



**Nestlé**

# CSV Forum New York 2009

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Transcript of Session 2

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Maria Livanos Cattai:

So we're going to go into our second session. And we're coming from the concept now to application in some specific areas. The first one we're going to look at is water. The Growing Water Security Crisis. Needed Solutions in Policy and Action. Actually I think one of the things we should be doing is challenging every word of that title. Is it a crisis? Is it a matter of security, and so on? Many would say that we are facing a major crisis concerning water. Some would say we're not there yet; we can manage it. What actions do various bodies have to take, perhaps to mitigate it, to prevent it, to face it? And how can we at the same time extend our clean water to the billions of people who don't have it?

00:00:58

Now our panel today, again, like the first session, we have four launchers, if you wish - initiators, agenda setters, of the discussion, and then we have a series of expert discussants. As I call your name - I'll read them off in alphabetical order, first the agenda setters, then the discussants - please raise your hand; not everyone can see your name here - so we can identify you.

00:01:28

I begin - it falls nicely alphabetically. Peter Brabeck, Chairman of Nestlé, that everyone knows. Nancy Birdsall, Founding President of the Centre for Global Development. Georg Kell, Executive Head of the United Nations Global Compact. Jeffrey Sachs, Director of the Earth Institute and also Professor of Sustainable Development and Professor of Health Policy and Management at Columbia University. Yasmin Aysan will be joining us I think later from the

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International Federation of Red Cross and Red Crescent Societies. Ger - am I pronouncing this right - it should be Ger or Ger? How do you like it?

Ger Bergkamp: Both ways is - anyway.

Maria Livanos Cattai: Well, what do you like?

Laughter

Ger Bergkamp: Ger is good.

00:02:17

Maria Livanos Cattai: Ger. All right, Ger Bergkamp, who is General Director of the World Water Council. Anders Berntell, who is Executive Director of the Stockholm Institute - Water Institute. Katherine Bliss, who is Senior Fellow and Deputy Director of the Americas programme Centre for Strategic and International Studies in Washington - I assume you're based in Washington. Parviz Koochafkan, who is Director of Land and Water Division at UNFAO - Food and Agriculture Organisation. And the Rev Ismael Noko, General Secretary of the world Lutheran Federation and Founder of the Interfaith Alliance for Peace in Africa.

00:03:01

I think we would be good if we started this session trying to just look at the profile of what the problems are, where we stand in water. So if I could turn to you, Peter, and ask just first, can you give us a profile of water usage to begin with, just so we know where we stand, and perhaps even get rid of some of the mythologies that we have.

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Peter Brabeck:

Yes, if you are talking about water withdrawal, we have a very simple statistic; it's about 10% households, it's about 20% industry; it's about 70% agriculture. This is the withdrawal. Now in the case of households, in the case of industry, there's also part which is going back into the system. Therefore when we are talking about usage, real water usage, it's 93% agriculture.

Maria Livanos Cattai:

That means it goes - when you say it goes back in the system, it doesn't - it falls into something else -

00:04:09

Peter Brabeck:

..... I give you a good example. For example, within the industry, you have had rolling energy production as part of the industry. That means you have water picking up there and a lake somewhere up in a mountain, goes through an electricity company and then afterwards goes back into the river system. Okay. So out of - the whole water goes back, or if you have, for example, even in the households, most of the water comes back into the system; you have to clean it, you have to treat it; but it comes back into the system, it's not been used.

Maria Livanos Cattai:

I understand.

00:04:44

Peter Brabeck:

So when we are talking withdrawal, this is one statistic; when we are talking about usage, it's another statistic.

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Maria Livanos Cattai:

And are there very different profiles of water usage across the world or is this a fairly stable percentage?

00:05:01

Peter Brabeck:

I think one of the issues with water is that first of all you cannot work on averages. On average we have sufficient fresh water in order to assure food security and the life security. There is no issue. The problem is that it's repetition. It is not - it doesn't help you a lot when you have too much water in the north of Siberia, and then afterwards when it comes down to the Aral Lake, there is no water left. Okay. Or when the water is coming like in the monsoon regions, it's coming too much in a short period, and then afterwards you have a long period of dry water.

So that's one of the complications with water is that you have to analyse each of the situations on a regional basis. And in general what we know is that we are being able to assure food production today by using fossil water. Rainwater alone is not enough in order to ensure the food production for today. So we are using today already quite an enormous amount of fossil water, which was created many thousands of years ago and are not going to be replenished.

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And therefore this is an issue which is extremely dangerous because, once these fossil reservoirs are going to be used up, we will have even - even more acute water shortage than we have already today.

Maria Livanos Cattai:

I want to come back to you about patterns, agriculture, and what industry can do and the efficiency of industry.

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But I just wanted to set first that we're all clear on the general picture of water usage. I am going to start out this session with a single question, a question that's a yes, no or maybe - or both; and that is - is water a commodity or is water a basic right? Just yes or no to all of us. Nancy?

00:07:07

Nancy Birdsall:

Well, I'm going to violate the rule, and say it's a terrible question. It sets up the wrong structure for the discussion, but it's both.

Maria Livanos Cattai:

Tell us why it's both.

00:07:18

Nancy Birdsall:

It's both. Well, you know, if you - the connotation around it's a right is all positive, and the connotation around it's a commodity is all negative. But the fact is that if you don't have some sort of a market for water, if you don't have a price for water, then its going - its distribution will turn out to be unfair and unreasonable, and the poor won't get it or don't get it in sufficient amounts or sufficient quality.

Maria Livanos Cattai:

The reason I ask this question -

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Nancy Birdsall:

- better to treat it as a commodity from a policy point of view, even though you may want to think of it in some sort of broader moral terms as a human right.

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Maria Livanos Cattai:

The reason I ask this question is to set why we're looking at water at all. There are many things that are being depleted in this world or being misused. What is it that water - why is it so important? What is it that captures our imagination? Anyone else want to answer that, how they would like to - ? Please go ahead.

Next speaker:

I would think that water is a right, and on the basis of that we can build all other - parts of it. But I think it's a right.

Maria Livanos Cattai:

Please go ahead.

00:08:29

Next Speaker:

I think what we see with water, why it's so different from other resources, is that it is so vital for life, and not only vital for life but for economies and societies. Without water - without energy you can do quite a lot of things yourself; without water you cannot just live. There's no planet. And so in that sense it gets into a very different category that might even be beyond rights or beyond commodity. By the way, part of the water that is commoditised is only a tiny, tiny little part of the water on the planet. So the commoditisation discussion is maybe not so relevant to continue for long. I think it's much more about - what is it actually that, with the entire construct of the water cycle planetarily, that we're actually doing.

Maria Livanos Cattai:

Anyone else like to - ? Georg?

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George Kell:

Well water poverty is a reality already today with more than one billion people lacking access to fresh water. And therefore it has a very practical meaning in many parts of the world already, and it's rapidly spreading to that - the direct link now to climate change and the droughts which we can see in more and more countries. It has a real manifestation; in essence it's a natural resource, and it's part of life, part of mythology, so deeply ingrained in the DNA of almost all the religions and philosophies that it's equal only with the definition of life.

Maria Livanos Cattai:

Yes, please. Parviz?

00:09:55

Parviz Koohafkan:

Well I think it's both. Particularly access to water and right to water is foundation for sustainable development and for development, but it could be commodity as a policy issue to regulate how that access could be happening to the poor and to the society at large.

Maria Livanos Cattai:

Anders?

00:10:16

Anders Berntell:

I think it's in general very important in all discussions about water to make a differentiation between water as a natural resource and the different activities of the society that are using that resource, on the one hand; and on the other hand, the supply of drinking water to households, because they have very different features, and I think we often tend to just talk about water.

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Maria Livanos Cattai:

Exactly.

Anders Berntell:

And that actually distorts our discussion. I mean, if you discuss with slum dwellers somewhere who are buying their water from the private water vendors, to them it's very difficult factor that water actually is a commodity.

00:11:06

Maria Livanos Cattai:

It's very interesting - that's why I wanted a little bit, Peter, and we'll come right back to this - to set the proportions of usage and the proportions of perhaps even eventually of wastage. We can come back and put things into that proportion. Did you want to bring up - yes, Yasmin, how would you answer that?

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Yasmin Aysan:

I mean, from a civil society perspective, I guess we're obliged to say it's a right to access to clean drinking water. And particularly in rural areas this is a serious concern for women and girls that they have to travel very long distances, and also it has a serious linkage with health. I mean, without clean water there are huge health risks which affect people's productivity. But having said that I think increasingly we need to look at educating people and raising awareness on how to manage water resources for the future.

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Maria Livanos Cattai:

We'll come back to that, because perhaps that is the crux of our discussion today is the management of the difficulties that we're facing today. Anyone else want

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to bring in a first approach on this? Otherwise I'm going to - you didn't say anything on this one.

Next Speaker: I'll say something.

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Maria Livanos Cattai: You'll say it afterwards; all right. Peter, I'd like to pick up again, perhaps dig a little bit deeper into the profile. You were saying to us actually we're looking at personal consumption which is rather on the least amount is personal consumption. Some of the statistics that I've taken from your writings and those of many others is quite small. People talking about 100, 200 litres a day in the US or in Europe for drinking and washing? That's about right?

Peter Brabeck: That's a very, very low one indeed.

Maria Livanos Cattai: That's on the low end.

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Peter Brabeck: It's much higher, yes. The lowest per capital consumption is basically - one of the lowest is in Germany; in the developed countries, is in Germany. And it's very interesting that in Germany the price is also the highest. So there is an incentive for people to save money. There is an incentive for people to install new toilets, for example, with smaller basins and higher one, depending on what usage you have - because the price is relatively high. And there is always a link between - if you have a resource that is free of charge, you will not use it in a responsible manner; wastage will be very high.

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Maria Livanos Cattai:

I want to ask you if - we're somewhere in there for personal usage - how much water does the average person in the developed country use in terms of agricultural - what he eats - diet consumes. How does that work out?

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Peter Brabeck:

Well that's very simple. Basically you need one litre of water for each calorie that we are producing for food. And this is as long as you have the calorie coming from vegetarian, from plants. When you're moving over and you want to produce one calorie from meat, you have to multiple the water usage by ten. So that means that basically an Indian who lives on a vegetarian diet will eat every single day about 2,500 to 2,800 litres of water. But if you talk to a Texan, most probably he will eat 6,000 litres of water every single day.

Maria Livanos Cattai:

Yes, well that's very large.

00:14:56

Peter Brabeck:

That's huge. That's huge amount. Now if you want to make it worse, if you want to produce one litre of bio diesel, you need 9,100 litres of water.

Maria Livanos Cattai:

How inefficient.

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Peter Brabeck:

Okay. Well it doesn't look very efficient, yes. But that's what our politician wants us to move forward. Now check now this amount of water against what is human right. I personally believe water is a human right - and by the way it is declared to be a human right in the document of the United Nations. You don't even have to discuss about it; it is in the document of the human rights. But the human right is the five litres of water that we need to drink, and the 20 litres of water that we need for minimum hygiene. But there is no human right that we have to water our lawn, that we have to fill up our swimming pools, that we have to water the golf courses - that's not a human right.

So let's fix what is human right. Human right is five litres which we need plus the 20, and then the rest is something which I think is a commodity.

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Maria Livanos Cattai:

And how about changes in the world? When you talk about what somebody in India would "consume" - and I put it in quote marks - for his or her eating purposes per day of water, and somebody - let's say meat - a big meat eater - what happens when you look at a very large country like China, which 20 years ago or 25 years ago only consumed per capita 20 kilos maximum of meat, and today consumes perhaps double, if not more? More. This now becomes a commodity then? This is no longer tenable or how do you - how would you look at it?

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Peter Brabeck:

You see, food consumption is increasing over proportionately to the increase of demographic increase of the population. Because you have the two phenomena. On the one hand we have the population that is growing as you have - it's doubled over the last couple of years, and it's going to increase another 50%. That means that this part of the population, we have to produce food for them. But in parallel with this, as you have people having a higher living standard, they are moving from the pure vegetarian diet to have a little bit of mixed diet.

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And we will not be able to prevent, and it would be absolutely unfair to say - you know what, you Chinese, you Vietnamese, etc., you have been eating a bowl of rice all your life, you should stay with the bowl of rice. I think they have the right to have from the bowl of rice a little chicken or a little of the bulk, a little bit of the meat. And I don't think we will be able to prevent this.

But this has an enormous acceleration effect on the amount of arable land that we need and the food production that we need. Therefore we will have to double food production in the forthcoming years; not only increase it 50% like the demographic is; we will have to double food production in order to take care of these two phenomena.

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Maria Livanos Cattauri:

What is interesting - and I'd like to come back now and ask all of you this, is that industry as a consumer, large industry has become extremely efficient over the years. Many industries have worked hard at becoming

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efficient. Are we having difficulty in translating this same efficiency into Agriculture?

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Peter Brabeck:

I would first say that, without any doubt, on the level of industry there's still a lot to be done. A lot to be done, and we have to continue to become more efficient in the water usage. I mean there is no doubt about this. I mean, if you think about what - how much water we need, for example, in order to produce a T-shirt, how much water we need to produce one tonne of steel, or how much water we need in order to produce a CD - you're talking about hundreds of litres of water for one - one thing - a CD. I mean, we don't see these relationships.

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And I don't want even to talk about how much water we need to product oil. Okay. And especially when we're talking about the new - the new oil. Because what we are going to do, we are steaming up the oil sands. And in order to steam up the oil sands, we have to freeze the surroundings where we're steaming up. All of this is water intensive. There is nothing more water intensive than oil production, energy production.

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So all on the industry side there is a lot we have to do in order to diminish the amount of water that we're using. And on the agricultural side it is just phenomenal how we are really wasting water on the agricultural side.

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Maria Livanos Cattai:

I'd like to come back perhaps and ask you and other colleagues, and those of you in business, what kinds of priorities and steps you would envisage; how they would be implemented; whether there is need to price the market in such a way that they're forced or are there technological advances? And in agriculture, given that the proportion of the population involved in agriculture in developed countries is very small, whereas it's very large in developing countries, what incentives or disincentives would you use to push the productivity of water usage and agriculture. If you can keep those, we'll come back to them in a minute, and I will start with some of our other colleagues.

Nancy, first of all, for you is this an overwhelming problem or is this a handleable problem?

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Nancy Birdsall:

Well, we know it's manageable because there is so much waste that the margin for being more efficient is substantial. I think there's a big enough margin so that if we could have efficiency everywhere in the world in the use of water in agriculture and in industry and in households, then the Chinese could have plenty of chicken in their rice bowl. That makes it seem manageable.

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On the other hand, it is a - the water issue requires management at a level that is very tough politically and administratively. It requires a set of steps at the local level, at the national level and sometimes across borders, that it's very, very difficult for politicians to face -

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Maria Livanos Cattai:

Can you give us some of the problems that they would be facing - where they would move out of their comfort zone - in imposing some rules or some standards or some financial consequences?

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Nancy Birdsall:

Well, the biggest one has to do with creating a market in which there's a price in effect for water, so that consumers and industrial and agricultural users recognise its scarcity and then become more efficient. And the toughest part of that has to do with the fairness problem. In politics it's usually those with more power and more wealth, or more land or more - deeper pockets, more money in the bank, that will prevail in the development of appropriate policy and regulatory arrangements.

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You take the case - I always remember this story; it's a story, you know, my experience. In Lima 20 years ago, visiting friends, an upper middle class family with the swimming pool. And this family had been trying to get the local government, the Lima municipal government to send a water bill. They had been trying for two years to pay for their water. They were very well aware that up in the hills, in the slums, people were paying ten times - well, an infinite amount more, since they were paying zero.

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But on average people were paying, as Peter said, ten times as much for drinking water. And they couldn't get the government to charge them. So that's partly a

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political problem; it's partly a management problem. It has to do with organising systems - which came up in the earlier panel - that that makes it a very, very rough problem where I think companies, corporations who are users of water have some obligation to take a position, and particularly sometimes to work on the education side to undo the confusion sometimes created by well-meaning NGOs who are misguided in the positions they take.

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Maria Livanos Cattai:

Can you enlighten us just a little bit, Nancy, or whoever wants to answer this question, about the complexity for instance of pricing water? What are the different kinds of options that are in front of governments? And when you say it's a hard choice they have to make, is it hard if fairness or equity is put into some kind of formula?

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Nancy Birdsall:

Yes. Let me - because I don't want to go on too much, and other people have thought a lot about this subject - I would say for municipal areas, particularly in developing countries, what's difficult is to arrange pricing that reflects the scarcity of water and the cost of delivering the water through the infrastructure system, and then to - for the case of the poor - to ensure that they have some sort of subsidies, if not built into the price, separate from the price.

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So you have in many countries now conditional cash transfers, for example, arranged so - ideally that's what you want is to have the price be the same for

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everyone, but then to have the poor subsidised. That's very hard.

Maria Livanos Cattai:

But that may not be true when we're talking also about industrial use - many of which you have mentioned? Should the price for making one CD be the price for drinking one litre? Of course there are differentiations and this obviously must add complexity to administration.

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Nancy Birdsall:

Well, we know from the electricity sector it's possible to have prices that rise as your usage rise, which I think Peter also mentioned. Let me just say for the agriculture, my understanding of people - the literature now and thinking about this, is it's a little bit like the CO<sub>2</sub> problem, that what you really want to do is set some targets for total use and then to have water rights traded across users.

You know, that's even more complicated; look at the fight over cap and trade at a global level. So that's -

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Maria Livanos Cattai:

That brings us of course to the larger issues of general resource depletion around the world, and climate change, and so on. Jeff Sachs, I turn to you on this. Bring it up to that level, if you wish. How does water fit into the context that you work in?

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Jeffrey Sachs:

I think this problem is a lot worse than we think, and it's probably the most dire problem on the planet

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actually. And I don't think we're feeling that here. You can put a price on anything, and price millions or billions of people out of survival very easily. So there's no magic for a price. We have some huge physical challenges that are real on this planet, that are already upon us but we don't even recognise them. We have wars that are absolutely without question water wars, but we don't call them that.

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Darfur is a crisis of ecology most fundamentally. There's not enough food in Darfur; there's not enough water in Darfur; and therefore communities have been at each other throats and engaging in ethnic cleansing and bringing in Khartoum to do terrible things. But at the core of that is a rising population and falling precipitation. We have that kind of crisis throughout the world's dry lands. We don't call it that; we call Somalia a crisis of pirates. Somalia is a crisis of the most extreme aridity on the planet, and we're so bad at what we do as human beings that when we finally came round last week to give aid to Somalia - \$250 million - it was for a coastguard, not for water.

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So we could be slammed in the face with reality and not know it, ladies and gentlemen. We're so completely inattentive to reality. We ought to have a meeting in a water stressed village, and then we'll talk about pricing, we'll talk about other things. People should understand hunger is already upon us on the planet, and it's going to get a lot worse because climate is changing, because the population is rising, because the ground water's being depleted and

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because we are absolutely incapable to this point of mobilising any kind of real response.

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Water is one of those issues inside the UN system completely diffused. There is something called UN Water which - bless them - they tried to co-ordinate among a number of agencies. There is no financing, there is no strategy, there is no overview, there is no place that water scarce countries should apply for help. There are major crises all over the world. People are hungry and dying. People are on the move already. Climate change will render large areas inhospitable. This is all way beyond the issue of how you price water; it's how you price human beings that we're talking about.

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Of course water is a right, because if you don't have it you die. There's nothing in market pricing that assures rights. We live on a planet where billions of people have absolutely no rights. They struggle for survival every day. And despite the fact that we call things rights, it doesn't operationalise those rights in any way. So I think this issue is already far more severe than we make it out to be. We're talking in a well-watered, mid-latitude, temperate environment. But we have more than a billion people living in the arid zones now that are getting dryer under ecological stresses of multiple forces, and we're living on a warming planet that's going to cause glaciers to disappear that make Pakistan liveable - barely. But the Indus Valley depends on glaciers that may not even be in existence in 50 years, and we'll see how many F16s we need then.

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So I don't think that we've really got this issue right yet.

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Maria Livanos Cattai:

Let's come back a minute, Jeff, to look at perhaps - to break it down into what we can manage. There's no - it's excellent that we alert people, that we get the mobilisation, if you wish, of concentration and attention on problems. But sometimes we can't always handle them on a purely global level. Things like water need to be anchored in both local as well as international approaches. They need to be anchored both perhaps in the rights - that part that is personal usage - and perhaps also in the efficiencies that we can build into other kinds of usage and wastage.

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So, if it's all right with everyone, let's try and dig down now into what we can do and how we can handle both of those areas - or all of those areas as originally outlined by Peter in his profile. Georg, let's start with you in this way. You have created a CEO mandate for water inside the UN global compact. Can it actually do something, and if so, what?

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Georg Kell:

Well, let me pick up where Jeff left on the awareness creation and the lack of understanding how issues are connected. I fully agree with this fundamental description. I think the water issue, its global challenge and its immense impact - already visible in so many parts of the world - is of course linked to all the other systemic issues, notable climate change and food. So we do come back again and again to the

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stewardship of the globe if you so want, and the systemic issues that we're facing - and we should never lose sight of that.

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And in that of course business has a fundamentally important role to play both as agenda setter, as a provider of services and products, but also in a normative sense in what it does and what it does not do. And here the shared value - let me say this quickly - I think marks a very important step in the evolution of a globalising corporation, a global company, in seeking out its way forward.

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And the fact that Nestlé - and Peter Brabeck is really an expert on water now, with all the statistics handy - it's quite remarkable that a business leader is really taking up a public good. And with this, my introduction to the water mandate of the Global Compact is - one way forward is obviously creating awareness and building the momentum for change both in the public and in the private domain.

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The issue of efficiency gains has been mentioned so many times. No doubt, by demonstrating through good water stewardship you can actually make an impact - a visible impact - in the communities where you operate. That's one way forward. And that's the focus of the CEO water mandate - it's stewardship; it is also disclosure, which is quite an innovation, because the 50 companies now participating in the CEO water mandate actually agreed on a shared framework on how to disclose on water usage, and its management, which is quite outstanding I would say. We wish all

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governments would do likewise so we would know what we can account for.

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Now the bigger issue behind water, in my mind, is actually its linkage - to food, to the management of the natural resources. And in a positive way you could argue - and that's why I'm not quite as pessimistic as Jeff is just coming back from China, where in a major province, the government decided to do a major clean up with water, environmental issues, being the corner stone. Once nature is so scarce that it's so visible, you know, then societies tend to react then, and the good news here is - I think through clever investment and stewardship, so much more can be done.

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Maria Livanos Cattai:

Can you give us a few examples of what you saw happening in China perhaps?

Georg Kell:

Well projects worth over 4 billion were signed off on the spot; all of them had to do largely with water river clean up, forestation, sustainable agricultural and natural resource management at its core. And that I consider a very good and timely response, and it's an absolutely necessary one. And I hope such responses would come forth much more.

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The problem in water is it's of course linked to climate change and the way of life overall at the globe, and everybody's affected everywhere by what anybody does. So we need - we need to formulate a much more systemic response to all of these issues. Yes, individual actions are important; yes, examples must

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be shown - awareness and so forth. But we also need to link it back to the bigger systemic natural resource issues.

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I think that the stewardship of the natural environment and how humanity is managing it will indeed be our next big phase in history.

Maria Livanos Cattai:

Thank you very much, Georg. Before we go on to our discussants, I'd like to turn back to Peter and set perhaps the stage for us on some of the things that you think - some of the steps you think that we can take to mitigate the rather horrible picture - a terrifying picture I should put it - that Jeff has evoked, but not giving up on it. What kind of things do you see that we really can do now?

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Peter Brabeck:

Well, let's go through this thing. The first one is household, okay, 10%. Well, in Europe today we have - we are losing between 30 and 40% of all drinkable water through leakage in the infrastructure, basically in the pipes and the tubes and things like this.

Maria Livanos Cattai:

That's a large amount, yeah.

Peter Brabeck:

This is quite a large amount for European. In London it's about 35%; and then depending if you go to this house of Europe, you get up to 40%.

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Now in the developing countries this figure is about 60 to 70%. So if we would be investing just into the infrastructure of the drink water supply, and make this

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sure - and I'm just talking now only leakage - we would already save immense amount of money. So that's a very simple thing. We're investing today on a worldwide base US\$540 billion into this infrastructure. We need - the figure is we need one trillion, 40 million - we need about the double in order to make this investment.

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Now you would say this is a problem only - as I mentioned - of developing countries. Well there's a second aspect of this which is the aspect of the safety of the water. And you would be surprised - but I was surprised at least - to see that the city of Washington, capital of the United States, just made a decision not to invest 124 million in renovating the water pipes, knowing that those pipes hundreds of years old. They have all plumb fitting [corrected by female] - lead - ..... okay, which is basically - we all know how lead is - er - poisonous, okay.

00:38:23

And the argument was that we cannot afford the 120 forty [sic] million, and that in poisoning with - with - lead, it's so small that it really, really doesn't have an impact on this. I mean, this is here. So it's not a problem only of the developing countries.

Now here's household - very simple, okay. And I really hope that, with all the stimulus package, and all the money that is - I mean - which we're talking about, now trillions, that a little bit of this will be used in order to improve the infrastructure also in the US of the water system. This will be the first thing, just the household, okay.

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00:39:00

Secondly, the industry. We made a commitment with the UN in this CEO Water Forum, where each one of the members we have said - we are going to put saving of water as one of our environmental priorities in the way we're running our companies. And I think we should - we have been trying - in the beginning we were very few; we are now 50 companies, and we are trying to convince more and more CEOs to join us in this Water Forum.

00:39:30

Now agriculture. Very good example in the agricultural world what can happen if, when you recognise that water should have a price, was Australia. Up to - up to very recently in Australia water didn't have a price. And then they went into this horrendous drought which had an impact of course on food production on a worldwide basis. And suddenly, the government understood that water is a valuable thing, and they put a price on it.

00:40:04

What happened immediately afterwards? Farmers went to look what was the best irrigation system that there is, and from a very wasteful irrigation system they went to the most efficient irrigation system and therefore have been saving water enormously in agriculture.

00:40:22

Secondly, we know that GMO can help in order to have less water consumption. GMO technology can help you to create arable land which today is not, because it's too saline. So we have on the agricultural side quite a lot of possibilities available already to day

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that we would be investing, if there was an incentive to invest. But if receive - and we had before India here, okay - if I receive, like a farmer in India, I receive an electric pump, okay, free of charge; I receive electricity free of charge; well, I can tell you what I'd do, what it is that farmers are doing. They let the thing run day and night, okay, because it doesn't cost them a thing.

00:41:14

And they couldn't care less. We talk to them, because they are our farmers, for example, who are supplying us with milk; and we say - you know what you are doing? He said, yes, but if I don't pump, the neighbour pumps. It doesn't cost me anything. Well, shouldn't be surprised if the water levels in the Punjab are going down every single year by half a metre.

00:41:32

Maria Livanos Cattai:

So you would argue that, even in the developing countries, there has to be for industrial and agricultural use, there has to be made awareness that there is a cost to what is happening?

Peter Brabeck:

There is no doubt for me about this.

00:41:46

Maria Livanos Cattai:

Any other instances and ideas on a local level? How important is it - and I want to ask all of you now to come in with your challenges and everything else - how important is it that while we make a lot of awareness, Jeffrey, on the international level, actually many of these solutions have to be driven down to a very local level for local circumstances? And how important is the other balance, that there be some kind of international action?

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00:42:17

Who would like to take up some of those - some of those issues? And Yasmin, for instance, perhaps you can tell us from your experience - I know that you have a partnership with Nestlé on water and sanitation, I think, in Africa. How does this work on the local level? What is the impact and importance that we start immediately doing things on a local level, and at the same time what is the importance that we drive this back up also to the global? Yes, go ahead, Yasmin.

00:42:46

Yasmin Aysan:

Thank you. Being with the humanitarian response as well as development organisation, we're often dealing with too much or too little of water on a constant basis. It's either too much flooding that is uncontrollable, or too little water which results in drought. And for us I think a couple of things are important. One is it is also reflected in our partnership with Nestlé. Water is for us a health issue as well as a food security issue, so we don't look at them as separate, but as a package of - how do we improve in the rural areas the conditions for water, clean water, and link it up with health, sanitation and as well as food security? And this is essential for the survival of the communities. And in this partnership, I mean, part of the work is advocacy - as many people mentioned, because it's managing local resources to begin with; many of these people don't have access to piped water. It's about managing what is locally available.

00:43:50

I must say of course people have tremendous practices, because they live with this sort of seasonal

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change of water availability, and have developed tremendous resilience. We have to take that resilience and see what we can add to it. And usually it's a small technology, small knowledge, some innovation that we can spread through our volunteer base.

00:44:20

Maria Livanos Cattai:

You may have heard - I don't know if you heard earlier that we were talking about creating share value. How does this - how can that contribute to the kind of work you do? How can we create that shared value in the use of water and contribute to solutions.

00:44:39

Yasmin Aysan:

I found the first discussion very interesting because I felt, you know, as civil society organisations, we're trying to become more businesslike, because we're expected to do more effectively in, you know, do our delivery to the people in a more effective way, and be able to address many more people at the lowest cost and the most efficient way. And it was intriguing for me to see how the business was trying to become more like civil society in terms of values and in terms of doing good for the public. And I think there is a lot to learn from each other.

00:45:15

I think in a very competitive world for the civil society organisations, we have to get more businesslike in terms of our efficiency and effectiveness. And also there is a lot of - just to give you an example, I was looking at this partnership project that we have in 27 countries, and Nestlé supports us in two countries in Africa - and I was looking at some of the challenges

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our health people had in running this programme. And one of these challenges was to help to community level in our organisations at the grass root level how to manage the projects better.

00:45:56

It's not about the delivery of the service, but it's more about the -

Maria Livanos Cattai:

The management -

Yasmin Aysan:

The management - financial management and making it more effective. And I think there is a lot of learning that we can get from business in that respect.

Maria Livanos Cattai:

Thank you very much, Yasmin. Ismael, you had a water project in Rwanda. How does that work, and has it been effective?

00:46:18

Ismael Noko:

Yesterday I think in the evening, dinner time, Peter Brabeck introduced the fact that Nestlé and Interfaith Action for Peace in Africa (abbreviated IFAPA) have an alliance, partnership in providing water in Rwanda. This is a community out of the city of Kigali, and very far of about 25,000 people, had no water, clean water nearby. They walked for distances, children in the morning, four o'clock, they wake up and they go a long distance to collect water before they go to school. And mothers had no time at all to attend to local domestic issues because of the distance they do cover.

00:47:04

The second thing is that the water they got from that long distance, they had to pay for it - exorbitant prices

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were set for that water on a daily basis. So it was very difficult for them.

So we went into partnership with this Inter-religious Council of Africa, with Nestlé. We have now provided drinking water, clean water, just outside the doorsteps of every home and every school.

Maria Livanos Cattai:

That's quite an achievement.

00:47:40

Ismael Noko:

That's quite an achievement. It's quite a difference in the life of that community. What also is important about water is a very sensitive issue, is that every local community, where there are no municipalities, where there are no governments in the usual sense of the word, but the local traditional leadership is providing the leadership in terms of whatever's going on in that area. We had first of all to engage in the dialogue - promote a dialogue between the community, the local government, the ministry of agriculture and water affairs and also the inter-religious community.

00:48:22

Now why, when we handed over that water in K..... Village on that day, we had already trained about 13 water managers to take care of this water. So there was a graduation, Niels Christiansen and I were providing the diplomas to those graduating students. Nine of them were women out of the 13.

00:48:52

The other one which is very important for you to be aware also in terms of talking about water, is you know that every religion functions with water. There is none

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that will function without water. And there are myths around water. And to work in some of the traditional societies you have to keep this in mind. We have to call and invite, during the handover, the mufti of the area, the archbishop of the area, and also - to hand over this important improvement of water facility in that area.

00:49:35

It went well. The reason for doing that is because there is water provision, water tank lying in one area that was provided by us Christians. And those Muslim communities said - we're not going to touch it.

Maria Livanos Cattai:

So how did you get over it?

Ismael Noko:

When we handed over this water, it was an interfaith celebration of the new facility

00:50:00

Maria Livanos Cattai:

It's very interesting what you're saying, Ismael; it comes back to the question that I have at the start for all of you. Please chime in, please, all the discussions here. Look - it looks to me many of you are saying that some of the problems of water have to be handled at a very, very local level with a knowledge, very intimate knowledge of local partners that are involved in it, driven also by the knowledge of the agricultural, industrial make up, as well as the people.

00:50:30

That is because there is an urgency to it, and local action can take place fairly immediately. But the question I have for all of you is that, if Jeffrey's right and the problem is very much larger, what also are the

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broader actions - not just awareness, which I know is extremely important - but also the broader actions that can be taken? And finally, to add into that question, international agreements sometimes take - normally take 10 to 15 years to work out. Do we have 10 to 15 years, or are there many, many actions that we have to take much quicker, much faster, much broader?

00:51:14

Who would like to start on that one? Jeffrey, short, and then we go to the people that haven't had a chance.

Jeffrey Sachs:

Ismael, this is piped water, right? Your project?

Ismael Noko:

This is piped water.

Jeffrey Sachs:

Who paid for it?

Ismael Noko:

The - partnership between Nestlé and us; we paid for the - now this water is not given for free.

Jeffrey Sachs:

No, I didn't ask that. Who paid for the infrastructure?

Ismael Noko:

Who paid for the infra - ?

00:51:45

Jeffrey Sachs:

And are you going to recover all your costs from that or is part of that a grant?

Ismael Noko:

That's a grant.

Jeffrey Sachs:

Yes, okay. Look - I think the point that people have to understand is - there's always local management, but

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they're can't be local financing. And this is the hardest thing in the world for this country to understand. And we beat round this issue all the time. So the world's divided between those who can afford and those who can't afford. It's not a matter of advocacy or awareness; I'm just speaking basic truths. You can put a price on water in Australia and then people can pay and it will be more efficient use. This will not solve the problem in your community outside of Kigali, unless there's a grant facility to do this.

00:52:36

We're not even close, ladies and gentlemen, not even close, to having the most barebones mechanism for the most primitive amounts of international financing to respect a tiny fraction of the reality on this planet.

00:52:51

Maria Livanos Cattau:

If you're not close, what - all right; if we're not close and the problem is urgent, then we have to look for some other ways to get it -

Jeffrey Sachs:

Okay, so what do we do? This is my - just constant plea to this community here, because I live within this community together with you. Every month we state the same lie. We honour our aid commitments. I was at the G20 two weeks ago, with Secretary-General we honour our Gleneagles aid commitments. That's the ten thousandth time that sentence has been repeated. Do you think we have the slightest chance of honouring our Gleneagles commitments which are due in 12 months, which would require an extra \$25 billion a year for Africa, so we could start taking something serious? I don't.

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00:53:43

So I think we can go around and around and around and talk about local management, but unless we get real about economics and investment and population and technology availability, you can price things. But if you put a price on - we've been good at pricing things for a long time, and then millions of people die. That's obvious. Pricing solves nothing for the poorest people. I'm sorry. And so -

00:54:10

Maria Livanos Cattai:

Let's pick up some of those issues -

Jeffrey Sachs:

- This is not advocacy at all that I'm talking about; it's the most basic, primitive management which we refuse to do.

Maria Livanos Cattai:

Katherine?

00:54:22

Katherine Bliss:

Thank you. I just - I wanted to get back to the question on the household and the local level, and how that links to the international issues. And, you know, one of the things we've been talking about are - are piped sources. But, you know, as we know, even water that comes out of a piped source may not be safe to drink and may not be clean. And I think, you know, it's important to mention some innovative, you know, and business opportunities that can happen at the local level for developing chlorination, filtration, the production of filters and chlorine processes, you know, at the local level, using local products; the production of storage containers, and opportunities that at least

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can stimulate some business entrepreneurship at the local level, and you know, link to larger networks or processes, promoting that in advocacy and research at the international level.

Maria Livanos Cattai:

Parviz?

00:55:15

Parviz Koohafkan:

Yes, I just - we know agriculture is the biggest user of water, and is huge area of improvement. We know also that food security is really acute problem in the world. Obviously investment in agriculture could make a big difference.

Unfortunately, the ministers of agriculture, particularly in developing countries, have been really, really bad in getting money from their government. Less than 10% of the budget allocation goes to the agriculture, if we just look at it in a very, very optimistic way. So if you want really to change things, we need to invest in agricultural water, and particularly to invest in improved technologies - some of them are available; many technologies are already off the shelf available, which could bring huge good result - direct irrigation, conservation, agriculture - lots of other technologies are available. We used to do big, big elephants of huge irrigation systems which are now - most of them are broken down. We need to do smaller scale irrigation; we need to look into the water saving.

00:56:29

There are a lot of possibilities and we should definitely invest in agriculture.

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Maria Livanos Cattai:

You keep saying that we should, and we should. What is going to push - we can and we are doing it? What is going to push that?

00:56:41

Parviz Koohafkan:

We did discuss shared value - the industry sector, like the business sector, cannot get its share of water unless it puts some investment in agriculture sector. This is a joint venture that they should put together. They should build synergies, looking at the multiple use of water. Basically, the other sectors than agriculture investing in agriculture sector, to free water for our sector.

00:57:10

I was recently in the Middle East in a conference that many, many urban development is stopped because they don't have any more water. But in the agriculture sector is a lot of inefficiencies. If they do a little bit of that investment they are putting in urban development in agricultural development, they could get somebody to use it. This is the way I see it.

Maria Livanos Cattai:

Anders, do you have any ideas here?

00:57:34

Anders Berntell:

Well, yeah. Firstly, I think - yes once again, I think it's important that we make this distinction between what kind of water we are discussing. When it comes to water supply for a rural community or an urban community, I think it's about financing structures and it's about good management of the system as such. And there's failures on both of those issues. It's normally - most countries around the world - not the

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physical scarcity of the resource that hinders - that prevents us from providing water supply to these people. It's about bad management and it's about a lack of the financial resources. And that's about the priorities.

Maria Livanos Cattai:

Those would be your priorities on it?

00:58:24

Anders Berntell:

Yes, and I mean, priorities can come as a result of pressure within the society or also as the result of some kind of international movement where we collectively stand up and say - look this is something that you need to address now.

Maria Livanos Cattai:

Ger, would you like to - ?

00:58:44

Ger Bergkamp:

Yeah, I would like to come back a little bit to the more systemic issues that we talked about before. What do we need to do beyond the local level project? Because we need a couple of tens of millions of them, so how are we going to organise anything if we're going to make a dent in this in the coming 20, 30 years? For many people we have less than 10 to actually fix this, but it's not evenly distributed around the world; as Jeffrey was saying - a lot of the arid, semi-arid areas do not have more than that 10 year horizon in which to fix.

00:59:18

But the problem is not only financing or pricing, it also is the capacities to actually have those investments to be maintained and operated. So we see a lot of lack

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of the true capacities to actually put things in place. There's no point in throwing a lot of money at it when five years later it's broken down and not maintained - and we have seen a lot of those experiences.

00:59:42

So the - when you look at some - okay, what is the systems that need to be put in place? It's one first - yes, it's a system of infrastructure that needs to be put in place, upgraded and further innovated. Within that we need quite a lot of innovation of other technologies that - we heard it also this morning - when you talk about the bottom of the pyramid or those extreme situations, you need to come up with solutions that we haven't seen yet; you need to put those in place.

01:00:10

But what's very important is to look at the systemic governance issues that are around.

Maria Livanos Cattai:

Let's do that, Ger. Look, what I'm going to suggest is first of all we take some questions from all of you. And then I'd like to come back to this panel and ask you all to perhaps start to focus our minds a little bit. We've split out the issues; we've argued and looked at a very broad perspective of possibilities. But maybe to make this very useful, if you could look at - for each of you - two or three priorities that you would feel necessary on the different levels. First of all on the level of government and in the international area. Let's take the international first. What would really make a difference? What would you need - not in the 15 year horizon - what would you really think in an ideal world - what would make a difference on the international level now?

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01:01:05

Second, what would you say would be priorities for governments, individually, that you would feel that they need to do? Your priorities may differ. Third, perhaps in a civil society, people, behaviour, education, groups of the individual level. At first on the industry level: what would be some of the priorities you would want industry - how would you incentivise industry to do this? And lastly, the larger usage of agriculture: what would we need to make it happen?

01:01:39

Now while you're thinking about that, I'm going to take some questions from the audience, please. Does anyone have a difficult question to put, or are you all at a level of complete confusion - as I am - as to what we can really do now? We have - lots of questions here. All right, those with microphones, can you locate the people whose hands are raised and start to bring them the microphones? We'll start right in the middle here and in the front here. Yes, a microphone here in the front to Jane here in the front. Microphone over to Lisa afterwards. Right, and then afterwards we'll pass - yes, we'll pass it over. So start.

01:02:18

Kim Jeffrey:

My name's Kim Jeffrey. I work for Nestlé; I run the North American water business. We own about 14,000 acres of land protecting our hundred spring sources that we utilise for our bottled water. We harvest sustainably because we have to - we don't have a business if we don't harvest our water sustainably.

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01:02:39

Agriculture in the US is the third rail. Nobody wants to talk about it. If you own the land in America, you have a reasonable use to the water that's underneath it. But what is a reasonable use? And part of the issue is - we're not measuring anything today. We don't know what's happening. Until we start taking an inventory of what we've got, we don't really have what should be a sustainable resource in our society.

Maria Livanos Cattai:

Because we're not measuring it?

Kim Jeffrey:

Because we're not measuring it.

Maria Livanos Cattai:

Next comment. Who did I say? Jane?

01:03:10

Jane:

Can I ask you a quick question, mainly for Jeffrey? Are there lessons that could be learnt from the global fund for HIV Aids, malaria and TB - a sort of a fund that was both helping for subsidies, but also the capacity building that's needed at the local level? That's my point as well.

Maria Livanos Cattai:

Yes, do take notes on the ones you want to answer. Over here, Lisa?

01:03:31

Lisa:

One of the easiest ways to save water and create more is to plant trees. Where - what can we do to incentivise major tree planting projects all across the world? Okay, an occasional Nobel Prize winner will plant some trees; but we need more.

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Maria Livanos Cattai:

Mr. Patkowski, yes.

01:03:51

Mr. Patkowski:

We talk a lot about investment, about money. We didn't ask the question how this is utilised. The story from Peru that poor people pay ten times more than the other guys who pay nothing. Part of the problem is corruption. Do we feel uncomfortable to mention the word corruption? How many - these investments were misinvestments in fact, because completely not utilise the way. And why are we avoiding that question?

01:04:18

I wanted to ask the question on the first panel, but I think, instead of bringing it to the third one, I think -

Maria Livanos Cattai:

You'll bring it to this one - And we're all taking good note. This time you'll be answered, I hope. By the way, we have a question from Oskar in Chile: how can we conserve water resources in countries like ours, when developing countries buy green bonds while favouring global warming through pollution?

That sort of puts everything together into one very large question. Yes, right here.

01:04:49

Bob Thompson,

University of Illinois:

You know, farmers, as we've heard, use 70% of the fresh water -

Maria Livanos Cattai:

I thought it was more -

Bob Thompson,

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University of Illinois:

Well, 78%'s the number I generally use. But with the rapid rate of urbanisation, we've passed the point where 50% of humanity lives in cities, and it's projected to go to 70% by middle of this century. Cities will outbid farmers for part of that 70% of the fresh water they're using. But yet we need to double food production in the first half of the 21st century using less water than today. So we may be talking about need to triple the crop for drought.

01:05:26

Now with some - my concern - I think there is a lot of technology available to get water more efficiently to the growing - to the root zone of the plants, but we're still going to have to find ways through research to increase the efficiency with which plants use water, and increase their drought tolerance. But yet agriculture investments in foreign aid as well as developing countries' own government budgets has completely disappeared - has fallen significantly - and investments in agricultural research have fallen more than proportionately.

01:06:04

What's it going to take to get the gravity of a situation like this need to increase the efficiency with which plants use water back on the agenda?

Maria Livanos Cattau:

Thank you very much. Again, what will it take? The question over here. Anyone else? Yes. And a microphone at the same time, over there. Thank you.

01:06:28

Patrick Webb:

Thanks. Another web question, but Patrick Webb [laughter] from Tufts University. I'd just like to draw on

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an early link with the nutrition panel. I think there are - just one example: Mexico, during the years when there was very little access to clean water, there was very high levels of consumption of pulque, a local agave made traditional drink. We're talking about 15 litres per day consumption quite often. And it was the main source of liquid. As that country has invested heavily in improving - improving access to clean water, consumption of pulque and other traditional drinks has gone down, which has had potentially some negative externalities. Pulque had - was very high in micronutrient content, so that iron micronutrient deficiencies that have been linked to the decline in consumption in very rural remote poorer areas - I'm not saying improving water's good, because this will have a negative. But at the same time soft drink consumption has increased as expenditure on pulque has gone down. And that, through high energy and the high sugar consumption has led to obesity. We were talking earlier -

01:07:49

Maria Livanos Cattai:

Keep that thought also for the nutrition discussion that we're going to have later. What is your question to the water panel?

Patrick Webb:

The question is - we talked earlier about we needed to cost negative externalities, and I just wanted to raise with the panel .....

..... Do we know enough also about the costing of production of other drinks, not just water.

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Maria Livanos Cattai:

Thank you very much. And just one last question, yes. Oh, I'm sorry. There's somebody back there also. Please, go ahead.

01:08:18

Mark Keppler:

Good morning. My name is Mark Keppler from the World Bank. One of the most important and interesting parts of this conference is the broad background of the participants. I think it's particularly important we have religious leaders participating in this kind of conference. My feedback to the organisers is that next time you talk about water, you may wish to have some military leaders. I mean that quite seriously, and my question for the panel is - how do you get national and global security leaders into this debate on water, to form some sort of alliance?

01:08:47

Maria Livanos Cattai:

It's a question, a very good question, and one to all of you. Do you think that we have not enough addressed the water security issue, or do you think that it's overdone that we will have water wars? Which way are you looking at it? Yes. Last question? Yes, please. Last question. Is there anyone else who wanted to intervene? Yes, please. Please go ahead, sir.

01:09:11

Franklin Fisher:

My name is Franklin Fisher. I'm an economics professor at Meredith and MIT, and I've also been for some years the head of something called the Water Economics Project. Technical efficiency in the use of water is very important, and Nestlé has been a leader

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in promoting it. But water efficiency should mean more than technical efficiency; it also means making sure that water is used in the uses that bring the greatest benefits that appropriately measured - and there are ways to measure that. Free markets won't handle that for some of the reasons already mentioned, because there are social values to water that are not reflected simply as private values. This has to do, for instance, with the fairness question.

01:10:01

But there are now analytic methods - rather sophisticated analytic methods - for dealing with these problems and also for solving water conflicts. Shouldn't - I mean, if I have to end up phrasing this as a question -

Maria Livanos Cattai:

Please do so.

Franklin Fisher:

Shouldn't policy makers and perhaps members of this panel take a systematic look at those?

01:10:22

Maria Livanos Cattai:

Thank you very much. That's quite a few. You don't have to answer them all exactly. Each of you can answer the ones that you would like to look at. I add one question from Tony in Canada, who comes back to the larger issues that some of you have looked at. And he expresses perhaps a frustration. He says - people are so concerned about the state of our planet, and they're frustrated by the lack of leadership, the debate that continues, perhaps from the supply side thinking. There's little discussion from the other side. People really need to know actually that there is

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progress from the demand side, that there is progress. And they need to be engaged in this process. What should be done?

01:11:15

So let's engage people. Let's engage people by answering some of those questions, yes, but also could you go back to what I asked you to do - look at what you really think now. But stop analysing and let's get into what we can do on those different levels. Who'd like to start? Nancy.

01:11:36

Nancy Birdsall:

Well, it was a great set of questions. I was intrigued by your question, Maria, about priorities at different levels. So I thought I would say a quick word on that.

You know, at the international level, actually water is a kind of a local and sometimes it crosses borders. But as Peter has pointed out, it's not like global warming problem. It matters where you are. So what are the priorities at the international level? I mean, I agree with Jeff that it's important to have financing available that's money from the rich world to the poor world to deal with some of the initial upfront investment costs. But I think that that alone, even if the Gleneagles commitments are met, is not really going to make a big dent in -

01:12:30

We have to recognise that there's a lot more that has to be done. And one thing I would use as an example of "do no harm"; that's where I would put priority at the international level. And a very good example - because water is part of this larger set of systems that

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matters for everybody, and there's so many collective action problems - at the international level, this issue of bio fuels is a big one. And it's the Europeans and the Americans that have set mandates and defined subsidies that have led to really stupid arrangements that are very intensive in the use of water and producing bio fuels. In the US we have a tariff against bio fuels that could be imported from Brazil where they would not be necessarily competing for water and food resources.

I mean, it's a mess at the international level.

Maria Livanos Cattai:

So what would be your priority?

01:13:33

Nancy Birdsall:

A priority is that those in the rich world, besides fighting to ensure that there's more aid, also create pressure to fix this policy problem at the international level.

The other thing that I wanted to say, which is a very general comment, is that water - like clean air, like the climate change issue - it's just ridden with collective action problems because there is this externality. And I think we have to recognise that that's the biggest challenge in a global economy. We have collective action problems that are much more easily managed at the local level where people can get together. And we're just terrible at the international level.

01:14:25

And we're just sitting here across from the United Nations. And so, you know, the other things is - in

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terms of priorities - more effort to understand how to fix the way we address issues at the international level, so that we're more conscious of fairness - not just efficiency, but fairness - that most of the problems we're talking about, it's not just - you know, it's the poor farmers versus the rich farmers; it's the slum dwellers versus the swimming pool owners. In each setting, if we would pay attention to the reality that the poor tend to lose out when we don't address these collective action problems at the policy level - I think we'll all be better off.

01:15:09

Maria Livanos Cattai:

Well, they've said some rather nasty things about the international level not being able to do anything. Do you defend it or do you think it's also true and that's why you're working with companies?

01:15:18

Georg Kell:

Well I have actually three proposals to make in response to some of the questions. The first one is - I think we all have to realise that we are all learning on natural resource issues and its growing importance for human life and its sustainability. Policy makers come often from another generation; we come from another generation. Scarcity of natural resources is a phenomenon we are coming to grips with now; so we are in a learning curve. And water is a great issue to put forward, but so are other natural resource scarcity issues.

01:15:52

So we have to come to grips with interdependence, and we have to come to grips with the new valuation to

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recognise the importance of forestry, of fresh water in human life, and how this is factored -

Maria Livanos Cattai:

The audience ..... so tell us what you can do.

01:16:10

Georg Kell:

The UN is having a fundamental important conference in Copenhagen. I would challenge the water community to actually rally everybody out there to come to a successful comprehensive global deal on climate change, because that will slow down water scarcity. And I would hope that all business leaders will lobby positively, and be business statesmen on this issue. No co-operation the lobby against the global climate deal .....

01:16:38

Secondly, on the business community, I'm extremely pleased that the stewardship of the natural environment - water, climate action and related issues are now moving upwards, so as part of the corporate responsibility agenda. But I would also caution a little bit. See it as an integral part of the overall responsibility; don't offset other responsibilities, because the social, human rights and anti-corruption issues, our friend Georg has reminded us, are equally important. So keep a healthy balance here, but push it forward.

Maria Livanos Cattai:

Push it forward. Who would like to also make that - ? Please, Ismael, you go next.

01:17:13

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Ismael Noko:

Yes, I think it was a question about trees. Planting of trees is also saving water. I think - I would say yes, exactly that. In my other job which I do every day as General Secretary with the Lutheran World Federation we have reached an agreement with the government of Mauritania. As you know Mauritania is a Muslim country. We've agreed on planting trees. For the last 35 years we will plant trees. If you go to the headquarters on Mauritania, you will see bushes around. That is what we've been doing for the last 35 years.

01:17:42

We realised before we began that that we needed water to irrigate or to give to the trees to survive. We also realised that you just cannot do it that way. We had to put the students from Mauritania to come to the University of Oregon here to study. They came up with a Mauritanian bush that can survive on very little water. So when we bring things together, the management of water and the planting of trees - and that has worked marvellously. So, yes, you can say that.

01:18:13

Secondly, I was thinking of the - Jeffrey was so fed up with what has been going on internationally here in the discussions. I share your feelings - emotions - yes, because a lot has been going on, a lot of saliva has been spent at the level of international conferences. And really we need to do something. I think the way it works, Jeffrey, is exactly at that level of implementation of the local community where they know what you are talking about, but they've a different language. When you talk about the shared

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values, they're already sharing values but they don't know - they don't know the vocabulary. So I think we have the potential to start to move these things.

01:18:58

We learnt - this is my last point - we learnt that to stop a desert - a desert has its own feet underneath - you must arrest the feet by using the particular plant which I talked about. So in order to give what we are talking about feet and movement, at the local level, is to work the other levels as well.

Maria Livanos Cattai:

Thank you very much. Ger.

01:19:19

Ger Bergkamp:

Two main points. I think we can take an example from concrete action of 300 parliamentarians that in Istanbul a few weeks ago pledged to work together to improve legislation; improve budget allocation in national government but yet set up a help desk to - as a peer review help each other out.

Maria Livanos Cattai:

Are they really going to do it?

01:19:39

Ger Bergkamp:

That is exactly what they said and we will help them to do so. I think the second point that we can focus on very importantly is looking at waste and we will get back to that again this afternoon. But the amount of water that is wasted by throwing away food from the point of production - all the way throughout the chain is enormous and I think there is an enormous gain to be made and I think corporations have a huge role to play

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to - in their marketing and in their promotion - to actually reduce that food waste.

Maria Livanos Cattai:

Carole, why don't you try some of the priorities? Or answer some of the questions?

01:20:13

Next Speaker:

Okay - just on the priorities issue and this ties in with one of the questions that I think came up about transparency and corruption. If - you know - I just wonder if - you know - one of the possibilities for improving that aspect is to - you know - empower citizens at a local level. And at a national level to have a greater understanding of these questions of waste to have that information posted to - you know - receive information in a text message or whatever on prices or on what is available so that they can demand greater accountability and promote greater transparency in that process.

01:20:50

I was just going to add one information as well. The question about pulque I found really interesting as a Latin Americanist. And just on the water and nutrition side actually back in the 19th century the pulque industry and the beer industry in Mexico kind of fought it out over who had the greatest amount of nutrition and provided the greatest benefits to the population - so these debates continue.

01:21:15

Maria Livanos Cattai:

I am going to come to you in a minute if it's all right. Let me ask Parviz - go ahead.

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Parviz Koohafkan:

Yes, I just wanted to say now - from the point of view of priority setting, we need this slogan - think global, act global. It is very important. We need also to look at the interlinkages between the water conservation, forest conservation, watershed management, and downstream water use. Rather than putting subsidies around the world and creating so much mess, we could look into paying for one of those services.

01:21:52

Subsidies unfortunately have not been very, very helpful neither in the agriculture sector nor now in the bio energy sector. It is really going to create a lot of problems.

Maria Livanos Cattai:

And some of the subsidies that involve not only bio fuels but trade and agriculture subsidies have probably not been very helpful on the water issue either. Some priorities - do you have any other priorities, Anders, that you would like to put in here on any of the levels that I mentioned?

Anders Berntell:

Can I just - ?

Maria Livanos Cattai:

Answer some questions? Certainly.

01:22:26

Anders Berntell:

A couple of questions. Tree plantations - I think once again it is very local. It depends on where you are; what kind of species and so on. Sometimes the trees are actually stealing water because they are also plants and growing on water.

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01:22:40

In South Africa for example, they cut down trees that are stealing water from the river. Corruption - there is a very good initiative called Water Integrity Network - based at Transparency International. A lot of international organisations and companies are involved in doing very good work to combat corruption.

To come back to your questions. Even though I and others here also have stated that - yes, water is in general a local issue - I think the water sector is lacking from the fact that we don't have a place within the UN system. I agree on that. I think when we compare the discussions about climate change for example - it gains a lot of, or more international visibility than the water. So we would need some kind of a platform within the UN system.

01:23:40

Governments do not prioritise water. Compared to agriculture, even less in budgets, in government budgets, is spent on water. If we look at these so-called poverty reduction strategies and other strategic documents by developing countries, very few of them actually prioritise water. So that is an issue to raise the awareness amongst those governments to address the issue.

01:24:10

Then jump to agriculture, which is the bigger picture. And there I share Jeffrey Sachs' concern about the state of the resource globally. And at the root cause there is in general - agriculture. We have a number of - an increasing number of rivers that are running dry. We have decreasing ground water levels also in many

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parts of the world. And the reason for this is over use in agriculture in general.

01:24:47

We and others have come up with these calculations on how much water that would be needed to feed the world by 2050 - and it is between 50 and 100% more water.

Maria Livanos Cattai:

Is anyone listening to you? Any governments actually listening and doing, and making that projection in their plans?

01:25:15

Anders Berntell:

Some are. In some countries and then I come into some of the measures, some of the activities. I mean, some are now giving up this concept of food security, national food security. And I understand that - well, it is nothing we can achieve ourselves. We need to rely on trade to feed our population in our country. And you can see that there are also in some cases, some of the more wealthy nations - outsourcing the food production, you know, in other parts of the world. To rely on their water resources when they don't have it themselves. Trade is at least one part...

Maria Livanos Cattai:

So trade would be one of the activities that you would suggest we - ?

Anders Berntell:

It needs to be addressed within trade discussions, I would say.

Maria Livanos Cattai:

Is there any other priority you would give us?

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01:26:11

Anders Berntell:

Well food loss is once again - 50% of the food that is produced is actually lost. And if we would just be able to make a gain of 50% increase there of - reduction of the losses -

Maria Livanos Cattai:

Is that a generally accepted figure, sir, 50%? That is very high. Is that generally accepted in developing countries?

01:26:34

Next Speaker:

In Europe it is not more than about - not even 1%. There is a huge difference - huge difference. But depending on the - I think there are some instances now from the UK saying that a family normally throws away 25% of the food that they have bought.

Anders Berntell:

I was talking about the - in the supply chain. The supply chain in developing countries - it is about 40 - 50% being destroyed because of lack of infrastructure.

Maria Livanos Cattai:

Infrastructure - yes. Last one because we must move on.

01:27:06

Next Speaker:

Water efficiency in agriculture has been discussed but I also think that consumption patterns and the way that we actually consume food - our diets - is something that needs to be addressed also.

Yasmin Aysan:

Everybody made really good comments on the more international level. Just a few things. One is - at the regional level I think there is a need for better control

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of the major river basins - Mekong Delta, Zambezi, Indian subcontinent. And it is a military as well as a political issue - it was mentioned. As an organisation we have to deal with the consequences of it, trying to get some preparedness at the community level to cope with it. But I think there is a need for a lot more to be done at the intergovernmental level in these water basins.

01:27:59

A second issue is - I think more research. Knowing that because of climate change etc., things are not going to improve, and people's resilience to cope with too much or too little water is not going to be sufficient perhaps, their existing practices. There may be need for more research in water harvesting, drought and flood resistant seeds, etc. to be able to support the community level.

01:28:29

And the third thing is - yes, resources to scale up good practices, as Jeffrey mentioned. I think there are a lot of good practices - a lot of piloting - but not enough resources really to scale up to cope with the situation.

And my last point is about - not to call for a doomsday scenario, but if there is nothing there - to think about the safety nets. I think India and China for example have put in place some crop failure insurance, etc. to look at if things fail, how are we going to protect people down the line?

Maria Livanos Cattai:

Thank you, very much. Jeffrey, your priorities now. You have raised all of our fear factors, now get us into some good priorities of how we can solve.

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01:29:21

Jeffrey Sachs:

We can't do anything without more resources. And I am going to say it again. It is often said, Nancy said it, many people say it - you know, money is not everything. But when money is necessary, it means it is necessary, okay - it doesn't mean the other things aren't necessary also - it just means that this is necessary.

01:29:43

So this is necessary, I am going to say it again and again until I die. This is a necessary component of not leaving millions of people to die every year. And not having the violence that we are having. I don't care if it is not sufficient because the other things also need to be done but it is necessary, okay.

Now, trade is not going to solve the problem because we just took a huge step backwards when we had a food shortage two years ago, everybody closed their markets.

Female:

That's right.

01:30:12

Jeffrey Sachs:

When you talk about trade, what you are meaning is - that they are going in to try to take over land in other countries, and we are probably going to have more revolutions as a result of that. We already had one government toppled in Madagascar because of this kind of disaster.

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01:30:26

So, whether we are for trade or not, we should understand we had a calamity in the last two years in the world trade sector - a calamity. Because trade failed at the fundamental moment of scarcity. Nobody believes in the world trade for food any more. It failed at the crucial moment. So - that is one thing. Where am I?

Laughter

01:30:52

Jeffrey Sachs:

Now, let me really stress something of reality to people here that I have to insist on because I spend more time probably than you do with governments writing budgets.

It is just not right to think that poor country governments don't care about their people; are uninterested in their food supply; neglect agriculture; neglect the health sector; neglect whatever it is they are always being accused of neglecting. FAO should - of course you should say prioritise - but you should understand that there is no way - because I am in the middle of this - where one day food - that is the priority, and then the next day education is the priority, and then the next day the health sector is the priority, and then the next day something else is the priority.

01:31:39

You add up for a poor country - that is what I do for a living. There are \$300 per capita, they may collect 15% of GNP in their budgets. That makes \$45 per person per year for all government functions. \$45 per person per year.

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Now, try to run an agriculture programme, an environment programme, a roads programme, power, schools, clinics - and so all that happens is poor people are broke - they can't stay alive and then we blame them - you are not prioritising this; you are not prioritising that.

01:32:14

Every single day, ten of my colleagues tell me we are not prioritising X because what they want is for that 100% of the budget to be allocated 200% of the ways. This is what poverty is, ladies and gentlemen. I am working with governments who are sending me requests every day for agriculture. It is not true they don't care. I have got a stack this high - I pass them along to the Secretary General; I pass them along to Bob Zoellick; I pass them along to all the aid agencies.

01:32:45

For the last two years how many of them have been funded? Zero. Zero. FAO has held conference after conference. I have been involved for the last ten years at FAO conferences. How much money has been raised? Zero.

Okay. So let's get real. Now you take an issue like food waste - it is like - don't think people are just kind of letting their food sit there. And if they were only more aware not to let it waste - their life depends on it not wasting. They don't have a silo; they don't have logistics; they don't have fumigants. I am not talking about middle-income countries; I am talking about the poor two billion people on the planet.

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01:33:30

Rich people should be able to take care of themselves, so pricing and other efficiency things matter. I am talking about whether we care on this planet or not, and it is still up for grabs. There are two theories on this planet. One is that we will put up enough walls and maintain enough military that we don't actually have to care about the bottom. That is the prevailing theory. The other is that we feel we are interconnected enough - that everybody really is a human being with rights. That is not the prevailing theory - that is just in the documents.

01:34:06

But the prevailing theory so far is that we can conveniently ignore the bottom two billion. Not the bottom billion by the way - it is two billion people.

And that we can just lecture them about awareness and how important it is for them to do this, that or the other thing which they can't afford to do.

01:34:25

The truth is - and I will stop here. There is plenty to go around in this world. But not just by sharing at the bottom. It has got to be sharing from top to bottom - that is the way that it can work. And it wouldn't require a tiny fraction of what we just spent. We have done five trillion dollars of bailouts in the last eight months - five trillion.

01:34:48

And, ladies and gentlemen, I defy you to show me one penny of that for the poorest two billion people yet - literally. If someone can come up with the numbers - all I know of is aid cuts so far. I don't know of one specific programme in the last eight months of five

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trillion dollars that has gone to poor people in the form of official development assistance increase - not one penny.

01:35:14

The G20 1.1 trillion - nothing was for the poor - nothing. Except an announcement paragraph 26 which said we honour the Gleneagles commitments - which we have said a thousand times, as I noted. So, when things are necessary - they have to be done. That is not the only thing that has to be done, but they do have to be done. And we still on this planet are still debating the proposition, whether it is walls, guns and bombers, or whether it is actually an integrated global society.

01:35:48

Maria Livanos Cattai:

Jeffrey, if what you are saying is something we need to pay our attention to and governments can't do it alone or local or international, and aid providers can't do it alone, isn't that all the more reason, Peter, that gives importance and value to creating shared value, and the importance of all the actors taking part in this prioritising of actions and the proposition at least that you put forward of creating shared value through these kinds of partnerships that along the international community, the local governments and the aid providers do not manage? What would be your priority, Sir, to conclude our session?

01:36:37

Peter Brabeck:

Well, first of all, after Jeffrey's intervention, I think - which I fully support by the way - and we chose the real dilemma of the water problem - it comes back to

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policy decision making. And - we had a very interesting open discussion in Davos this year with the Minister of Environment for India who in public said - you know, the last thing any minister would do is to get involved from a centralised government into the water issue - this is politically suicide.

01:37:25

And I think it summarised very well why we are where Jeffrey was just saying. I think it is the most difficult political decision that has to be taken, because we are somewhere in between this local very, very strong emotional interest - it was mentioned - I mean how emotional water is - if you think about we are baptised with water, everything around religion is water - up to the way that we are water - 70% - we are water okay, so I mean, how politicians can make the right thing, on the one hand, being so local, on the one hand other being global.

01:38:08

It was talked about - watershed. Many of those issues we cannot even on a national level solve, because the implication is much bigger. And just think about Iraq - if you think about Turkey, Iraq, Syria, I mean the whole question here is who is getting the water here, and who is getting it lower down - and the Mekong delta was mentioned.

01:38:33

Where I come - and I just wanted also to make this remark to you. You see, I might be provoking now but I am convinced - I think climate and the Kyoto protocol was the worst thing that could happen to the water issue. The reason for it is simple. As our world politicians have started to concentrate, to see all

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problems of the world in CO<sub>2</sub> emission, they found one answer - and this is how to avoid CO<sub>2</sub> emission. And one of the answers they had was of course bio fuel. Now, we have to understand one thing - a calorie is a calorie. If we use this calorie for our food supply, or whether we use this calorie for the energy that we are putting in our car, it is the same calorie.

01:39:40

Now, the energy market in caloric terms is 20 times the food calorie market. So when our politicians are saying - we have to replace between 10 and 20% of the oil energies with food energies, they have never made any simple calculations - that it means we would have to triple food production only in order to create the oil for our cars.

01:40:17

And this is absolutely, completely out of any mind. And those are policy decisions, you see. I mean it is as simple as this. You don't have to go to university. But this is what our policy makers are deciding and reconfirming and continuing. And you can tell them 10,000 times it doesn't work, but they will go on like this. We are talking about arable land, we are talking about reforestation. Or we are talking about deforestation and talking about reforestation, and we are losing in an incredible manner, the last forests that we have in an incredible manner. Why? Because we need more arable land in order to produce more bio fuel and more food. So we are talking about deforestation; we are talking about deforestation - huge one.

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01:41:12

It was interesting to listen; and I was happy that Jeffrey said this - we are now moving the real water problem from the water to the virtual water. Okay? And many, many governments have understood that it is better to perhaps stop producing, for example, wheat - and to import this wheat from outside, because wheat is, for example, one of the crops that needs an enormous amount of work. So it is better to use the little water that you have for other crops and import the wheat.

01:41:48

The others have gone the next step, and this was mentioned before - that they are going to make contracts with countries that have water in order to produce their food supply not any more in their own countries but move over into the other countries in order to do the food supply, which was the case in Mozambique and then afterwards led basically to the toppling of one of the governments.

So there is a new - completely new - trend that has only to do with water. Now, there is one - two positive things I want to say. First of all, it is absolutely true what Jeffrey said - the Darfur war is a war of water, and Ban Ki-moon, Secretary General, has said that many, many times - that the real reason for the Darfur war is the water issue.

01:42:39

And I just want - in order to give a glimpse of hope, I have been participating in another project where water has become, I would say, rather a means for peace - peace, we have not achieved it, but at least it wasn't war. And this is the whole question of the Dead Sea.

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The only real project that has arrived between the Palestinians, the Egyptians, the Jordanians and the Israelis - during the Intifada ..... was the water project - how we can bring water back into the Red Sea. That is the only project where they have continued to work together and with all the war and with all the things going on, at least there they realise that only by working together is there hope perhaps one day that we will get this.

01:43:31

Last aspect and then I will close. We are working very closely together with McKinsey, in order to establish an analytical tool that will allow governments to make better water decisions based upon facts. You know, one of the problems we had with the CO<sub>2</sub> was that there was no analytical tool and only once that this abatement curves had been established by McKinsey, was - did then allow to make more rational decisions. And similarly, I think we have a problem with the water side. We don't have a real tool which allows governments to make better decisions. We are working on this; we have presented it in Davos. We are now working with three governments putting this tool to their disposal and to see whether this would help through an analytical measure in order to improve better decision making.

01:44:29

Maria Livanos Cattai:

Thank you very much. It may - I don't know if it's a good thing or a bad thing that they're no government officials - I don't think so - in the room, but if there's a message that's gone out there it's - policy makers beware. There are a lot of us around the world that

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are going to hold you to taking the necessary decisions very, very shortly. This is not a problem - as everyone has said here - that can await a very slow process. This is a problem that needs an immediate set of different kinds of policies, of actions, of incentives, of even education of the public and knowledge.

01:45:08

Would you please join me in thanking this panel for their extraordinary discussions? Thank you.

Applause

Maria Livanos Cattai:

Ladies and gentlemen, I think we have one short hour for lunch, and we'll see you back promptly here at a quarter to two.

Music

END