



### Episode 6: From Rainwater Tanks to Dignity: The Ripple Effect of Water Access Projects | Dialogue with Kerstin Danert from Ask for Water

Procurement notices, funding and grants to opportunities, lists of potential partners, insights into market trends, databases of development professionals, webinars, latest news, and much more. Visit [developmentaid.org](http://developmentaid.org) today and see how we can help you achieve your sustainable development goals together.

#### Allam Hisham

Hello, everyone. Welcome to DevelopmentAid Dialogues. Our new project exploring the heart of humanitarian aid's most oppressing topics. I'm your host, Hisham Alam. Our guest today is Dr. Kirsten Danner, the founder and director of Ask for Water GmbH. Dr. Danert is a highly respected expert with 25 years of experience in water supply and environmental issues. Ask for Water, works with governments, NGOs, and research institutions around the world to address pressing water challenges in low- and middle-income countries. Good morning, and welcome to DevelopmentAid Dialogues.

#### Kerstin Danert

Good morning and thank you so much for having me on. I'm really excited.

#### Allam Hisham

Thank you for being with us. First, I would like to ask why Ask for Water? Why you picked this name?

#### Kerstin Danert

Oh, that's a great question. So, Ask for Water is a question to ask, to ask for water. I fundamentally believe that what we need globally, but particularly in international development, is dialogue, questioning, asking questions, being open to questions, being able to, reflect together. And so, when I started to think about starting my own company and kind of breaking out, I said, if I start a company, it's going to be a question. Let it be a question. Let it be something that shows we can ask. And there's human rights element to that as well, you know, about demanding, asking, questioning, for the right to save drinking water. So that's kind of behind it.

#### Allam Hisham

So, how do you help people to get access to water?

#### Kerstin Danert

So, I really work with organizations, be they governments, NGOs, or funding agencies, who are, providing safe drinking water who are trying to improve access. And the work that I do is really trying to improve the way that they're working to



## DevelopmentAid Dialogues



reflect on practices. So, it's kind of, it's a supporting role. So, I'm not in the frontline as an engineer on the ground, unless I'm doing a particular piece of research analysis, but I'm supporting, questioning, reflecting. I can give you examples, but that's kind of the overarching.

**Allam Hisham**

Yes, please give the examples. We would like to hear this from you.

**Kerstin Danert**

Okay, so I've just finished a piece of work in Uganda, a country that I'm very familiar with, and there I was doing a study of what's happened since the Ugandan government put in a ban on galvanized iron pipes in groundwater. And as a bit of background, and when galvanized iron pipes, are installed, underground, so that's the pipe that allows the water to come up in a hand pump, when they're installed in water, which is corrosive, they corrode.

And, after many years of this problem, the Ugandan government, put out a ban on this galvanized iron materials. And my work was looking at, okay. There was the ban. What's happened? What are the advantages? What are the challenges? Is it being implemented? I'm really trying to look, with governments, with different organizations, what's happened. And that piece of work is for Uganda. It's being presented in April to the, senior management. But it's also for other countries because there are other countries who haven't taken the step. So, it's, okay, so what can they learn from what happened in Uganda? What went well? What didn't? What are the challenges? So that's one very practical example of the kind of work that I do.

**Allam Hisham**

So how does your company combine science, engineering, social science, and the arts to achieve its goals?

**Kerstin Danert**

That's another good question. I think I have to say it's become very intuitive. I was lucky, actually, because I did my PhD research in Uganda, and it was introducing new technology, a new manual drilling technology, interestingly, the technology worked. It wasn't taken up for various reasons but I successfully, you know, completed my PhD. And that process took me from being quite a straight mechanical engineer into someone working with different issues. Because I was looking actually at diffusion of innovation, uptake of innovation, and how innovations are uptake, whether technological innovations or others is more than the engineering.

It's the society, its economics, its policy, it's politics. So, within that process of doing my PhD, that was quite a painful process, I have to say, because I was quite mathematical. I had to learn to, to really think about these issues and I just continued to do that ever since. So, for example, I worked with the Ministry of Water and Environment in Uganda for a number of years and we looked at operation and maintenance and rolling out a framework for operation and maintenance, you know, setting out roles and responsibilities. And that brings together technical aspects, getting the quality right.



## DevelopmentAid Dialogues



It brings together institutional aspects of roles, financial aspects of who's paying for what. So that way of working has become quite intuitive, actually. We all have emotions we're not just kind of rational beings so particularly in events, one of the things I've done over the years is to kind of organize international events and in country events to share knowledge, to bring people together. And the arts are an important part of that, of sharing in other ways, whether through film, whether through photographs, through music, through drama.

So, it's another way of bringing people together at a different level to share and for example, when I was doing some really interesting work in Northern Bahr el Ghazal in South Sudan, working with handpump mechanics, we were exploring kind of the challenges they were facing and ways of overcoming those. And we did role play, you know, drama. It was all men we had little drama sketches and they played out scenarios to be able to reflect on situations and get at issues. So that's a way, an example of bringing the arts in. So, it's kind of become intuitive over the years.

### Allam Hisham

How often Sub-Saharan countries are relying on water well drilling?

### Kerstin Danert

It's really, really huge. I mean, in a piece of work I did a couple of years ago, I estimated that about half the population of Sub-Saharan Africa depend on groundwater and that of course includes springs and hand dug wells, as well as boreholes about one in five, depend on hand pumps for their drinking water, and that's generally boreholes and wells, but hand dug wells, there are less hand dug wells around than drilled wells.

### Allam Hisham

And how do you help them? What kind of support do you provide to them?

### Kerstin Danert

I started to work with the Rural Water Supply Network. I was still living in Uganda there. I started working with the water supply in 2005, and it was a new topic for the network around, we changed the name, we called it cost effective Warhols. And that work, which has gone on for many years, became called professional drilling, professional borehole drilling, professional groundwater development. And it's really been trying to look at quality, how to ensure the quality of the borehole. And how do you do that? And again, this comes back to this issue of kind of thinking holistically.

So, the drillers need to have the necessary skills to be able to drill well. But those contracting the drillers need to have the incentives in place also. And there needs to be information available about aquifers, about the groundwater. So, the collection of information is extremely important to be able people to think about siting boreholes to get ideas of what kind of depth they're expecting to be drilling and striking water. And so, my work over the years has been really trying to look kind of systematically at the borehole drilling sector and think through and work through and try to improve skills, to get policies in place, to get the right incentives in place and raise awareness about incentivizing high quality borehole drilling.



## DevelopmentAid Dialogues



So, there are things that can be done that undermine that. So, we can talk about if you want. But that's really been my work. So that's been developing guidelines guidance documents. We developed a set of films trying to really pull out the essence of these guidance document that comes back to the arts.

### Allam Hisham

Yes, my next question when we are speaking about groundwater. The first thing that jumps to my mind is the movie *The Boy Who Harnessed the Wind*. And then I, watched the short film that you co-produced for Walker Institute. And I'd like you to share your experience producing this movie.

### Kerstin Danert

Yeah, the question is, how do you bring across key issues in a very concise way? How do you do that? There's another film I worked on with, it was the end of a large research program called UpGrow. A film called *Understanding Groundwater*, *Groundwater in Africa*, and it's how do you bring together complex messages into a simple narrative, illustrated to help people learn quickly, reflect it's a difficult process. It's not easy. Coming up with a concise script is really hard, especially as more people start to use short films as ways of learning, so the way that people are learning is changing, we have much more options.

I think short films, animated and non-animated, are a really great way of enabling people to think about complex issues and engage in topics without having to read and read and read. So yeah, I think it's really important.

### Allam Hisham

How can projects like what you're doing, the movies, the capacity building contribute to the broader conversation of water supplies and the climate resilience in low- and middle-income countries?

### Kerstin Danert

That's a big question. Yeah, let's try to answer it. Okay, so it, these types of products capture people's attention. So that's one and people have a lot of things going on, so succinct helps with capturing people's attention they provide people with information. They hopefully will encourage some people to find out more to go deeper, to realize that there's maybe something missing that they need to know more of and also by capturing, borehole sighting or supervision.

By capturing things shortly, it gives a great starting point for discussion and people learn by talking and sharing and exchanging. And I think these kind of short films or even longer films, can be a great way of, triggering the dialogue, triggering the interest, because of course you can't be a borehole supervisor having seen, you know, an animated film that takes four or five minutes, but it can make you think, ah, these are aspects and can make you want to go further and can make you, or encourage you to talk to somebody else about particular salient aspects. So that's kind of how I see the role of film.



## DevelopmentAid Dialogues



### Allam Hisham

Do you think that there is enough interest from international bodies or NGOs, to support drilling projects in Africa.

### Kerstin Danert

There's a lot of interest in drilling wells. There's a lot of interest in the numbers in the, in bringing up access to drinking water and in drilling wells. And increasingly not just wells with hand pumps, but also wells with reticulated systems. I feel there's not enough interest in really supporting stakeholders in country to raise their skills, to do a really good job. And I think there's not enough attention on, you know, really, what was the technical quality of the projects that came out.

So, there's not enough engagement of qualified, skilled hydrogeologists. So, I had a great conversation with a really interesting organization I'm working with, we were talking about this, and what came out of the conversation was, a borehole is much more than a hole in the ground there's, there's a whole package around a borehole and, you know, there are countries where there are projects where there aren't enough skilled personnel supervising, sighting, assuring quality, where's the next generation of drillers coming from, formal training programs, robust training programs.

So, I think there's a great interest in the borehole, but not enough interest in the skills and the policies and the process to make sure that those boreholes are the quality that they need to be for the future.

### Allam Hisham

What is the average cost for drilling a well?

### Kerstin Danert

So, when I started in 2005, when I started on this cost-effective borehole, that was the question. Right, Kirsten, find out the average cost of a borehole in different countries, and then we see how to bring those costs down. Actually. You know, a borehole, a manually drilled borehole, can be anything between 10 meters to six, 700 meters. So really there's, there isn't an answer. So, if you're an organization, drilling in sedimentary formations with quite predictable ground water that's not too deep, you will have a certain average cost. If you go to parts of a country where the geology is more complex and difficult and so you have to do more exploratory drilling, you have wells that fail because simply they're not sited in the right places, your costs will be completely different.

So, I fundamentally refuse to answer that question. The range! Is enormous so it's a great question it's a great dialogue, you know, so it depends what you throw into the equation. So, when funding organ, and that comes back to why films and short ways of teaching are very important when you have funders who really want to do a great job, no question, but they may not understand the nuances of groundwater. They may be coming from a different sector. And so, they're pushing their, the NGOs they're funding or the organizations they're funding for a particular standard cost and perhaps pushing the costs down too low without realizing that that has a hidden cost, a hidden price.

So it may be that organizations are forced to work in certain areas, can't work in others, are forced to hide costs. So, there's a whole set of issues when you think too much about averages and targets.





## DevelopmentAid Dialogues



### Allam Hisham

What are the most effective techniques for hand pump installation and maintenance to ensure sustainable access to clean groundwater and low- and middle-income countries?

### Kerstin Danert

So, it starts with the planning and the procurement planning and the siting. So really in the planning process so for example, in most countries in sub-Saharan Africa, there will be a rainy season. A season where it's difficult to reach the site. So that affects your planning. You may only be able to drill for six months, for eight months, you know, certain times of the year. So that's one. Not trying to do too much. Trying to do it properly. There are lots of different types of drilling techniques, different types of rigs, large rigs, medium rigs, small rigs, and it's matching the equipment size to the needs is important. So, yeah, making sure that the specifications specify the borehole that you want at the end of the day and not the equipment so that you don't have a mismatch with, you know, very big equipment.

And in terms of water lifting devices, there are hand pumps on the market, public domain hand pumps, which can be manufactured by multiple institutions, multiple organizations. There are propriety pumps, which are manufactured by a particular company that have different quality assurance, around them. And a whole set of increasing a lot of solar technologies coming on onto the market, solar lifting, solar systems, solar arrays, and electric submersible pumps. So, there are a lot of different kind of technologies.

### Allam Hisham

Is there any particular technology or innovation that significantly improved the outcomes of water supply projects?

### Kerstin Danert

I mean, hand pumps have revolutionized access to safe drinking water. The humble hand pump going back to the 70s and 80s, because prior to the hand pump, it was primarily open dug wells that people were using. So, lifting water with buckets. So, with a hand pump, you're able to have a borehole that's closed, that's protected, that you don't have surface water contamination going in and they're relatively low cost to maintain, they do need maintenance.

And then laterally that the big shift that that's happening now is the reduction in the cost of solar panels. So that's another new kind of more recent innovation that's enabling small pipe systems to be put in place so that, and people not having to work and lift, you know, pump by hand, but having that done through solar energy and electricity.

So those are two big innovations. And the other innovation is in the drilling itself reductions in drilling costs, smaller rigs that can get to more remote places. So mechanized drilling equipment. There's been a change over the last 20, 30 years with smaller rigs on the market and manual drilling, which has been around in the Gangetic plane for thousands of years. But, also innovations over the past decades in improving manual drilling technologies, particularly in Africa and those spreading between different countries.



## DevelopmentAid Dialogues



### Allam Hisham

I'm curious to know which, countries are still interested in producing and manufacturing, hand pumps is Japan, Germany, the U. S.

### Kerstin Danert

The public domain hand pumps are primarily produced in India, which is interesting because the Indian government is shifting towards pipe supplies away from point sources. So, India is the main producer of the public domain hand pumps and manufacturers in India, but their market is in Sub Saharan Africa. So there's a question, a regulatory question, that starts to come up there, you know, around quality and then there are proprietary pumps made in a number of European countries as well before we conclude,

### Allam Hisham

Before we conclude, I'd like to ask a more personal question throughout your impressive career, spanning various contents and countless projects. What moment or experience stands out to you at the most rewarding or fulfilling? And how have this shaped your continued dedication to the field of water supply and environmental conversation?

### Kerstin Danert

When I was living in Uganda, I did work with women's group in Cap Chorwa in the mountains and the border between Uganda and Kenya. And, it was a rainwater harvesting project. So essentially, it's a very local NGO funded from a corporate sponsor, Uganda corporate sponsor with their social responsibility money. And we had brought in masons from another part of the country to train masons there to provide domestic roof water harvesting, so really fabulous project and providing a different technology than was being used in that part of the world. And fortunately, then many of the women, the older women spoke good English. So, I was able to very comfortably wander around from home to home, really reflecting with these women, you know, some months and years after the installation of their tanks. And, have cups of teas and chat and I was talking to one woman and I asked her, you know, the difference that it had made. And, you know, she talked about various things she doesn't have to get up so early anymore. You know, she can invite people round for a cup of tea because she has water at the home. And she then said she just doesn't have to go anymore to the spring, which was very far and slippery when it was wet. Just having water at the home, the importance of that to her life fundamentally. And I subsequently talked about this with one of the members of the organization. And he explained to me also, he said, Christine, here, women undergo female genital mutilation. You know, it's, they're trying to curb it. It's, you know, there's lots of, you know, initiatives and policies to stop it. But for women of that age, it's common, and she didn't. And so, when she goes to the spring, she gets a lot of abuse for that. So having her water at home saves her you know, you suddenly realize there are so many different levels. There are many, there are loads, I could probably write a whole book about them. You know, people who couldn't afford salt that I spoke to in villages or people who were really transformed by, yeah, particular training and confidence, but there's loads, there's loads, that's just one, it's kind of random which one I chose in a way, yeah.



## DevelopmentAid Dialogues

### Allam Hisham

Thank you, Dr Kirstein for sharing your valuable insights and experiences with us today. Your dedication and work at Ask for Water are truly inspiring, and they are making a significant impact on addressing water supply and environmental challenges in low- and middle-income countries. We deeply appreciate your time and the wealth of knowledge you have shared with us. To our listeners, thank you for joining us on this episode of DevelopmentAid Dialogues. We hope you found this conversation enlightening and insightful. Stay tuned for more discussions on pressing topics in humanitarian aids. Until next time, this is Hisham Alam signing off for DevelopmentAid Dialogues. Goodbye.