and how it fits into our schedule and so it's also education but even though there is not a live audience now they will be live

audience later and we record knowledge clips now so we are in and out of those teaching labs to see and record and we organize site visits to interview in the field and so this also takes a lot of time okay and there that's it nice so a busy schedule through these things yeah okay like i define priorities it depends on what comes earliest and where's the pressure the highest and where did i do the least trying to run after everything okay um how and maybe one more thing i try to do emails in the afternoon okay okay i think i'm also an afternoon email person myself um while my promoter and supervisor are more morning email person so that sometimes clashes a little bit so yeah i mean if there are these like things like when you write an email and i see i mean i'm not a morning person and i'm not a morning person and i'm not a morning person

today i will reply immediately because i hope we can reschedule but other than that i see them incoming and i try to actively prevent myself from reacting to them okay because i'm more productive in the morning ah okay yeah so i prefer writing my report in the morning and after 4 pm i answer emails because my brain is dead anyways okay i should maybe follow that strategy also um okay now to get back to the uh agricost um project more generally and maybe just drought and salinity and how you experience that um what is for you a very like a big difficulty when you looked at like making and like upscaling and mainstreaming solutions such as the one you worked on yourself but also just more generally other solutions what is a definite difficulty that you see um

uh a technical difficulty is of course to up a scale or any absorbent bed like from a technical point of view because you need to you can do that but you also want to predict let's say bed life so how long can you have this material in your reactor before you have to exchange it and um if you do like we did in a rush designing this without knowing any water quality data then this is all estimation from table values and rough calculations um and there so so i find that difficult um that there was that let's say that there is good that there was time pressure because now now we have a system and we get data and you know that's all good um but my researcher heart would have preferred having data before you know some type of information and rather you know go and sample and test things and then have data then model it then design it and then build it and now we went the other way around however maybe better this way

around because now you can actually collect data yeah so it's it's like this is the technical part you mean i'm not sure uh well it's however you fill in that question so um so well and maybe then the upscaling in that specific project i would say yeah we come very easily to the like the communication issues yeah um so i have two two responses to that the first one so to summarize what you mentioned it's more of a so with the measurements and the data it's like a both a time scale issue well difficulty um and also how you well start the work in general is was reversed for you then how you would have liked to see it but that also gave opportunities to now get measurements is that correct okay yeah and then the second response i have so you mentioned communication issues uh obviously i'm gonna ask could you please elaborate a little bit on what you saw as difficult communication

uh problems or opportunities or i i think we have mentioned that in our previous meeting at um arcacia and we tried to um take it up again to mention that and that is about the communication i would say for my project we have a frequent communication with them usually the way it works is that they ask a lot from us and then we run after them to get information from them and it might be true that this stuff is not available at the point we're asking for it um so i can't judge that only i don't want to say it's it's on purpose um but um like let's say the time response like if it's they need something then they put a lot of pressure to get this as soon as possible because they want to start building or they want to wear you know they need the results before that deadline yeah and then we try to deliver but if we want to have

you know their time schedule to sample or to influence what they sample then there's no way they change that so we ask them to measure duc which is a very typical very simply and cheap parameter they they don't add it to their sampling list and there is no reason why they don't do it other than i don't care it doesn't matter to them and they don't want to deliver it to us for whatever reason or i don't know i i don't see another reason for that it's not in their list of priorities but they make their problems our priority yeah i think it's a problem and then also i think because they notice that it bothers me so they don't go directly by me anymore and like instead they put all their emails and pressure and demands on the students and i only learn about it and i don't know why they don't do it because they i like inquire and asked the students like did you have contact with hans

and then they would say oh yeah we had like a meeting and i had to give a presentation whatever at their event and like i'm not aware like what presentation did you get what did you talk about and then i say oh they wanted the design solution for me for nutrient removal i say what the hell we never discussed this nor did you present and then they would say oh i presented the list and like okay i would have like you know do but they were so under pressure to quickly do it that they went directly for it we also also always have this kind of underlying message that they will get a job afterwards from them yeah so they all i mean that one student at least he feels like he will like it's all good well invested time for him because he will you know start there afterwards whereas i with what i have experienced i wouldn't be so sure about that yeah yeah so i feel there is a lot of like strange behavior that i don't appreciate and um yeah maybe i also have to put

the foot down myself and so far i went by a boris because he's a project lead and he addressed it and he spoke some clear words um but i don't feel it reached them to the degree that we thought it would okay so and i mean this is an ongoing thing like we are already one year in this situation so um yeah so that bothers me a little also another example i think we gave that example already before is that they organize they are in many projects yeah sweet future and whatever they were called and they don't make and it is natural that they use results and projects in other projects but they don't make clear distinctions i think that they kind of they have all that information and then they use it and it's our interest that they use it because we want you know impact but then if you join one of those events and then you see them giving a presentation just in front of you where they present your design and your everything

and they don't mention even to you delved because it's for their other project then i find it a bit annoying they could at least say that this is a solution that has been developed within the agricoles project which is their sister project or whatever but they sell this then as an output of another project okay so i think um that is it just doesn't feel nice even though in principle i don't have a problem with that right yeah um i think it's more about yeah as i say it's more a communication problem than about the matter itself i'm very happy that they are proactive i'm very happy they use it everywhere i'm very happy you know they are so that's where we are complementary i want to understand if it works and i just want to build it you know and they want to try it they don't have a problem building three installations that don't work if then the fourth one works whereas for me this is like a strange way forward yeah but i don't

have a problem with that is their money they want to do it like that okay good but the way they frame it and the way they communicate that's what bothers me yeah so it's um it's on one hand what i'm hearing it's on one hand expectation differences between what you feel is comfortable and also is from like a more moral perspective putting pressure on moral perspective yeah mostly okay it's just not the way i would do it yeah and so i'm always in shock when others don't have a problem with that do you feel that is kind of connected to the fact that acacia water at their roots is a i think the english definition for that is a for-profit organization and then uh research work is public research usually no okay no i think that's not the problem like if they want to commercialize whatever solution they develop yeah or let us develop like for me it's more i feel they misuse us as

like free consulting engineers yeah to then commercialize a product okay even so and that is wrong yeah because they should pay a consultant engineer for that and then we do the research part which is the part that is not yet known uh whereas the design part i mean i'm very sorry but they can they i think that is just cheaper for them if i mean yeah no yeah um and i made that comment uh that i said like i'm you know i spent so many hours and these were free consultation hours for you you know that you would usually pay 150 euros or more per hour and you know when do i get back from that i don't even get five data points and um so i then i asked them to finance like a 4 000 euro pilot installation for the msc student and then they kind of had a problem with that and in the end they made it kind of possible and still we didn't charge them anything but

then they kind of said okay we will build this on another project but then we need solutions from you for this other project too so i think that they just try to benefit a lot yeah i find this uncomfortable okay unpleasant uh even though they are very friendly people you know mm-hmm yeah so but it's not the kind of project i would go for again let's say okay okay okay so um to go outside this project uh what do you think is necessary to facilitate change um well in this case change towards a more sustainable durable way of working um with agriculture or agriculture or

agriculture or water or having clean groundwater can you repeat the question what do you think is necessary for concrete so actionable and and like actual actionable change um from a researcher's perspective i think um we transparency and clarity from the regulators would be beneficial because now, maybe that's a typical Dutch situation, there is the infidratiebeslag, however it's pronounced, and there is a regulation for certain values in it. But then if you go in the field and want to build a pilot,

you get a permit from the local water board, which can ignore those values and say, yeah, you can do it anyways, you know, and you only have to remove pesticides. And that makes it difficult for me because I know that worldwide, and even by law in the Netherlands, I would have to remove nutrients as well. And so, but by acacia water, there is no interest in that because they don't need to do it, and so they only want to remove pesticides. And that makes it then harder for me because if I want to publish or do something, I have to do it. If I want to do anything with that, I want to make sure I can justify

and don't get questions, okay, but why don't you even do what is required and do where else it would only be required to do that, or whatever. You know, this kind of weird situation where for this one project, it's fine to do only the one thing. It doesn't even mean that the next project, they will allow this again. So does it make the solution be applicable for other situations as well? Well, then why not just do it? But as the law requires and be able to have a solution that also fits the other problems. So that is the one thing that I think that this kind of clarity

and, you know, more uniform approach could be beneficial. On the other hand, because it seems to be easy to get these type of permits, it also makes the approach faster. So you can try out things on a smaller scale, and then, you know, adapt it to also maybe in the future, remove nutrients in another project. But it's always like in our communication, we're like, do we really not have to remove nutrients? Like, what exactly did the water say? What is in your permit?

Like, why is it not in there? So there is just this constant, and then we hire a student who comes and researches on tidal drainage water pretreatment. It's all about nutrient removal. And I have to tell him, like, you know what? Nutrient removal we're not considering. And then, like, why not? Like, because on that location in the Netherlands, despite all the regulation you've found, we don't have to do it. So I just find this like, it is, I don't know.

Difficult? Weird. Yeah. I find it more difficult. Yeah. Yeah, it's, I never even considered that, because having access, quote-unquote, to having a pilot location where you don't have to look at nutrients, as you said, makes it really hard to probably publish in a, well, high-grade journal,

because then the first question you're going to get is, so why didn't you look at the nutrients? Yeah, that's my point. Like, especially because there's a nutrient crisis, right? Yeah. Like, everyone, like, you want to incorporate nutrient-rich water? Like, what the hell? And then, of course, you can explain, yeah, because it's a brackish aquifer where, you know, most likely, anyways, we're not going to produce drinking water from this.

A, B, there has previous research that has shown that there is some, you know, degradation and consumption of those nutrients, and it's not a problem. And anyways, afterwards, we use it for irrigation, so good if there are nutrients in there. But it's just not the approach. The other, normally, even in the Netherlands, by law, I would say, it's like you don't contaminate something that's uncontaminated. And so then to change that is a bit weird. Yeah.

So I find that it's at the same time accelerating change because it allows you to quickly test things on an easier scale. And on the other hand, it kind of adds a degree of confusion that is not necessary. Okay. Maybe that is just my very German perspective on a very vague regulation issue in the Netherlands. I think that's super fair, though. And so if you then go above, like, again, above a single pilot location, how would you say, who needs to work together?

This is a very broad question. Who needs to work together to solve the issue of drought and salinization of groundwater or nutrient pollution or anything related to groundwater, really? Yeah. I think that respect, the only partner that our consortium is missing is someone from the water board. And maybe there is one in there. I'm not aware. I'm not sure.

There's one woman from the. . . Yeah, she was in Leeuwarden, I remember, right? Yeah. Yeah. So I think, in principle, the consortium is pretty well built. Okay. But there is not a lot of exchange. Yeah.

So I don't feel them there. Yeah. But in principle, I think it's been very nicely designed by Boris and partners to have farmers in there, to have a case here and there, to have the university and the water board and potato people, you know. So I think the setup and policy people. So I think the setup is not perfect, but it's pretty nicely done. Yeah. And I think these are the people that need to work together.

And I highly appreciate that the farmers are in there. I highly appreciate that there is this type of interest also from the farmer's side. So I feel like it's set up for success in principle. Yeah. I have two questions related to that. First is, from my previous. . . Previous talk we had, more informally, you told me that you had pretty direct contact with farmers or a farmer

that had a pilot project on his land, quote-unquote. How was that communication with them or him or her? That was once, not to forget. Okay. And that was facilitated perfectly and well by Acacia Water. So they arranged a meeting, which we joined, to meet at two farmers' locations and sit at their kitchen table and to think and brainstorm and suggest solutions for the problem. Okay. Talking specifically, in my case,

about the maintenance requirements and ideas for pre-treatment solutions. That would need space on their farmland. Yeah. And we discussed boundary conditions and it went very well. I mean, I think the fact that we came there, also the fact that we didn't open a PowerPoint presentation or anything, it was not formal. It was very informal, yet sincere. Yeah. And I think this was really a good experience.

Okay. And the farmers spoke also English. Hmm. So I didn't expect that. I thought we would be lost in translation, but it wasn't so. And so I felt a little bit less guilty for not speaking Dutch. Hmm. Okay. So, yeah, I was a bit concerned about that part. It motivated me to learn more Dutch,

but I was happy I didn't need to try that. Mm-hmm. And so, yeah, it went very well. Very well. Okay. How would you say cooperation regarding pilot projects more generally? So not just the pilot project in TESOL, but just in general pilot projects that you might join or lead in the future. How, what can be improved? Or what is currently something that you would love to see improved?

Yeah. So currently, I don't feel I'm in the lead at all. Okay. I would say I feel like I'm a resource to quickly supply information for a case of order to select and build. And then if we are lucky, we are informed afterwards what they finally installed. And then we are not sharing into, we are never sent a schematic. We kind of have to,

by questioning over time, find out what has actually been built. And by building, begging, we might get data points shared. Okay. So I feel that can improve majorly. Yeah. So I would also, because of course,

these are like, feel like last minute, let's go for it situations in which maybe the process then also doesn't allow to participate at a researcher's pace. Yeah. But if it had been known, uh, that the pilot needs to be built by December of this year for the new area, then, you know, we could have,

uh, sat down, discuss, and then make a design and bounce ideas with other colleagues and, uh, other companies be involved, maybe also in which companies are selected to build this. Last time it was irrigation company. Okay. It's available,

but they don't know anything about treatment. So then they don't make a drawing of what they actually build. We have no hydraulic line scheme. We don't know where the sampling points exactly. I mean, it's just, it's just, you feel you supply, but you're not involved. And then afterwards you have difficulties to get access.

Um, not physically. We can always go and sample. but they're very quick to ask you to measure the pesticides in house, because it will be cheaper for them, but they're, they're not able to add a TUC measurement for you to their sampling that no, I mean, it's like, I don't know.

Okay. Um, yeah. So you would say that, um, the knowledge exchange that said, let's call it. Yeah. It's, it's inequitable.

Yeah, I would say so. So I would say like, if it was about being in need of pilot plan, then you, you would have a student that has the timeframe to develop that. Yeah. You know, where they say, okay,

the student will start has six months and then, you know, in the course of these six months, we're going to develop that and you're going to be part of certain progress meetings. And, and then at the end of that, we will have the design that you all know and discussed and we agree on, and then you can go ahead and build this the next season. And now it's like,

uh, angry students start and he was, it's bombarded with emails to supply a design. And one month after he started, because they want to build us again in December in one month from now. So like the student is supposed to do a research, a literature research, read up on the topic, have follow all the courses within the courses, make a design,

validate, discuss, feedback, and then have a deliverable after two years. What the hell? I don't know. So I think it's also very, I think that just Acacia has their own timeline and then we're also there and we have resource, but we're not part.

Yeah. And I think for any other piloting a project, um, then, um, the role has to be defined differently. It can be said, okay, we want to have you as a consultant and I charge for that. Yeah.

Yeah. Um, otherwise, uh, yeah. You see some frustration talking. No, no. I'm just thinking while, while you're,

while you're talking. So because I have to summarize it in my head, um, it's a timeline difference, like a different viewpoint. So you would say that Acacia is looking much faster than, than you yourself or your team or people working to plan ahead. Okay. Yeah. Maybe they go with upcoming opportunities.

Yeah. But I have the feeling that they, they knew they would build a pilot and for Bosco because they mentioned it a year ago. But, um, uh, at that point it wasn't known to me that they have no plan for that. Uh, they had again, no data.

Uh, we didn't have a student. So I think it's natural that they go with when they are ready to go, but it's not aligned with what we do at the university. And then also the understanding, let's say of what is the university's role in this is a misunderstanding from their side. Okay. Okay. Um, because if they need someone to design a contactor for them,

please go to an engineering office. Yeah. What I mean, we're going to do research. Yeah. I can also develop the design, but that's not my task. Yeah. What I mean? Yeah.

Um, and, um, the communication with you and other people, partners of the consortium, would you say that is at least equitable? Okay. Yeah. I mean, between me and the boards,

obviously they have good connections, good communication. We're supervising together students within the agricultural project. So that's very good. Yeah. And then, um, apart from that, uh, even in the other section of the same department,

people that work more on the modeling or on, yeah, those solutions, even though it's also Boris, I mean, he doesn't bother me with that because they also don't have time for that, but because they are only very irregular meetings, it feels like once per half year would, I don't know, unless,

um, I, I, it's not that I naturally am updated, even if I may be five offices from, from them. Okay. So I don't know what's going on there. I will see. With one of them,

I have a bit of contact because he also goes on site and now I have a student who also goes inside. So these two, they communicate with each other and contact and they may alternate or go together. So I think that is already beneficial. And then of course, with some people that are purely doing modeling and never are on site, then I never see them. And then anyone who is outside my own building and never meet other than you

on the one coffee moment. Yeah. Um, yeah. Would you have, uh, would you like to see more updates on other sections of the project or are you more like, okay, I I'm fine with those updates reaching me whenever they do,

because it's somewhat relevant for me. Yeah. Somehow that is true. Yeah. Because everyone is kind of busy. Um, on the other hand, I had other expectations when we started, I would say I kind of had assumed that, um,

it would allow for more personal connections and to also, you know, when you never meet, then also you can't explore each other's other topics of research where there might be more overlap or more future possibilities to collaborate or to get to know them to the degree that you even know if you want to collaborate with them. So I think in that respect, less from a content side than for the opportunity to, um,

connect to each other and to learn from each other. I think I had higher expectations. Okay. But, uh, in principle, I'm also not unhappy about having to attend monthly huge project meetings, but maybe there is the midpoint. Yeah. Okay.

Um, and to, this is a different angle of knowledge transfer, but I think, Oh, and sorry. And also, I don't know how it usually is that this was my first very big project with many partners. So I don't know how usually that is handled.

So maybe that's totally normal. And I had just weird expectations. Yeah. But regardless, either option is valid in my opinion. So, um, okay. So to, to keep going within,

in, in the, like the knowledge transfer sphere, how, how do you see them? Like information spread outside of, of just the consortium group. So how do you see, and what's your opinion or, or view on,

on knowledge transfer outside of just the consortium partners or whatever? Is it going good? Is it going bad or well, um, I will present at, uh, the Amsterdam international water week, which is on, I think I'm presenting on November 8th, which is,

uh, in principle international, but mostly national conference, which is very much for, um, regulators, people, and, you know, can make changes also.

Yeah. So I think it's a very good platform to, um, show off a little bit or showcase a little bit of what we're doing in the agriculture project. So you'd have to make that presentation, but I think this is a nice thing and it was also financed then by Boris. So he also agreed that it would be a good idea. So I think, um,

it depends a lot, on the initiative of the individual and I don't know. Um, I think Simon also, um, attended or will attend a conference with his project, but again, I'm not aware of what you're going to present. I haven't seen an abstract. I don't know what's going on,

but I heard it kind of on the corridor that he's going to go, which I think is nice. Um, and I think it will be nice if we could be, and maybe that happens everywhere in the consortium, in the, in the research group, but no one knows. So I think it would be nice. If this type of information could be shared.

And I'm taking myself also into the critique because I also didn't share shared among those people that are directly involved, AKA a case of water and Boris. Um, initially it was thought we would have a website and I know that there is an empty website somewhere hovering around the web, but I kind of had hoped it had this kind of, um, information would be shared on that platform so that we can also keep each other updated on that type of, um, output. And other than that,

um, let's say knowledge transfer, um, uh, I think the role has been taken on a little bit more by a case of water that does organize all these, um, meetings. Uh, they are often under a different project title, like this sweet South and others.

Yeah. Uh, where they, um, showcase mostly the agriculture. So what I know as the agricultural project, but maybe the same solution is also in their other projects. I cannot understand that totally because anyways, but they do do a good job there. I have to say,

because these events are very well attended by people like farmers. You've been to at least one. Yeah. Um, and so, uh, while it might not be, attributed to the right project or the right people, I think the content itself, uh,

gets some attention, uh, which I think is good, um, out to your link. Then the project to the impact is difficult if there is no reference that does the other critique. But then there was Boris who had a little, um, showcase on national TV, whatever way they had to get interviewed him and the farmer,

on the field. Yeah, I think this was really sweet. Um, and so I think there is quite something going on, um, for not being too far into the project. Uh, and I think, um,

that's nice. Okay. That's all I know about maybe the potato people have more and maybe TPM has other things. Yeah. I don't know. Okay. Um, well, okay. There's no part of the interview,

but I will try. To update you on what we're the TPM people are doing. I think that's also fair. Um, so yeah. Um, and then more. Okay. And again, on the topic of the interview itself.

So with all this being said, so the main issues for you being communication within the project really, um, and also a little bit of expectation differences between, between different parties. Um, if you extrapolate that to the region as a whole and facilitating sustainable change, who is responsible for, well being more climate proof or climate friendly or however you want to call that. Um,

yeah. Uh huh. Well, I have to think about this a moment. I mean in general, of course, society as a whole. Okay. Because I don't believe, but you can say,

okay, the farmer now has to change everything. Um, because, um, they, they could ask for what is my incentive other than saving the planet for my children. So I think because they are, um, let's say adding the pesticides or using pesticides,

um, um, or using the water, uh, of course they need to change their habits, but it cannot be only their task to also find out how to do that because that's not their main business. Yeah. Um, so I would say, say it would be unfair to leave it on them and also unwise to rely on that.

Yeah. Uh, therefore, um, I think the, um, effort has to be a joint effort. And so, the agricultural project is a nice example for that. I do believe that,

um, incentives from the government are a good idea. Always. Uh, of course, an incentive that is a monetary incentive, like let's say you can plant carrots if you have more water. So you're, you know, beyond the climate aspect motivated to change because it allows you to make more profit and still requires an initial investment.

So if there hadn't been, um, fun channel through a case of water to build pilots on farmer's lands, there would be no pilot on farmer's land because they wouldn't have spent 50,000 euros on building pilots anywhere. And we see it also now if there was no company or whatever going to sample these things, they would maximum be switched on and off, but there wouldn't be sampling right because no one has time or money or interest in that. Yeah. So, um,

it can only work if it is a coordinated effort between partners that do the part they know best and in that and the government should could, I mean, they do help if they provide funds to say this is a good initiative and you take money to build pilots. Right. So in that respect there, I think this is the way forward. Okay. Um, so in, in general,

you would say that the right steps are being made. But at the more micro level things need to change a little bit better. Yeah. Yeah. I would say in general, as I said, I think it's the project team is in principle a dream team. Um, um, and,

um, I also appreciate it. Don't get me wrong to some degree, the, um, activeness of a case of water to, you know, just go ahead and do things that we were always waiting for. Research, just to take a decision.

We would never have anything, I guess. Um, yeah, at the micro level, I think within the project, uh, it could be better. Uh, if I,

if I, let's say, compare this to the European projects that are speaker where, um, they are conferences for these different projects or, you know, workshop days, uh, where people, uh,

report more regularly, uh, on those issues and findings and to have discussions in a structured manner on what's next on the agenda. And maybe I'm glorifying this because I also attend only as a spectator to those, but it seems to be that the European union at least asked for those things to be done and then how they are realized. I also don't know, probably not much better, but I think, um, uh,

um, I wonder sometimes that they, why is it necessary that a case here has to do all these things, um, from their side, it's convenient, but maybe it could be nice if there would be also something that is more agricultural labeled, to, um, bring us more together and to also feel that we are more part of the solution and not just contributors,

um, um, to a case years solution. Um, so yeah. And also to spread among the boundaries of the agricultural project, because I know their Taurus is working on similar topics. They have the project. So are we, we are all sister project,

but we're never talking together, but if we had, you know, a joint day of, oh, everyone who looks in pre-treatment solutions for everyone, blah, blah, blah, blah,

blah, you know, maybe, but maybe that exists and I'm not aware, but it could be a nice thing. Yeah. Yeah. Um, I mean, this is more of like a general only this year that has been,

uh, the English translation is going to be rough, uh, a national center for salinization problems, I think is the literal translation. So there are efforts to create something like that, but just on the topic of salinization. But I think for, uh, fixing these types of issues from a technological point of view,

not yet, um, before we continue, uh, are you okay with going over time a little bit or do you have a appointment after, um, a little bit is okay if it's not more than 15 minutes, uh, because I have a very full agenda and I wonder,

yeah, yeah, no, that's fine. It's, I only have a few questions left, but not enough in for two minutes, if that makes sense. Um, so first of all,

um, to, to continue from where we just spoke, um, what do you think is needed for farmers to change pretty much from, from like a very basic point of view? Money. Okay. Okay. It's,

um, yeah. So, and not only money, but also, and that is the robot, a case, a role plays. Well, is people that talk to them,

um, in the right way on the right, um, like we say on that I hide, you know, not from like where the university or we are the government, I guess, but you know, more like as the facilitator, okay,

you won't change. We won't change. Let's help you with that. What are your needs? We can help. Uh, so I think that setup is pretty nice. And, um, ideally,

of course there would be some kind of farmers, climate change, farmers, climate association or something, you know, where you don't have to talk to 20 farmers that you only know because their case, they've already reached out to those 20 or five and they are interested. And I want to see this also my lack of knowledge. Maybe they do. I don't know,

but that's my impression. Yeah. So I think, um, having a facilitator that brings the knowledge and the money, uh, can be different. Oh, of course. But I think that's important.

And, and I meet on the eye level, uh, that is more working together and with each other to find solutions. And then, um, respecting the fact that the farmers, um, have the interest, but maybe not the resources and the time to invest to do so.

And then how can they contribute in their, in those boundary conditions? Yeah. And then I guess if it Dennis, if there is a solution that can be commercially bought and it shows the benefit of, of making your better profit, plus, but you know, good, good publicity because you're more climate resilient and you go and come into the media,

then I think there is no resistance. Okay. That's fair. Um, so it's, it's, those two things are central. Um, then as one of two final questions is, uh,

did we not speak about any factors or, or things that you would say are necessary for firstly, productive work in pilot projects, but also just facilitating sustainable change that we haven't spoke about yet. Hmm. Um, maybe, maybe one aspect that we haven't really talked about, um, is the governmental involvement into this.

Okay. Because I felt this is more like, like an up, uh, how do you say bottom up, up approach for change that I, that's how I kind of see it. Um, although I'm not totally aware of everything that's going on again, that's a disclaimer,

but I don't have the feeling that it's the government saying we need to do something. Here is a ton of money. And now, of course, it's, it's, it's, it's, it's, it's,

it's, it's, it's, it's, it's, it's, it's, it's, it's too much money and now, you know,

we give it. Um, you know, we try to have a multitude of these types of projects, um, in the same direction, maybe, uh, so I feel more it's like, okay,

there is this fun and it has a title and then they see what comes up and that's great. It's one way of doing it. Um? But I, maybe that's what my lack of Dutch, but I didn't see a lot of, um, um, other initiatives like this or a lot of like you know a push or maybe this is what you mentioned it's coming now and there is more of that um but it felt more like okay there is a group of people

that has this idea and then we push it from the bottom up and then we will see and hopefully after five years that will be a follow-up project but there um it could be maybe more you know pushed or highlighted or funded or you know brought together with different other projects from the governmental side to kind of say okay this is something we have to do and we have several initiatives in the netherlands and bring that let's bring them all together and you know um facilitate their exchange and compare solutions because who is going to say at the end what is the one that works best i don't know yeah okay um so so regardless of this being somewhat of a bottom-up solution to summarize it you would say that some more government involvement in order to streamline this is maybe helpful yeah i think i think

government involvement in general i don't know would be good okay or at least like a vision okay what is it that we want to achieve in the netherlands as a whole and is there more to come in investment in the future like is it worth going down that path because this is where we want to go as the netherlands yeah or is it just like let's spread some money and see what comes up and then we move to the next topic okay yeah yeah okay um i think we went over most of what i want to ask you um do you have any questions for me before we conclude that are well crucial for you i guess crucial for me um i don't think so at the moment uh but interest okay question and that is of course um uh there is the whole warning group of potato people in there too where i never heard back from and i always had the initial thought of like okay

why potatoes right is it just because it was available and are there not other crops and then of course i understood that okay this area where we were initially looking was the potato area so it's interesting but then of course all farmers tell okay if i have no water i'm going to grow carrots yeah so i'm like okay so that was surprising to me um so um yeah i wanted to hear a little bit like okay what what's with them like what where are they what are they doing are they still there so that's maybe the one thing and the other is um um yeah so maybe it was a general comment question is that we're talking about agricost and this was sold as the one of the potatoes on the island they're sold in other areas of the north where they grow these potatoes now acacia water has many different types of potatoes and i think that's a good question other projects that i know of because we are pushed into this and boscope which is greenhouse

yeah okay greenhouse agriculture which is principal not part of the agricost project so as i read it so now um all my students are pushed to work on the boscope case which is greenhouse uh water treatment so and um somehow it doesn't fit the agriculture no you can make it work as i'm all yeah but um yeah so i feel like um how much is this still about that part of the netherlands or are we just trying to find pre-treatment solutions and infiltration solutions for everything yeah yeah how do you see it i mean i somehow so somewhat felt the same um um vibe

i know vibe is not a very formal word but that we went from agricost to just agri x whatever in general as you said and i think that is also connected to the fact that the i think like i think like the expectation of uh results from the north was overestimated and people realized okay it's a little bit harder to facilitate change more generally this is me speaking as a public administration says sociologist so the the the technical side is there or something and then um but creating agency or actionable change is something that is a little bit lacking and now people are getting demotivated because these solutions that are a time-consuming or or or well expensive or whatever they're not diffusing as fast as they could and now because of that and i think connected to what you're mentioning is akasia's like okay we're gonna shelve this

zutop south project or something like that and then work with these same solutions in different areas so we can get the ball rolling from a business perspective you know they need to keep operating otherwise they're going to go bankrupt obviously so that was somehow also a little bit disappointing to me i think um so yeah that's one thing and then what was the second part of the the the question that you asked me i i kind of potato people oh the potato people so from what i know um is first of all the phd student that was working there um did not get a contract extension after his first year um that was the colombian guy yeah uh they did find a second person to start anew uh or proceed with what he was doing um but i feel as though so i'm pretty sure he got the no-go in april-ish um so they probably hired someone

the summer and that person is starting now again like a new or or or maybe proceeding with what the other person was doing already and we'll see where that goes but um that needs to be reintegrated i feel like into the overall consortia consortium so again i'm not a biologist or or someone that knows a lot about genetic modification or whatever those people are doing i don't know exactly how that works but i feel as though that is probably the most time consuming part of agri-coast so it's also a little bit sad that they had to already have a pretty sizable delay um so yeah that's my two updates from from that angle okay yeah um also i feel as though the communication between waging and tu delft can also be greatly improved i don't know if you agree um yeah well i never hear from them but also they don't hear from me and the link is uh of course boris i don't know how much she's in contact with them yeah i don't know i feel that because it

seems of course like very different projects linked through not the strongest link eventually yeah they are more like standalone projects that join on paper yeah to some degree right and acacia water seems to also be what i feel more interested in the quick technological solutions yeah i don't know how much they are involved with the potato you know uh also considering that they move to shrubs on greenhouse and lava fields yeah um yeah um so i think there that is also then a bit more feebly linked yeah eventually and it's maybe more artificial to keep up that type of contact if there is no much overlap so maybe it's also natural um this shouldn't be but maybe is natural you know and then also from tpm of course it's it pretty it's similar right i mean now of course with your project different that's nice and i guess we will hear some kind of feedback from

that at one point as well yeah that's interesting i always really like the interviews from these master students too because it was a different access of course of did not it has nothing to do with their content of the project what was interesting as how our group works together yeah analysis yeah with all its feeblenesses and greatnesses um but at least i always heard from them via these you know i knew they were still alive and walking okay yeah um yeah i think and if i hear you correctly you would both like to see more togetherness if i can call it that then at the what we have at the moment or are you fine with the current status quo no i do think it would be nice to meet more often if it's not a liver where you have to spend six hours of your day to get and come back from because eventually we can have project meetings that don't include all the

stakeholders yeah it's more like the work that you have to do and i think it would be nice to have a team that is more like a core team to feel more like a team that can meet between gardening and to delft i guess there are points that are closer than leward yeah um i think that could be good or if it's even online in the worst case um but or even within two delft at one point you know i think um it could be nice on the other hand also good that we don't have to prepare presentations every month you know but maybe uh meeting like every quarter not too much and then it's also not that important if not everyone is always there because then let's say what you miss it's not what you miss in one year but what you miss in two or three months so maybe it's also painful okay um yeah but overall nice setup and then only this um yeah let's say a little bit of friction or um

how the agriculture project is kind of appropriated to serve other purposes i think it's a little bit it's on the one hand what we want right yeah because somehow i should celebrate that the solutions are used for other problems on the other hand i'm not sure if the same solutions fit the other things because we don't have time to research that yeah yeah so it seems as you say very much for profit driven yeah and i also don't what is the role as arcadia water trying to brand this and sell this as as a parent or a solution do they get anything from the company that you know like what is like they don't get just the project money from this project because the pilot was not built with agriculture money so what is this so for me this is all very vague um yeah yeah i think largely from from this is an interesting view because i think from most

from what i've heard during this this this round of interviews is internal dynamics usually break on communication which is also something you mentioned um but that's like a more general ups like what people observe is that the communication within projects but also outside of project is sometimes lacking but the this is not the first time but it is one of the few times people have mentioned like equitability or equitableness anyway equity between partners and fairness in deliberation and fairness in agency uh as a central theme which to you is i think very important what i'm hearing at least um and having the right information and also being offered that information and also knowing what people are up to especially from a for-profit organization i think is very so transparency i think is the good word for this um that's something i think i am going to investigate

further and also maybe ask more directly from future respondents um yeah because that's something that i think to me now i think about it is also very vague like a where's the money coming from where's the money going uh and b what is happening with these plans because i did know that acacia water was working in boscov also obviously but i didn't know they were marketing agricost as such a a poster child for good even that they never mentioned agricost they just use the content in their other locations you know that is actually the second problem i have the problem of transparency i don't know what's going on and where the flow is and where's the money coming from and where does all this i'm

happy they build a file according to my design i don't know where the money is coming from and because the money is not coming from us i seem to have no rights on you know what's happening yeah although as the um let's say owner of the idea i feel morally they should be obliged you know to give back and with the giving back i mean transparency and data because at the end of the day i want to publish but because they organize their campaign campaign sloppy they don't have a plan on what they're actually doing and in the end there are all these mishaps i get nothing you know what i mean and i can't tell a story at the conference with five data points thank you you know so um and that's that's not nice no transparency but also for giving credit at least give me publicity you know as

you dealt agricost member so that at least i can show to my committee for my career development that i facilitate a change in the development you know but even that's impossible because the label agricost is not transferred with the data so i can't tell a story at the conference with solution to the next thing yeah okay so i feel like at that point more like exploited yeah if that makes sense yeah no i think especially from so within the agricost project i think the the citg projects i think you're also citg right the civil engineering faculty yeah um that issue is the greatest with that faculty uh also with so especially with you because you're the one that ultimately delivered the solution that was hampering the water storage project i think um yeah and then but also from what i'm hearing from simon and and yeah it's it's yeah it's something i think they are a little

bit more apprehensive in calling this out yet but i think they feel the same way from what i'm hearing when i do speak to them which is around once a month also but um so yeah okay yeah i think this transparency issue is something that might crop up as a bigger issue in the future and we have to hopefully fix soon but um yeah again but also like the problem is that even i cannot really advocate for these things and put an agricost label because we have no website we don't have a linked inside like there's no website we don't have a website we don't have a website we don't have a way that they can say make shout outs but you know when boris is there i can write okay thanks to agricost but not even you know linking anything where people could then look up what agricost actually is um that is also on our plate like we put on acacia's plate but their motivation for that is not high enough to deliver on that again it's like they take but they don't give

you know what i mean like okay we have that website but who manages it who does anything is there something going on don't we all agree we want to have that even though if it's zero interactive it's just to link it and to you know make publicity because if it's not happening from our partners we have to make it ourselves and for each of us as researchers it's very important um to to make that connection yeah yeah no i think so too i think it's also a a just like obviously the the the stereotype is that researchers are underpaid and overworked and i think this feeds into that stereotype perfectly so um and then from the perspective of um not getting recognition for your work is very valid um yeah because i need to get something from this right yeah i don't get data which is my first priority actually what's not happening

then the second is at least get the data which is my first priority actually what's not happening then the second is at least get the data which is my first priority actually what's not happening me um recognition that i can you know shine it back um on at least you know showing to the academic community that i'm involved there or we as you dealt or as the agriculture you know what i mean so one or the other yeah i mean it cannot just be nothing that nothing is not true because of course on paper i have it and i will graduate a student from that which is all great and i'm appreciating this yeah yeah and now i need to stop because it's five for 21. yeah it was really nice chatting to you yeah and thank you so much for having me thank you so much for having me thank you so much for thank you for this um and um i think we covered hopefully some things i hope it also was shining

through that i'm also positive about this and i appreciate many things yeah yeah of course there's always two sides to the same coin you know so um yeah there's positives and negatives anyways um thank you so much for giving me your insights and experiences and well i hope to see you soon at a more informal meeting month meeting perhaps but we'll see um yeah all right bye-bye