



COP21 – The view from Germany

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Introduction

German positions on the Paris Climate Summit

Hopes for the Paris Climate Summit from 30 November to 11 December are high, but will the COP21 as it is called become a breakthrough for global efforts to reign in climate change? In this dossier, the Clean Energy Wire presents German perspectives on the summit and an international agreement. A series of interviews will highlight positions of activists, researchers, businesses, politicians and negotiators. The factsheet “Controversial climate summit issues – positions in Germany” gives an overview of the most disputed issues at the COP21 - e.g. climate finance and loss & damage - and highlights the position of the German government and civil society on these topics. The Clean Energy Wire is offering this special supplement because the results of the Paris summit have strong implications for the country’s Energiewende, the ambitious move to simultaneously phase- out nuclear power and decarbonise the economy through a build- up of renewable energy sources.

Interview

We must err on the side of caution

Biologist and climate researcher **Hans-Otto Pörtner** from the Alfred Wegener Institut, a Helmholtz centre for polar and marine research, who was elected co-chair of the Intergovernmental Panel on Climate Change (IPCC) Working Group II (Impacts, Adaptation, and Vulnerability) in October.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

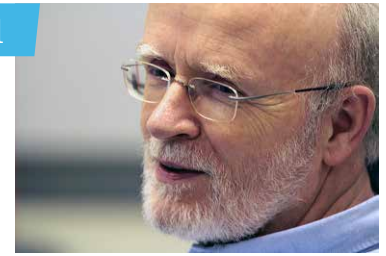
HANS-OTTO-PÖRTNER: I believe many issues are on the right track in the run-up to the summit. Speaking as a citizen, rather than as a co-chair of the IPCC Working Group II, I hope that the countries' ambitions will approach more closely what climate science says should be the targets, and that they implement scientific findings.

I would also hope that countries like the US, China, Australia and Canada give up their reluctant position and energetically join this huge transformational challenge, instead of playing for time.

What do you think are the biggest challenges in the process?

Surely the largest hurdle is the fact that Paris will be a gathering of countries with hugely differing backgrounds. For example, there are many countries that have invested too much in fossil energies over recent years and decades – countries like the US, who have based their whole infrastructure largely on fossil energies. It is necessary that those countries can now understand the positive challenges that are related to the necessary transformation ahead, and show their readiness to bring the process forward, and to do justice to their position of economic leadership.

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Hans-Otto Pörtner. Photo: AWI.

What is Germany's role in the negotiations?

Germany, with its strong economy, has an important role to play in the moderation of the talks. The country must also present its climate protection efforts as a model, without playing the know-it-all. But Germany can show that the transformation model works. It must openly contribute its successes and failures to the international discussion, so we can find a constructive basis from where to start.

Germany is also a role model when it comes to the implementation of scientific information. But I also believe that Germany could be even more ambitious at developing long-term climate targets, and could incorporate more findings from the last world climate report in detail.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

I believe many aspects of national policy are exemplary on an international level. The roll-out of renewable energies is clearly the figurehead of our country. Of course, the transformation in the car industry is a totally different question, and we also went in the wrong direction by increasing the use of cheap coal over the last decade – that has to be corrected now. So Germany is not exemplary in all areas, but the development of renewables really stands out, for which there are many obvious examples. If we take new technologies into account, for example power-to-heat or power-to-gas, then these add up to a new stepping stone, where we can show it works. Germany is proof that you don't need to sacrifice economic growth in order to protect the climate.

Are the findings of climate research fully incorporated in climate politics?

It is really important to take the risks highlighted by scientific research more into account in this process. Some risks are still neglected – this is even true for some risks related to rising sea levels, which could exceed current expectations simply because of new findings related to the behaviour of the Antarctic ice sheet. I also believe the risks for human health due to extreme weather events are still not incorporated enough. It would really be important to further extend the precautionary principle, so we can find the right way with the help of further scientific insights – even though we will never be able to resolve the very last uncertainties.

What is the future of the IPCC after the 5th assessment report?

By evaluating research from all areas of climate science, we will continue our contribution to the development of targets, draw attention to risks and, eventually, find the right balance between adaptation and mitigation. It must be one of the most important goals to highlight possible solutions for humanity, but at the same time draw attention to the risks that might be associated with these solutions. The IPCC, in its advisory role, will be indispensable for decades to come.

The interview was conducted by
Sören Amelang | 24 Nov 2015

Interview Paris must send signal for global fossil fuel exit

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Regine Günther, WWF Germany.
Photo: Lichtschwaermer.

Regine Günther, General Director Policy and Climate at WWF Germany.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

REGINE GÜNTHER: Unlike the climate summit in Copenhagen six years back, Paris will most likely deliver a climate deal. However, what determines the success of the Paris outcome is the quality of the deal – and here the devil is in the details.

For an outcome to be called successful, it must facilitate deep greenhouse gas emissions cuts down to levels that keep the global temperature rise well below 2-to-1.5 degrees Celsius. The world cannot afford global warming to exceed this critical level, which would destroy ecosystems, diminish future generations' wealth and drag the world's poor into even deeper misery.

All intended additional measures by states, which would enter into force through a Paris climate agreement, would bring down the temperature rise to around 3 degrees. That would be a substantial improvement – but it is still not enough.

In order to close the remaining emissions reduction gap, the Paris agreement must include additional mechanisms. These must enable countries to progressively improve their climate targets, to shift trillions of US dollars towards renewable energies and energy efficiency, and to improve their climate resilience. Improving climate targets and investments must of course be tracked and reviewed regularly, providing transparency and accountability of action, and scientifically measuring success against trajectories which are in line with the 2-to-1.5 degrees limit.

What do you think are the biggest challenges in the process?

Closing the emissions gap is the greatest challenge – and making states fully accountable. There are many issues involved in capping the temperature rise at 2 degrees, so the Paris agreement has to include three elements:

Firstly, we would like to see a legally binding agreement that translates the 2-degree celsius temperature limit into a longterm goal to completely decarbonise the global economy by 2050, backed by a 100 percent renewable target.

Secondly, we need a mechanism that reviews the national emission cuts every five years and we need a very robust stocktaking system that encourages states to scale up their levels of ambition.

And thirdly, the agreement needs to include a very robust system of transparency rules, making emissions of all states comparable. I don't think that Paris will deliver all the necessary details and criteria in a fully formulated text but it should include the principles.

Then there's the question of how we can support poor countries in their efforts to switch to low carbon and climate resilient development pathways. It is very important to provide support to countries that are already suffering from the impacts of climate change, which result in climate-induced economic and non-economic loss and damage. Paris must deliver a credible financial package, providing confidence that the pledges of 100 billion dollars per year by 2020 from industrialised countries will be achieved and will rise after 2020.

To be very clear: Paris must send the signal that the world is phasing out fossil energy fast and is phasing in renewable energy.

What is the German role and the German objective in the negotiations?

Germany plays a leading role because it is doing a lot at home and brings this experience to international negotiations. Within the EU, Germany faces some hurdles because there are countries that would like to put the brakes on climate protection efforts.

But Germany is certainly a beacon, even if many policies have not been particularly stringent and some of the biggest polluters here are being given a golden handshake to phase out dirty lignite plants. The fight to end coal still has to be won and the expansion of renewables has lost some of its dynamic, even though it is still proceeding.

Chancellor Merkel did a good job by negotiating decarbonisation with the G7, and her climate finance announcements to double Germany's contribution to international climate finance by 2020 was a strong push for other donors to do more and better. She is certainly very engaged and has been a driving force that is very important, despite some of the downsides of the government's policies.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

Germany has built up the share of renewables in power consumption to over 30 percent and has shown how to integrate fluctuating renewable electricity into the grid.

Not that Germany is perfect, but it is important to show that economic growth – including growth in jobs – can go hand-in-hand with climate action. This is a win-win situation and it's not just about costs. The lesson learnt: Decarbonisation, if done the right way, can bring more economic advantages than disadvantages. It also gives us independence from a volatile energy market, reduces imports and improves the national value chain.

This is a big change compared to early climate talks. Back then, moving out of fossil fuels was seen

as a burden, but now we view this not as a disadvantage but as a big opportunity.

What are the top priorities for the WWF in Paris?

Making Paris another milestone in the journey towards a zero carbon, climate resilient and more equitable future. The world is coming together to prove and declare its firm will to end the age of fossil fuels within the next decades.

When I talk about the world coming together, I mean more than the conference with all the ministers and heads of state attending. I also mean all the people coming to Paris. WWF will be part of this giant mobilisation and we are proud of it. It is amazing to see how the climate movement has grown and how far things have moved in the six years since Copenhagen: Even China and the US are shutting down coal power plants. The signal from Paris will be: Go forward and don't stick to fossil fuels – that would be a loser strategy.

The interview was conducted by
Ellen Thalman | 19 Nov 2015

Interview

Paris must be starting point for carbon price talks

Ottmar Edenhofer, director of the Mercator Research Institute on Global Commons and Climate Change, chief economist at the Potsdam Institute for Climate Impact Research, and former co-chair of Working Group III of the Intergovernmental Panel on Climate Change (IPCC).

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

OTTMAR EDENHOFER: I am admittedly rather pessimistic about the outcome because what we have seen so far are Intended Nationally Determined Contributions (INDCs) that probably do not allow us an entry point into an effective climate policy. The current INDCs are just slightly more ambitious than what we have seen with the Cancun Agreements. Emissions will increase until 2030. This is very worrying.

The real challenge is that we are in the middle of a large coal renaissance. Countries plan to install 1,000 gigawatts of coal-fired plants around the globe. And even if we implement and install one third of this, it would lead to around 113 gigatons of CO₂. Together with existing capacities – with which we have committed to emit 730 gigatons of CO₂ – we will then almost exhaust the 1,000 gigatons consistent with a 2-degree target.

What could be an effective short-term entry point for climate policy would be negotiations for a carbon price, with climate finance transfers conditional on the cooperation of countries over a carbon price. If Paris could sort out the climate finance issue and also define the starting point for a pro-

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Ottmar Edenhofer. Photo: MCC.

cess to negotiate on carbon pricing – even if the negotiations themselves are not within the UNFCCC – I would be happy. But this is unlikely.

What do you think are the biggest challenges in the process?

My biggest concern is that the INDCs are basically pledges, and these pledges are neither comparable nor can they be monitored, so far. This is the most important challenge for the Paris meeting. Nonetheless, to achieve something meaningful, we can't just rely on INDCs. That is why carbon pricing is so important. Without it, we cannot stop the renaissance of coal. Investments over the next ten years will determine the future emissions trajectory and it will become very hard to depart from this trajectory. It's not mainly a climate system issue – it's all about the investment cycle and these investments are already under way. We have to impose a carbon price because otherwise there is no incentive for investors to change their investment decisions.

What is Germany's role in the negotiations?

Germany is quite committed to contributing to climate finance and I hope that Germany can promote something on carbon pricing. Probably this cannot be negotiated within the UNFCCC but next year China has the leadership of the G20, and after that Germany. Germany could use that opportunity to launch a debate. At the Paris negotiations, Germany could at least make sure that climate finance can be used, or is designed, in a way that makes transfers dependent on international cooperation. It's probably not realistic to expect negotiations

on carbon pricing from the UNFCCC, but Germany could make sure the Paris talks lead to negotiation on this issue at the G20.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

Other countries can learn how important a carbon price is. Germany's model of the energy transition was to subsidise renewables and reduce demand for electricity. This has led to a situation where coal-fired plants have become incredibly competitive. The German example shows that we had very good intentions and we have invested a lot in increasing the share of renewables, but meanwhile we are in a situation where coal is much more competitive than gas. This is something we predicted as economists a long time ago and we always raised the importance of carbon pricing. The EU emissions trading system is not functioning well, so now we have real problems. Carbon pricing is not the whole game, many other things have to be done, but without it climate policy cannot be effective.

Do the Paris negotiations have the potential to be a historic turning point in the fight against global warming?

I hope Paris will be remembered as a starting point for effective climate policy and not a repeat of what we have seen over the last twenty years, where we have had negotiations and conferences and in the end emissions have increased. Despite the financial crisis, and despite the Kyoto Protocol, we have had record emissions growth over the last decade. The coal renaissance hasn't stopped in China, it has continued in India and we have by no means seen the emissions peak in China. Despite the undisputed progress of renewables, the emissions they have saved have been more than cancelled out by the growth of coal.

I hope this conference is a starting point for a new framework, with carbon pricing to incentivise carbon-free technologies and penalise the use of

carbon. We should also use the revenue from carbon pricing on investments like clean water and electricity that support the poor. In this way, we can design carbon pricing which is consistent with the reduction of inequality.

I think we need a new discourse along these lines. This is enormously important. Right now we are stuck, and I hope Paris can at least be the starting point for a reasonable debate. I'm not talking about making things a bit more efficient here and there – I mean real effectiveness.

The interview was conducted by
Ruby Russell | 17 Nov 2015

Interview Energy sector key to cutting CO₂, cannot do job alone

Uwe Franke, President of the German Member Committee of the World Energy Council and former CEO of BP Europe.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

UWE FRANKE: The establishment of a legally-binding agreement with clear long-term goals, a stable policy framework, and monitoring of progress. The lack of an international framework has created uncertainty in the energy sector, and an agreement is key to providing the certainty necessary to spur action. A successful agreement would send the appropriate policy and market signals to incentivise investment, while allowing for countries to utilise flexible instruments to achieve these goals. Furthermore, a successful agreement would include mechanisms to ensure accountability and comparability.

What do you think are the biggest challenges in the process?

The challenge is creating a comprehensive agreement while still taking into account the political, economic, and institutional differences across countries and regions. This requires managing the competing demands of the energy trilemma: environmental sustainability, energy security and energy equity. When it comes to energy security, many countries endowed with fossil fuels resources view decarbonisation as an existential threat. Other countries still struggling to provide access to electricity and lift people out of energy poverty have to balance energy equity concerns with environmental sustainability.

Enabling countries to balance these competing demands also requires the mobilisation of

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Uwe Franke. Photo: Weltenergiemat.

substantial financial investment to develop and deploy technology based solutions. Thus, formulating an agreement that sends the appropriate market signals to foster and spur investment in places where the funding can make the most impact is another major challenge.

What should the German role and the German objective in the negotiations be?

Germany should demonstrate leadership within the EU negotiating team and in its own right to encourage all countries to negotiate in good faith toward an international and binding agreement. Germany should help the EU speak with one voice and urge all stakeholders to come to the table. Germany has already experienced some diplomatic success in negotiating the G7 pledge to move away from fossil fuels, and could capitalise on the goodwill this engendered to build momentum toward an agreement.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

First, countries must design incentives appropriately. Germany's experience with the feed-in tariff for renewables and charges for the electricity grid – the cost of which ballooned over time and resulted in high electricity prices – should serve as a note of caution. Countries must think carefully about the long-term implications and costs of incentive schemes and policy designs.

Second, countries should ensure any low carbon policy design is based on market principles and sends appropriate market signals to spur investment and deploy appropriate energy resources. For

instance, one unintended outcome of the Energiewende is increased coal consumption while highly efficient natural gas plants sit idle, whereas it is exactly these natural gas plants which would complement renewables and help Germany achieve its climate goals.

Third, a transition must be holistic and integrated. This means encompassing all sectors, including transport, buildings, industry, heat and agriculture. Furthermore, such a transition requires investing in all parts of the system, including the grid, to assure new technologies will be integrated.

Fourth, the cost of the Energiewende may be too much to bear for many countries. However, each country should decide what they are willing to pay and who is willing to pay it. An open and inclusive dialogue about who is responsible for these investments and how to share responsibility between the government, the private sector, and the public is crucial. To strengthen the competitiveness of the economy should be key in the Energiewende. This is the most convincing argument for other countries.

Finally, no one size fits all. While there may be components of the Energiewende that other countries could adapt and adopt, different domestic resources and supply contexts, as well as different financial means, levels of development, and geopolitical and geographic characteristics, require tailored solutions.

How would you describe the role of the energy sector in the efforts to take effective action on climate?

The energy sector is crucial to efforts to mitigate climate and must be – and indeed is ready to be – part of the solution. It is impossible to achieve the 2 degrees Celsius target without the energy sector. However, it should not be the only sector expected to shoulder the responsibility, and a huge investment in the sector will be needed to do it. The energy sector can contribute to change across all sectors by pioneering new solutions and technology that can be adopted in other areas, including on the

demand side. Provided the proper incentives and policy framework, the energy industry can invest in new technologies to improve efficiency, decrease carbon emissions, and reduce energy intensity. But they cannot do the job alone.

The interview was conducted by
Sven Egenter | 13 Nov 2015

Interview World expects Germany to lead way with Energiewende

Jennifer Morgan, Global Director of the Climate Program at the World Resources Institute, who also serves on the German Council on Sustainable Development.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

Jennifer Morgan: A successful outcome is an agreement that has clear short and long-term signals and that will accelerate the pace and scale of change to the zero-carbon, climate-resilient economy. Absolutely central for this is a support package for developing countries, to help them manage the impacts and make the transition to that zero-carbon economy.

What do you think are the biggest challenges in the process?

The biggest challenge is that you have to get all the countries to agree by consensus. It's a massive process challenge – imagine any national parliament having to agree by consensus on such a complex set of issues. Obviously, different groups of countries have different priorities.

The poorest and most vulnerable countries want to make sure that there's a package that they feel will support them in this transition. This finance package – which is not only public money, but also about shifting private investments – is definitely one of the biggest challenges as well.

Do you believe the chances for a success have substantially increased since the last summit in Copenhagen?

There's certainly a greater chance of success in Paris, for a number of reasons. Compared to the situation before Copenhagen, renewable prices have

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Jennifer Morgan. Photo: © Rat für Nachhaltige Entwicklung.

dropped dramatically – this has created an economic situation that simply didn't exist before. It was seen very much as a choice between climate action and economic growth.

The second big shift concerns the US and China, who now act and cooperate on the highest levels, whereas before Copenhagen they were fighting with each other in the media. The announcements by those two countries have been game changers – no one can hide behind them anymore, and they both clearly want a success in Paris.

Thirdly, there is a much greater level of understanding of what a UN agreement can do and cannot do. Before Copenhagen, everybody thought: 'This conference will be the saviour and afterwards everything will be ok.' Now we know Paris is just one important moment along the transformation, it's not the end.

This time, there is also more pressure from more players. Now you see mayors, you see investors, you see business people pushing for an agreement. Having these other voices is incredibly important.

What is the German role and the German objective in the negotiations?

The Germans are definitely respected as being leaders, even if this position makes them feel uncomfortable. The country wants to get an agreement and provides an example through the Energiewende – proving that even a highly industrialised country can decarbonise its economy and grow it at the same. They also have been leaders in providing funding for developing countries. Germany's role is to really push the EU and other countries, to try and get the most ambitious and effective agreement that's out there.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

There are all kinds of lessons, but let me give you three. One is that you need a mix of policy instruments to get there. So, it's good to put a price on carbon, but that's not going to grow you renewables. You also need additional incentives for energy efficiency, for example.

A second lesson is that you need to think about building the politics while putting in place the policies. There is now such a strong coalition for renewable energies in Germany because with the feed-in tariff, incentives were being put in place for citizens, farmers, and other constituencies. This helps to keep those policies in place through changes in government, and it's important to pay attention to this issue. The idea of just shoving through the right policies doesn't really work. But, of course, there are also mixed lessons from this in Germany – for example on coal, it has been pretty hard. If you don't build a policy package to ensure a just transition for workers, you can get a backlash if you decide to go further. So in some areas, Germany has done quite well. In others, there is definitely more work to be done.

The last point is the importance of a long-term vision, like Germany's targets to cover 80 percent of power consumption with renewables in 2050 and cut greenhouse gas emissions by 80 to 95 percent. You need to have long-term signals to be able to think systematically and to ensure you're doing enough in the early years to make sure you achieve the climate goals.

What does the world expect from Germany?

In the lead up to Paris, people expect Germany – and especially Chancellor Angela Merkel – to work carefully with other leaders to find solutions. She personally has a lot of credibility and a deeper knowledge than any other head of state out there. There is an expectation in the lead up to Paris and

during the summit that she will invest a lot of her personal capital to make it a success.

After the summit, the world expects Germany to show the way, to be successful. When the *Energie-wende* started a few years ago, many people had no idea how the country was going to do this. But they also said if anybody can do it, Germany can. Because of the 'Made in Germany' brand, and because of the successful economic role Germany plays in the EU and globally, people expect Germany to figure this out and then to work with other countries to help them. Getting Intended Nationally Determined Contributions (INDCs) implemented will be a massive challenge. The credibility Germany has from the development perspective, combined with the experience and know-how on the climate front, is something that can be a great support for other countries. Everybody can learn from Germany's experience, technically and institutionally. We need to make this experience applicable to other countries, so they don't have to go over all of the bumps that Germany had to cross. I believe it's a huge opportunity for Germany's role in the world, but it needs to step into this more than it has been comfortable doing so far.

Do you believe Merkel's reputation as "climate chancellor" is justified?

From an international perspective, it is justified, even if domestically there is more work to be done. I have no doubt that she understands the science and what's at stake.

She managed to persuade the G7 to commit to decarbonisation by the end of the century. That was unexpected, is a big step and now one of the core options that's being negotiated. In a way, Paris is a great opportunity for Merkel. If the summit succeeds, it can provide more clarity, comfort, and certainty for the domestic debate within Germany. It will be further prove that Germany is not alone out there and nobody else is acting.

The interview was conducted by
Sören Amelang | 10 Nov 2015

Interview **We need global deal and national efforts**

Climate scientist **Daniela Jacob**, who is director of the Climate Service Center Germany (GERICS) in Hamburg which offers knowledge and advice on climate change to government, administration and businesses.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

DANIELA JACOB: It is really important that the negotiations lead to a new agreement to follow on from Kyoto, with a binding emissions goal to limit global warming to 2 degrees. But I also think that unless we successfully implement economic instruments, we will not succeed in this goal. These financial measures would probably be independent from any formal agreement and localised on a national level. I really hope that in Paris there will be representatives for each country who have the authority to make binding decisions on both emissions and finance.

What do you think are the biggest challenges in the process?

Transparency in the negotiations is very important. This will show the integration of different national interests. Dealing with conflicts of interest will be one of the biggest challenges. We are asking countries to cut back economically to reach climate mitigation goals. Finding the right compromise is a really big challenge.

Everyone benefits from emissions reduction but the costs fall on those countries making the reductions. Some countries are trying to “freeload” – to be less active on mitigation and let others carry the burden. So I think it is important that all nations agree to a multilateral approach to protecting the

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Daniela Jacob. Photo: Christian Schmid / HZG.

climate. The emerging economies must be included – Russia and China, but also India and Brazil.

It is a question of justice between developing countries and more industrialised countries. We have to negotiate acceptable levels of emissions reduction for developing countries to balance with economic and social development. You can’t really ask developing countries to slow down development. So I think this is a very difficult question. And then we come to the question of finding appropriate levels of compensation paid to the Global South by the Global North for its additional emissions.

What is Germany’s role in the negotiations?

Germany is quite a rich country and so we should play a leadership role in investing in climate funds for developing countries. Germany can also play an important role in the transition to a decarbonised economy. So I think Germany should move forward on implementing nationwide economic measures – in addition to the European Emissions Trading System (EU ETS) – such as carbon taxation. Of course there are economic considerations for Germany, but also opportunities for innovation towards a decarbonised society. Germany also has an important voice within the EU, so it is very important to show that the Energiewende can succeed without a reduction in living standards – to show that it is an opportunity, not a burden.

What lessons can other countries learn from Germany’s approach to cutting greenhouse gas emissions?

Germany has detailed goals on emissions reduction, which not every country has. Other countries can

hopefully learn that a strong push for renewables is possible, that it is financially viable, and that the transition to renewables doesn't have to impact security of supply. This is very important. I also think others can learn that a more integrated approach to the energy transition is important – bringing in heating and mobility as well as electricity. Although we are focusing on energy, many aspects of life and society are affected, so a systemic approach is needed.

Can a climate agreement in Paris prevent catastrophic effects of climate change?

We live in a changing climate and the impacts are already very visible – storms, melting glaciers, floods and landslides. We have to reduce emissions as much as possible. If we continue to emit then climate change impacts in the second half of this century will be disastrous. If we achieve the 2-degree goal we still have negative impacts of climate change in some regions but society will probably be able to cope.

At the same time, we have to implement adaptation measures to cope with today's changes in weather brought on by climate change. This has been less strong in negotiations because of voices saying that if you talk about adaptation you reduce the need for mitigation. But both have to be done. Implementing adaptation measures on the ground – which are also good for mitigation – is really important. For this we need local and national activities.

I think if we reach an agreement to limit global warming to 2 degrees we can avoid catastrophic consequences of climate change. It is important to stress that if COP21 fails to reach a global agreement it could mean the end of globally coordinated climate protection on a political level. But I think we need many bottom-up approaches too, like nationwide carbon taxes, for example. We need both a global agreement and efficient, effective instruments within the different nations.

The interview was conducted by
Ruby Russell | 05 Nov 2015

Interview Emissions trading is the key to climate protection

Katherina Reiche, managing director of the VKU German Association of Local Utilities.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

KATHERINA REICHE: We need internationally binding targets for saving greenhouse gas emissions in order to limit global warming to two degrees Celsius this century. Given the different starting points of the negotiating countries, this is an enormous challenge right from the outset. Even now, it is clear their pledges will not suffice for the two-degree goal. These targets will have to be reviewed and other mechanisms considered. As the representative of the municipal utilities and waste management in Germany, I can say that German municipal companies have accepted the political goal of climate protection. With combined heat and power, many municipal utilities have a very efficient form of energy production in their portfolios, saving nearly 11 million tonnes of CO₂ a year. Decarbonising the economy in the long term, however, can only succeed if companies have security in planning for the future. Huge investments are needed in clean technology. It is therefore important that in Paris clear and ambitious goals for climate protection are agreed.

What do you think are the biggest challenges in the process?

There are enormous differences and views on this subject. Add to this the large number of actors. Industrialised countries bear a heavier responsibility for climate change than developing countries, because they have emitted the most CO₂ in the past. Their economic growth

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Katherina Reiche. Photo: VKU.

over the last 100 years would not have been possible without fossil fuels. Of course developing countries are also striving for economic growth, which elicits more emissions. In the 1997 Kyoto Protocol, this legitimate desire for growth was acknowledged by requiring only a few industrialised countries to set mandatory savings targets. But the world has changed since then. China is now not a developing, but a newly industrialised country, and the nation with the highest emissions worldwide.

There exists the principle of common, but differently configured, responsibility. But each state decides for itself what this means. In light of this, it is very important that at least the European Union speaks with one voice.

What challenges are there at European level?

European emissions trading, which is for me the most important climate protection instrument, is a key challenge. It is market-oriented, so it adapts to the nature of markets, it offers flexibility and, in the future, the possibility of international networking with other carbon markets. That should be reason enough to strengthen this instrument. Unfortunately, the market is currently dysfunctional. Emissions rights are too cheap and they do not send adequate price signals.

What is the German role and the German objective in the negotiations?

Germany has set itself ambitious climate targets and that is a good thing. Within the positioning of the EU, Germany is also an important player. The German government has already been an important

catalyst for the UN Climate Change Conference in establishing mechanisms for monitoring climate protection commitments and for climate finance. Germany also plays an important role in the area of technological development and cooperation with emerging and developing countries.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

The energy transition in Germany is like a giant laboratory which is testing how to successfully decarbonise the energy supply. This has a signalling effect. Today we have much more renewable power in the grid. This is thanks to the Renewable Energy Act. Meanwhile, the share of power from renewables in total production is 25 percent.

Because policymakers have not managed to adapt the energy-policy framework to the altered conditions, this has paradoxically caused the most efficient fossil-fuel plants, the gas-fired plants, to no longer be profitable and has even led some to close. These are precisely the power plants we need to meet Germany's own climate targets. Only the political will of the federal government will remedy this situation. We see in the example of Germany that converting the energy system in an industrialised country is a tremendous feat. It must be considered and managed in an integrated way. Power supply, heating and cooling markets and efficiency technologies require holistic concepts that are adapted to local and regional conditions. In this area, I no longer see a holistic approach, but rather a patchwork, which is fraying ever more at the seams.

How do the municipal enterprises see the future?

Municipalities think globally and act locally. The energy supply is decentralized and local actors play an increasingly important role. Municipal companies are therefore predestined to shape the energy transition. Another advantage is that municipal services in Germany enjoy a very high level of

confidence among the population. Polls show this again and again. This is an advantage for projects like building pipelines or renewable energy plants. Although in principle most people support the energy transition, citizens do not always want these projects built near where they live and work. In this respect, municipal enterprises can play the role of mediator.

In addition, there are some very ambitious projects for climate protection at the local level in Germany: The highly efficient combined power and heat technology is a domain of public utilities, while municipalities are driving forward energy efficiency measures in buildings, the development of low-emission transportation and renewable energy. They will continue to do so. Last but not least, the consequences of climate change must be dealt with at the local level. In particular, flooding caused by heavy rain and storms has increased dramatically in recent years.

The interview was conducted by
Ellen Thalman | 02 Nov 2015

Interview **Paris deal** “no guaranteed home run”

Karsten Sach, Deputy Director General “European and International Policy” in the Environment Ministry who has been Germany’s chief negotiator at UNFCCC climate conferences since 1999.

CLEW: A last round of preparatory negotiations for the COP21 meeting has just finished in Bonn. The draft text they discussed was heavily criticised both by the EU and the group of developing nations and China (G77). What did you make of the draft and talks in Bonn?

KARSTEN SACH: We aren’t exactly where we want to be yet after this round of negotiations in Bonn. Particularly the G77 and China, representing a large number of developing nations, have proposed amendments and we can see that some nations are more interested in delaying the negotiations while others wish to see clean copy that resembles the final treaty and that can be worked with.

But the 20-page document at the centre of the negotiations in Bonn was first and foremost a great leap forward because it was brief copy in legal terminology. There were definitely passages that weren’t balanced enough and it lacked a bit of ‘meat on the bone’, particularly when it came to clarity around a long-term climate goal, clarity regarding a mechanism for ratcheting up ambition over time, and clarity regarding accounting rules. This is where we saw room for improvement and now there are very good options for these issues in the new draft. But there are also still things that we don’t like at all about the draft.

And what are those things?

The issue of differentiated responsibilities, for example, where some developing countries are trying

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Karsten Sach. Photo: IISD/ENB.

to further the strict separation of the world into two parts according to the status of 1992. The point of differentiated responsibilities is that everybody accepts that obligations are shared – but also that those obligations depend on the specific capabilities of each country. Industrialised countries are protesting against establishing different systems for review or transparency by differentiating only between groups of states. What we need are differentiated obligations according to the individual country’s capability for climate action, but also uniform review and transparency mechanisms. In the end it is a question of equity and about a fair split of obligations. I see this as the biggest challenge at the Paris negotiations.

Another very contentious issue in Bonn was climate finance, where the G77+China made a stance that seemed to have the potential to endanger a positive outcome of negotiations in Paris. How can this issue be resolved?

I am convinced that we can also find a compromise on this issue. Industrialised countries are well on track to fulfilling their promise of mobilising jointly 100 billion USD annually as of 2020 for climate action measures in developing countries. This includes both public and private funds. A recent OECD (Organisation for Economic Co-operation and Development) report shows that we already reached 62 billion USD in 2014. Parts of the remaining gap will be closed by Germany and the UK, who announced plans to double their contributions, and by promises by financial organisations such as the World Bank to do more. So we can give a reliable commitment that we will fulfil our joint promise by 2020.

But we also have to make sure that more climate finance is available after 2020. This will go hand in hand with changing the system. It has to evolve from one of few donors and many recipients to a system where more states, also contribute to the Green Climate Fund to increase the donor base. Some states, such as Korea and Mexico, or even Mongolia, have already taken this step. At the same time, the enabling conditions in the countries which receive climate funding have to be improved. This includes making investment conditions better by getting rid of distorting subsidies. Now all these aspects need to be put into the agreement.

What has to be in the Paris agreement in order for you to deem it a success?

Firstly, we need a legally-binding treaty with a clear long-term climate target, ideally a decarbonisation target. Secondly, there has to be a mechanism for ratcheting up of ambition over time – states have to think about how they can increase their level of climate action every five years. This should include the principle of “no backtracking”. And thirdly, we need clear rules on transparency and reference to ensure comparability so that we are able to see whether things are going well or not. We also need a long-term goal for climate adaptation and clear support for capacity building when it comes to the implementation of renewables or carbon emission trading in developing countries. We need more public and private climate finance by a larger group of states. That all belongs in the treaty and, for me, these are the terms of success.

Overall, we need a solid, robust and fair treaty. This treaty is supposed to last for decades. Therefore, it needs to be both modern and ambitious, so that it can account for changes in the ecologic reality without having blind spots about who in the past contributed most to climate change. And this needs to be complemented by ambitious Intended Nationally Determined Contributions (INDCs).

What lessons can other countries learn from Germany’s approach to cutting greenhouse gas emissions?

Other countries can learn from Germany that it needs a wide-ranging civil society dialogue to have a transformation process like the energy transition. They can see that it needs new institutions for the transformation and instruments that bring new players into the energy market – this is the big success of the Renewable Energy Act in Germany, which helped to introduce new investors to a new form of energy. It also challenged the old energy industry establishment. They can also see that a highly industrialised country with a power system largely based on coal can, in fact, change. But another lesson learned is that it is not easy – that it needs a societal process where regions which are losing out in the process have to be supported. Germany should communicate the clear course that it has set itself with regards to climate action. But we should also openly say that not everything is perfect and that we are organising a learning process which will inevitably include trade-offs. But we have started this process because we are firmly convinced that the opportunities are bigger than the risks.

What will be the German role in the negotiations?

We are an important part of the EU negotiating team. Germany stands for living transformation and our ambition is a good investment signal for the economy. At the G7 meeting in Elmau earlier this year we have brokered ambitious decisions, like the G7 commitment to decarbonising the global economy over the course of the century, as well as making sure that we keep our promises on climate finance. Of course we will continue to play a constructive, progressive role in the climate negotiations.

You are a climate conference veteran. What is different in the Paris negotiation compared to Copenhagen?

The difference is that the reality out there has changed. This becomes visible in the very strong

climate declarations from the US and China and the agreements between Germany and India, and Germany and Brazil. The big players have invested a lot into the process and therefore want to see results. Also, economic realities have changed: renewable technologies are affordable and competitive; it makes economic sense to install them in the global south. Because of these learning curves we now have a very different situation compared to 2009 in Copenhagen. Another reason is that we have the INDCs from around 160 states covering around 90 percent of the global emissions – even if the standard of the contributions varies quite a bit. But there are obviously also still a lot of conservative elements who have been in the climate negotiation process for a long time, and changing realities also means uncertainty and things become harder to put into writing. Conditions are a lot more favourable than they were in Copenhagen but it doesn't automatically make Paris a guaranteed home run. So a lot of work and tough negotiations are ahead.

If you are not successful in Paris, will you keep following the goal of a binding climate treaty?

We will succeed.

The interview was conducted by
Kerstine Appunn | 29 Oct 2015

Interview Machinery makers to benefit from global climate deal

Naemi Denz, member of the executive directorate at German Engineering Federation VDMA where she is in charge of technology and environment.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

NAEMI DENZ: From the perspective of the machinery and engineering industry, which has developed climate protection technologies, but also is keeping a watchful eye on the cost burdens in its value chains, the result must have four elements. These are: to achieve sustainable progress in climate protection, to formulate clearly defined goals, to share as equally as possible the burdens and opportunities for all suppliers in our sales markets and to maintain an overview of the impact on the entire industry.

What do you think are the biggest challenges in the process?

As with other recent climate change negotiations, the biggest challenge is to mediate between developed and emerging markets. The industrialised countries are demanding greater engagement from the rest of the world. By contrast, the emerging economies want a fair chance for their own, self-determined growth. This is a fundamental conflict, but also one that is not insurmountable. China, for example, is already a world power on the global market, but is still aiming for significant economic growth in many regions. The Chinese government has already proven that it can invest heavily in climate protection, but is pushing back against a binding agreement. The industrialised countries also cannot agree on steps for concrete

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Naemi Denz. Photo: VDMA.

implementation. Personally, I am doubtful as to whether the motto, “Everyone does what he wants and can” is the right answer for the long-term.

What is the German role and the German objective in the negotiations?

Germany has traditionally been a driver and facilitator and should remain in this role. We have a vital interest in getting as many countries as possible to participate if we want to achieve our own ambitious goals. But we also have to be realistic about this scenario. On the world stage, it is always more effective if the European Union acts in unison, and even that is not a matter of course. Therefore, Germany should use its standing to help Europe present a unified position and represent the European agreement along the lines of the climate and energy package agreed for 2030.

What lessons can other countries learn from Germany’s approach to cutting greenhouse gas emissions?

The individual conditions in the various regions of the world are different. In this respect it is rather difficult to draw fundamental lessons. But some key issues are clearly evident. First, energy efficiency deserves more attention. To increase energy efficiency is always a direct form of climate protection, regardless of whether intelligent systems make buildings more efficient, precision machines operate with high efficiency or we use digitisation to optimise Industry 4.0 processes.

Second, the transition to renewable energies is not a very simple undertaking. The German Renewable Energy Act has helped greatly to orga-

nise the entry into renewable energies. But we have also seen that we failed to adjust this process quickly enough. The current transition to a competitive tendering system makes sense. For this we need – now that about one third of our electricity comes from renewables – efficient approaches to system integration and the linkages between sectors.

Thirdly, Germany has achieved a large part of its climate goals by closing and sealing landfills and reutilisation of landfill gas. Developing and emerging countries have an easier time, because their current challenge is to build a reliable energy market, and, if they want, a modern waste management system. A low-carbon economy is easier to create in an economy still in the midst of growth, than in one that is already mature.

Incidentally, it is important to stress that Germany can be proud of the fact that it has paved the way for solutions for the rest of the world, as a pioneer of climate-friendly and efficient technologies. That wind and solar power can be used in developing countries today has much to do with the learning curve in Germany. We have built a competitive industry for wind energy. For various reasons, this did not work out in photovoltaics.

Can a global climate agreement harm German industry?

From the perspective of the machinery industry, a global agreement would first of all bring great benefits! The opportunities are immense. If the interest in efficient technologies continues to rise, if production and processes are designed to be low in emissions, and if renewable energy and system solutions are required, then we may receive what we like to call the “energy revolution-dividend”. Our industry would only suffer if an agreement includes heavy burdens or limitations in comparison to the regulations that apply to our direct competitors’ industry. The former would come from higher costs, and the latter from restrictions such as unilateral constraints on exports, as we are seeing currently

in coal power plants. For these, the OECD countries may block export credit coverage; but this does not prevent a single power plant from being built, as our competitors from China do not have to adhere to these rules.

The interview was conducted by
Ellen Thalman | 21 Oct 2015

Interview **Global South should be capitalised**

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Sabine Minninger

Sabine Minninger, policy advisor on climate change for German aid agency Bread for the World. Since 2008 Minninger has followed the UNFCCC process together with partner organisations in the global south.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

SABINE MINNINGER: A success would be a legally binding global agreement that will keep global warming well below 2 degrees Celsius until the end of the century. This must be anchored in measurable, reportable and verifiable (MRV) regulations, so that all countries have to follow the same rules, and mitigation efforts are measurable, transparent and comparable.

Of course, from the perspective of a development organisation like Bread for the World, the agreement has to respond to the needs of the poorest people in the global south who are vulnerable to climate change. There are islands in the South Pacific where resettlement programmes are already going on – this is not in 20 years, this is now. Loss and damage has to be anchored in a globally binding agreement.

What is most important for this agreement is long-term vision. And therefore there must be language on decarbonisation, close to that of the G7 agreement. At best, we need a commitment to global decarbonisation by mid-century. Or as a second best, within the century. The end of fossil energies has to be anchored in the global climate agreement. If this is not included, it will be a worthless piece of paper.

What are the biggest challenges to reaching a meaningful agreement?

We have already failed to meet the major challenge: to get legally binding commitments from

all states to reduce their emissions. This chance has been missed. The INDCs (intended nationally determined contributions) will not make it into the global agreement – only into a COP decision, which remains voluntary. And these voluntary measures are not enough to keep warming below 2 degrees. The commitments on the table will allow warming of 2.7 degrees, and of course we cannot accept this. It will be a human catastrophe. If this cannot be renegotiated in the next three months then we have to have an option to keep global warming below 2 degrees and that means every five years we will have to review and ratchet up national commitments.

Low ambition means efforts must now be targeted to a five-year renegotiation cycle. What is also key is that the agreement must have a robust MRV system. So far, everyone can do what they want, when they want, and how they want. And there is no transparency, so we cannot see who still has to step up their ambition in order to keep global warming below 2 degrees.

The 2-degree limit and full decarbonisation are the vision. The concrete action is the five-year renegotiation cycle with a ratcheting-up mechanism and the MRVs. This is the architecture. The house we are building will not be finished in Paris. Actually, we are just drawing up the architectural plans. And after 20 years of negotiation, those plans look lousy. Without the proper architecture everything that follows will collapse.

Now the bargaining starts. The European Union is desperate to have the five-year cycle. But the bargaining chip will be climate finance. There must be a long-term commitment to climate finance

with clear pathways and sources. There must be predictable, additional money that allows for planning and does not draw down existing development funds. This will be the trigger for countries like China, for example – which is not a big fan of a five-year cycle – to reconsider their position.

The African states have always been big friends of the European Union and have supported it on higher mitigation ambitions. But they have now shifted their emphasis away from mitigation to climate finance adaptation measures because they are desperate. We need a signal to the African states: We support you on your adaptation efforts but now please come back on track and really support us on mitigation.

Is Germany doing enough on climate finance?

On a global level we have a shortfall of close to 70 billion US dollars from the 100 billion targeted, and no one knows how to close this gap by 2020. It is hard to criticise the country that has been the most ambitious. I am glad that Germany has committed more money than any other country. Germany has put what it believes to be its fair share of money on the table: 4 billion US dollars, in order to trigger 6 billion in private finance to make up a share of 10 billion. But we don't believe it works like this. We still don't know how much private finance will be triggered. On mitigation, public money will trigger investment in renewable technologies, for example. But on adaptation we won't see that effect.

The most ambitious player has a responsibility to set the benchmark. We see a danger that if Germany commits 4 billion US dollars, no other country will better that. There is a responsibility to reach the 100-billion-dollar target and we believe it must be public money. Is Germany's contribution enough? No.

What is Germany's role in the negotiations?

I can tell you what role Germany should play. I believe the EU's climate targets are not enough.

Also, the German targets are miserable in that they haven't even achieved the last targets they set. What this means is that we need a very concrete announcement before Paris that Germany will exit from brown coal. Germany must stop extracting brown coal immediately to signal that it is serious about reaching its targets. The Energiewende can only be achieved if we stop using fossil fuels – and that of course goes hand-in-hand with better use of renewables.

What lessons can other countries take from Germany's approach to cutting greenhouse gas emissions?

That Germany was the first country to announce its energy transition was a remarkable step forward and deserves respect – if it is actually implemented. Germany is at the forefront of convincing other countries to reduce emissions and motivating them to follow their concept of the German Energiewende. The rest of the world is watching this process. Germany's position needs to be made clear before Paris. You can see how strong the coal lobby still is in Germany. There is a lack of political will and we have to do better. The German Energiewende has to be a success story. If Germany's energy transition fails, other countries won't be prepared to take the same path.

The interview was conducted by
Ruby Russell | 12 Oct 2015

Interview EU must speak with one voice

Reimund Schwarze, professor for international environmental economics at the Helmholtz Centre for Environmental Research in Leipzig. He has done extensive research on the economy of climate change, sustainable development and climate change policy.

CLEW: What would you consider to be a successful outcome of the Paris climate conference?

REIMUND SCHWARZE: What we need is a basic, wide reaching climate treaty that everyone can support. The architecture of such an agreement is pretty much in place. I would measure the success of Paris in terms of agreeing on such a basic treaty and not in terms of binding emission targets. Since Lima we have the countries' climate action pledges (INDCs) which will be part of a dynamic monitoring process spread over several years. If the main targets of decarbonisation as well as reaching an emissions trend reversal by 2030 – which seems to be possible when looking at the INDCs so far – are incorporated in a global treaty, I am satisfied.

What do you think are the biggest challenges in the process?

The biggest challenges in Paris are to find a consensus for this basic treaty and to give it a strong framework of general principles that are supported by all nations. This should include – from my view as an economist – the long-term target of achieving decarbonisation with economic instruments such as a price for carbon. It is also very important that the treaty incorporates the obligation of rich nations to give 100 billion dollars or more for climate finance. I am saying “or more” because I think that more than the promised 100 billion dollars per

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Reimund Schwarze

year by 2020 will be needed. This part is essential to make the treaty acceptable also for developing countries. Apart from that, I really hope that a ‘diplomatic disaster’ like 2009 in Copenhagen can be avoided and that geopolitical problems such as the Russia-Ukraine conflict, IS or refugees from Syria – as well as the loss and damages issue – will be settled to a degree that they won’t interfere with negotiations in Paris. If this succeeds, I am overall very optimistic that a basic treaty will be achieved in December.

You are a strong proponent of a price for carbon – where will such a price mechanism play a role in the Paris negotiations?

In order to make the national climate targets of the INDCs work, we don’t only need a monitoring process – we also need a price mechanism. This is why incorporating a target for a price for carbon into the basic treaty in Paris is so important. I am obviously passionately supporting a global emissions market. But I don’t believe that Paris will reach an agreement that sets one carbon price for the world which then gets implemented by the UN. However, it’s important that the basic principle gets embedded and then every country can implement mechanisms like carbon trading, or a carbon tax or whatever they choose, themselves. Even if this results in different carbon prices in different countries, it would still reduce carbon leakage, compared to a world where only a few nations or groups of nations have carbon prices and others have none. And it will kick-off a dynamic process, like with the INDCs, that can lead to achieving a long-term goal such as a global carbon market.

What is the German role and the German objective in the negotiations?

I think Germany plays a minor role in the climate negotiations. The most important objective for Germany is to keep the European Union together and make sure that it acts as one and is visible as a strong negotiating partner. The real debates will be between the US, China and the developing countries – and in order for the EU to participate, it's important that it speaks with one voice.

What lessons can other countries learn from Germany's approach to cutting greenhouse gas emissions?

Germany has so far not found a way that demonstrates how climate action can be cost-efficient. As a rich country, Germany can afford to implement a costly energy transition (shift from conventional to renewable energy) but other countries in the EU and other parts of the world don't have the same economic means. The task is to find a way of building a green economy in an affordable fashion. Neither Germany's energy transition nor the European emissions trading system are convincing approaches at the moment. Germany's solo attempt at creating social and technological breakthroughs and hoping that the world will follow has not worked out because this was only possible in a rich country like Germany. The energy transition is a luxury model – what we need are broadly applicable approaches to avoid carbon leakage and this is going to be a very long process.

The interview was conducted by
Kerstine Appunn | 12 Oct 2015

that his delegation was opposing the “strict separation of the world into two parts according to the 1992 status”. Germany instead advocates sharing obligations, depending on the specific capabilities of each country. This should also be reflected in uniform review and transparency mechanisms.

The question of common but differentiated responsibilities and respective capabilities affects a lot of aspects, including mitigation, climate finance and reporting obligations, Sach said in Berlin in November. If this issue was solved, a lot of the 1,500 parenthesis indicating different options for wording in the negotiating text will disappear, he said.

German chancellor Angela Merkel has made it clear that she deems responsibility for climate action to be resting on many shoulders, including emerging economies. Merkel acknowledges that industrial nations have contributed heavily to climate change and in May 2015 called it an “act of equity” to drive innovation in efficient technologies that can help poorer countries. Developing nations need financial support to mitigate against and adapt to climate change, Merkel said. But she also stressed that “fair and binding rules for both industrialised and developing countries” were needed in order to secure global investment into low-emission development. It was important to show emerging nations that economic growth and climate action can be done at the same time, Merkel said in 2011.

INDCs

Intended nationally determined contributions (INDCs) are the pledges that each country makes to reduce emissions and tackle global warming. They are seen as a move away from the top-down

approach of binding international commitments towards a bottom-up approach of deciding what action each country will take.

Countries have taken different approaches to their pledges, based on their individual circumstances and capabilities. Some give fixed goals for emissions reduction, others give targets for reduction compared to a business-as-usual scenario. A few have set targets for peak emissions years, while others have included adaptation measures as well as mitigation.

The EU submitted a collective INDC for all member states, committing to a 40 percent reduction in greenhouse gas emissions by 2030, compared to 1990. Climate Action Tracker has assessed this goal as “medium” – i.e. below the level regarded as “sufficient”. The 28 member states will not all make the same contribution to achieving the EU-wide goal. Germany’s domestic climate targets are more ambitious than the EU’s: it aims for a 40 percent reduction in emissions by 2020. However, both Germany and the EU are currently struggling to meet their targets. The German government passed a “climate action programme” in 2014 designed to cut an extra 87 million tonnes of CO₂ in order to keep it from falling 7 percentage points short of its 2020 reduction target. In a recent progress report, the European Environment Agency (EEA) found that current EU policies were not suf-

Heading the German negotiation team: (from left) Environment Minister Barbara Hendricks, Environment State Secretary Jochen Flasbarth, Chief negotiator of the German delegation Karsten Sach. Photos: BMUB; © IISD/ENB.



ficient to meet the 40 percent target by 2030. These projections, however, did not take into account new policy proposals.

The German government stresses that the INDCs – and the prospect that if fully implemented they could limit global warming to 2.7 degrees Celsius – are an “encouraging sign”. The bottom-up approach of the INDCs means that governments come under pressure from their electorate if they are not complying with climate action targets or are not increasing ambition when necessary. This approach must be backed by a robust monitoring and measuring system that makes sure the efforts of every country are transparent and comparable, state secretary Jochen Flasbarth said in Berlin in November (see also “Ratcheting-up ambition”). “Us Europeans were definitely not in love with the bottom-up approach in the beginning but it has led to an incredible dynamic and to pledges that are able to achieve a 2.7 degrees Celsius warming limit. We have chosen the right way,” Flasbarth said.

But if countries choose to not comply with their emission targets or to not raise ambition, they will not face any legal repercussions on an international level despite transparency and monitoring obligations. That is, unless national emission reductions became part of the legally binding treaty with strong compliance mechanisms (see also “Legally binding treaty”).

Ratcheting-up ambition

INDCs submitted ahead of the final negotiations fall short of keeping global warming below 2°C. This explains why there is a broad backing for a “ratcheting-up” mechanism to review targets, and a growing consensus that ambition should be raised every five years.

UNFCCC Executive Secretary Christiana Figueres has said that finding a way to raise ambition is key to the Paris talks. “I am confident that these INDCs are not the final word in what countries are ready to do and achieve over time,” she said.

Germany supports the principle. Environment Minister Barbara Hendricks said after international climate negotiations in Bonn in October: “For months Germany has been strongly in favour of an ambition mechanism being included in the climate agreement – a provision that countries review what additional contributions they can make every five years.”

A draft text of the climate agreement released in October suggested that new pledges for mitigation efforts would be submitted every five years and refers to a “global stocktake” taking place at regular intervals. Countries are to assess the “aggregate progress” of their efforts and consider the “best available science” to enhance the fight. Opinions when to schedule the first assessment, in 2020, 2025 or 2030 differ.

The German negotiators favour a first assessment in 2030 because this would agree with the timing of the targets in the EU and Germany (which are set for 2030), state secretary Jochen Flasbarth said.

Legally binding agreement

What will compel countries to honour their INDC pledges? Germany would like to see a legally-binding agreement forcing nations to comply with their INDCs, with progressive increases over time and a long-term decarbonisation target. “The new treaty must and will be binding according to international law,” Environment Minister Barbara Hendricks said in September 2015. Germany would also like it to hold countries responsible for their climate change mitigation and adaptation pledges – aiming to provide 100 billion USD annually as of 2020 to developing countries.

“This is about no more and no less. Everyone who is familiar with the material knows what this means – that we get a binding climate agreement. It is completely clear: the word ‘binding’ sets high standards. But we have to achieve it,” Chancellor Angela Merkel said at the Petersberg Climate Dialogue in May 2015.

But what does this mean specifically? Theoretically, all who signed the UNFCCC in 1992 already made a legally-binding commitment to curb rising temperatures and slow climate change. The problem is getting countries to commit to actual procedures for evaluation, and measures for enforcing that commitment.

In 2011, countries agreed to come up with a legal enforcement mechanism by the end of 2015. But the extent to which emissions reductions targets will actually be included in any agreement is still up in the air. The German government would be happy to sign up to such a binding agreement but reservations in the US, China and other countries make it unlikely that the treaty will hold countries to their pledges. Even if they are included, the treaty may only require countries to make a ‘best effort’ – while not actually sanctioning those who do not meet their goals. It may, however, make having a national plan for climate action in domestic legislation mandatory.

Long-term goals

Long-term goals (LTGs) are big-picture drivers of worldwide efforts to avert climate disaster. The precedent for LTGs already exists on the global stage, as leaders have previously committed to two long-term principles: stabilising greenhouse gas concentrations at a level that would prevent dangerous climate change, and limiting global warming to 2° Celsius – the former specified in Article 2 of the UNFCCC and the latter set out in the Copenhagen Accord.

The goals can also be more tangible policymaking targets, such as CO₂ budgets and specific emissions reduction aims. Climate finance to help developing countries in the period after 2020, and climate change adaptation strategies are also LTGs. It is still unknown to what extent LTGs will be included in the Paris agreement, but around 120 countries have already said they want to show some kind of long-term commitment.

Germany would like to see ambitious LTGs included in any final agreement at the UN COP21 summit in Paris in December. Environment Minister Barbara Hendricks has said the goal of a climate-neutral world economy should be written into the agreement in order to “send a strong signal”. Specifically, it should include a clear recognition of the 2°C goal and the need to decarbonise the economy this century, backed by concrete measures like stepping up emissions-cutting targets at regular intervals. Germany also wants an agreement on providing climate finance and climate adaptation. “A clear long-term target is necessary as a signal for investment into a low-CO₂ economy,” Rita Schwarzelühr-Sutter, state secretary in the Environment Ministry, said in Berlin in November.

Decarbonisation or zero emissions

A key area under discussion as an LTG is zero emissions or decarbonisation. The Intergovernmental Panel on Climate Change (IPCC) said in 2014 countries needed to cut greenhouse gas emissions to near zero if they wanted to stop the planet from warming by more than 2°C this century. “Decarbonisation” is considered the strongest expression because it would make clear to the financial market, investors and to every business in the world that cutting CO₂ was a global agenda, German head negotiator Karsten Sach told the Clean Energy Wire. “Zero emissions” would be the second strongest wording, he said.

The G7 industrialised countries Japan, Germany, the US, the UK, Canada, Italy and France said they supported a global effort to decarbonise after their meeting in Germany in June 2015. In a joint statement that aimed to set the tone for the Paris summit, they emphasised that “deep cuts in global greenhouse gas emissions are required with a decarbonisation of the global economy over the course of this century”. More specifically, they called for a 40-70 percent cut by 2050 over 2010 levels. Chan-

cellor Merkel echoed this position in her speech concluding the June G7 meeting.

Germany's Environment Minister Barbara Hendricks told parliament in November: "We need a green zero, this means zero CO₂ emissions from fossil fuels within this century; we have called this decarbonisation before. [...] Our way to run our economies has to fundamentally change."

The G7 did not go so far as to say how zero emissions would be reached; for example, whether strategies that offset emissions would be used for a so-called "net-zero" effect. This is when some emissions are allowed, but are neutralised. Emissions like those from aircraft or agricultural production are balanced out by planting forests or the use of "negative emissions" technology such as bioenergy with carbon capture and storage, which removes carbon from the air. But the use of these technologies is controversial.

Germanwatch said after the G7 summit that the post-2050 goals rely too much on risky negative emissions technologies and that a quicker path to cutting emissions was required. It said global emissions needed to "sink to zero by the year 2070", and "the world economy must be fully decarbonised by then".

Adaptation

COP21 aims to not only slow global warming, but also to agree measures to cope with its impact, such as floods, droughts and rising sea levels. The countries most affected by global warming are mainly developing nations in the Global South. They argue that richer countries responsible for the bulk of historic emissions need to put up funds to help those worst affected by climate change to adapt.

The Adaptation Fund was established under the Kyoto Protocol and has been active since 2009. At the Warsaw Conference in 2013, countries pledged over 100 million US dollars to the fund, with Germany contributing the largest share at

€30 million. In 2014, Germany pledged another €50 million to the fund. At the Petersberg Climate Dialogue in May 2015, Merkel announced that Germany had made €1.5 billion available in loans for adaptation measures in developing countries through the KfW development bank since 2005.

A report into climate finance mobilised in 2013/14 released by the Organisation for Economic Co-operation and Development (OECD) in October found that just 16 percent went to adaptation. A 2014 report by the United Nations Environment Programme (UNEP) found that adaptation costs for developing countries could reach two to three times the previously estimated 70 billion to 100 billion US dollars per year by 2050. It predicted there would be a serious funding gap post-2020 unless new funds were made available. The UNEP report also named Germany as one of the biggest contributors to adaptation-targeted climate aid (p. 29).

Loss and damage

Loss and damage (L&D) refers to the disadvantages and impacts of climate change that countries and people cannot adapt to. Both legal and technical questions, including how to calculate costs, and how to manage and respond to loss and damage, remain unresolved. The legal issue centres on whether rich countries that have been responsible for the bulk of historic emissions have to compensate those that suffer the consequences.

The Warsaw International Mechanism institutionally embedded loss and damages in the international climate regime in 2013. It provides a platform for increasing the understanding of climate consequences and finding appropriate tools to address loss and damage. But the details of how this will work are not expected to be hammered out until 2016, after the Paris conference. The group of G77+China are now pressing for L&D to be addressed in the Paris agreement. Industrialised countries are, however, wary of being held accountable for their "carbon debt". The EU's vision for the

Paris agreement, set out in February 2015, has been criticised for failing to mention L&D at all.

State secretary Jochen Flasbarth, from the Environment Ministry, said the government would do what it could to make sure that L&D received a suitable mention in the Paris agreement, Bread for the World reported.

Germany's head negotiator Karsten Sach said at a briefing in Berlin in November that it would always remain difficult to connect a particular extreme weather event and the resulting damage to climate change – which makes compensation claims for these events impossible. He stressed that the Warsaw mechanism should be upgraded by being incorporated into the Paris agreement.

The G7 agreement reached in Germany in 2015 includes the aim to make “direct or indirect insurance coverage against the negative impact of climate change related hazards” available to 400 million people in developing countries by 2020. This has been interpreted as a reference to L&D because one of the mechanisms to address L&D is climate impact insurance.

German NGOs Bread for the World and Germanwatch demand a separate chapter in the climate treaty just for L&D, saying that it should be increased the more temperature rises.

The Heinrich Böll Stiftung has proposed that the most polluting companies – or “Carbon Majors” should carry the burden of L&D compensation. There are 90 companies classed as Carbon Majors, which between them are estimated to be responsible for nearly two thirds of carbon emissions currently in the atmosphere. Three – RWE, RAG und HeidelbergCement – are German firms.

Climate finance

In the Copenhagen Accord of 2009, developed countries pledged to contribute 100 billion USD in climate financing per year by 2020 “to address the needs of developing countries”. Climate finance can come from public and private sources

and can be paid according to bilateral or multilateral agreements. A “significant portion” of the funding is to be channelled through the Green Climate Fund.

In October 2015, the OECD presented a report, commissioned by the donor countries, finding that climate finance by developed nations had reached an annual average of 57 billion USD in 2013 and 2014, and 62.8 billion USD in 2014 alone. Some 71 percent of these funds came from public sources. Industrialised nations regard this sum as an achievement but developing nations dismissed the OECD report, saying it included other developing funds re-labelled as climate finance, credit guarantees and re-payable loans.

The 2020 finance goal may not be part of a Paris treaty (which will not come into effect before 2020) but it will still influence negotiations as many developing countries see it as a pre-condition for trusting the pledges of industrialised nations. Furthermore, developing countries want Paris to arrive at a legally binding target for long-term climate finance after 2020.

Merkel has stressed that she considers climate finance to be one of the make-or-break issues of the Paris climate negotiations. The agreement on the annual 100 billion USD for climate finance was one of the few positive outcomes of the Copenhagen summit, she said in May 2015. But in order to reach a consensus in Paris, a clear schedule on how the gap between the 100 billion USD target and the money accrued so far can be closed, had to be laid out. She added that climate finance would have to focus on the poorest nations because they were also the most affected by climate change. Emerging nations, on the other hand, would be able to finance the necessary investment themselves.

Talking to NGOs in November, Norbert Gorißen, head of the International Climate Finance division in the Environment Ministry, said that international climate finance had to become more transparent, easy to plan, and predictable – something that could

be achieved in the Paris agreement. A quantitative climate finance target, on the other hand, was not the objective of the negotiations. Gorißen said that for post-2020 climate finance the circle of donor countries had to be expanded to include rich nations currently falling under the Non-Annex I “developing” country status (e.g. Saudi Arabia, Qatar, United Arab Emirates who are rich countries with high per capita emissions). “It’s not because we want to shirk from our obligations, but the task at hand is so large that we need more donors and this is also in the interest of least developed countries and the small island states,” he said.

After their June 2015 meeting in Germany, the G7 heads of state and government announced that they wanted to quadruple the amount of people insured against climate change-related weather damage to 400 million by 2020. They also announced an initiative to make renewable energy sources available to African countries.

Germany supports developing countries in the areas of emission reductions, forest conservation (REDD+) and adaptation to climate change. The government announced this year that it would double its climate finance by 2020 compared to 2014. Public funding by 2020 will amount to €4 billion, with another €6 billion leveraged from private sources, the Environment Ministry says. “These €10 billion make up around 10 percent of the whole 2020 pledge. I believe that’s a more than fair share coming from Germany and I think most people see it that way,” state secretary Jochen Flasbarth told journalists in Berlin.

“The most ambitious player has a responsibility to set a benchmark,” Sabine Minninger, from Bread for the World, told the Clean Energy Wire. “We see a danger that if Germany commits 4 billion USD, no other country will better that.”

The Green Climate Fund has recently approved its first eight investments, among them an 80 million USD project which is partially funded by Germany’s state-owned development bank KfW (15 million USD) for flood protection in Bangladesh.

NGO-run website German Climate Finance monitors the country’s climate action funding. It found that the government’s contribution, and particularly information on actual projects and their implementation, lacked transparency. It criticised Deutsche Bank becoming a partner of the Green Climate Fund since it is a financier of the coal industry. Critics also denounce that KfW still provides financing for coal plants abroad.

Price on carbon

Putting a price on carbon can take different shapes, such as emissions trading systems or carbon taxation. It is favoured by many economists as a market approach that makes polluters pay for their emissions and thus reduces CO₂ while stimulating growth of clean technologies. Germany’s chancellor Merkel is among the proponents and recently joined the Carbon Pricing Panel, an initiative launched in October by World Bank Group President Jim Yong Kim and International Monetary Fund Managing Director Christine Lagarde, with support from the private sector. Its website quotes the chancellor saying “Carbon pricing makes investments in low-carbon or carbon-free technologies attractive and ensures that fossil fuels are used efficiently”.

Germany is part of the EU emissions trading scheme (ETS), currently the world’s largest cap-and-trade carbon market. A surplus of allowances in the market means most experts agree it has not been effective at reducing emissions. Speaking at the Petersberg Climate Dialogue, Merkel stressed the importance of carbon pricing and strengthening the ETS, hinting at the potential for a global carbon price, or measures to facilitate trading between schemes. “Our aim must be to have a global carbon market with a robust and reliable CO₂ price signal. Then we could set incentives worldwide for achieving our climate targets in a cost-effective way,” she said.

Nonetheless a global price on carbon or a global carbon market are still distant goals because of the

widely-varying price of carbon and regulatory differences between schemes.

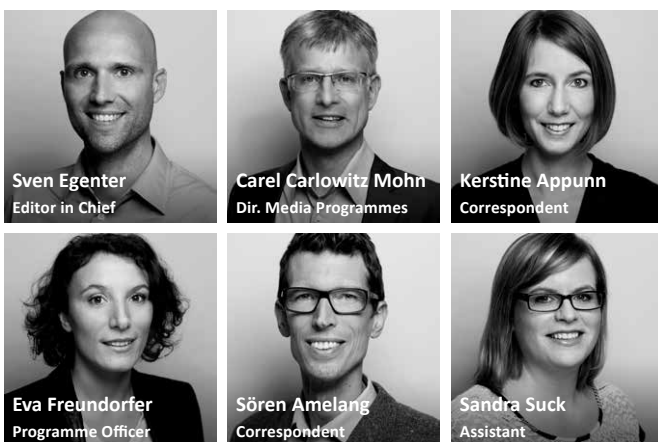
German climate economists Axel Ockenfels and Ottmar Edenhofer strongly advocate a globally-binding carbon price, instead of relying on voluntary national contributions. Only a carbon price would solve the “free-rider” problem that sees less ambitious states hide behind the measures of more ambitious states.

The International Emissions Trading Association (IETA), whose members include major fossil fuel companies like Shell and BP, as well as German utilities RWE and E.ON, has welcomed a draft text published on October 23, for referring to “international transferrable mitigation outcomes”. The IETA had complained that an earlier version of the text ignored carbon trading.

However, UN climate chief Figueres managed expectations in October when she said Paris would not be able to come up with a global carbon price. Six jurisdictions around the world already had carbon pricing mechanisms. “I would argue we already have a strong carbon price signal,” she said, according to the Guardian.

More background information on www.cleanenergywire.org

The Clean Energy Wire supports journalists who cover Germany's Energiewende, providing international correspondents with an overview of the key stories, experts/decision-makers and facts of Germany's landmark energy transition. Its news digest offers a daily snapshot of important energy policy reports, studies, policy decisions and current debates. The website provides in-depth background material and key contacts for journalists looking for information on Germany's energy transition and climate policy.



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