Four senior figures behind efforts to limit climate change have warned that the planet "is at a crossroads" as key talks opened a day early in Poland.

In a rare move, four former presidents of the United Nations-sponsored talks called for decisive action.

The meeting in Katowice is the most critical on climate change since the 2015 Paris agreement.

Experts say that drastic cuts in emissions will be needed if the world is to reach targets agreed in Paris.

Negotiators at the COP24 conference convened a day early because they are under pressure to make progress.

What's so different about this meeting?

This Conference of the Parties (COP) is the first to be held since the landmark Intergovernmental Panel on Climate Change (IPCC) report on limiting global temperature rise to 1.5°C came out in October.

The IPCC stated that to keep to the 1.5°C goal, governments would have to slash emissions of greenhouse gases by 45% by 2030.

But a recent study showed that CO2 emissions are on the rise again after stalling for four years.

In an unprecedented move, four former UN climate talks presidents issued a statement on Sunday, calling for urgent action.

They say "decisive action in the next two years will be crucial".

"What ministers and other leaders say and do in Katowice at COP24 will help determine efforts for years to come and either bring the world closer to meeting the goals of the Paris Agreement - including protecting those most vulnerable to climate change - or push action further down the road.

"Any delay will only make it harder and more expensive to respond to climate change."

The statement was issued by Frank Bainimarama of Fiji, Salaheddine Mezouar of Morocco, Laurent Fabius of France and Manuel Pulgar Vidal of Peru.

Meanwhile, the gap between what countries say they are doing and what needs to be done has never been wider.

"The IPCC report made crystal clear that every bit of warming matters, especially for the least developed countries," said Gebru Jember Endalew, who chairs the group of poorest nations in the negotiations.

"It also gave some hope by confirming that limiting global warming to 1.5°C is still possible. Here in Katowice, we must work constructively together to ensure that goal can become a reality."

In fact, so urgent is the task that some negotiators started their meetings on Sunday, a day before the official start.

Why is Sir David Attenborough attending?

The celebrated broadcaster and naturalist will be sitting in what's termed the "people's seat" at these talks.
Will global leaders be attending?

Yes, some 29 heads of state and government are due to give statements at the opening of the meeting.

The number is way down on the stellar cast that turned up in Paris in 2015, which perhaps indicates that many are seeing this as more a technical stage on the road to tackling climate change than a big bang moment.

But for the likes of China and the EU, the meeting is critical. They will want to show that international co-operation can still work even in the age of President Trump.

How years compare with the 20th Century average

2018
So will cutting carbon be the main focus of the meeting?
Rather than spending all their time working on how to increase ambitions to cut carbon, conference delegates are likely to focus on trying to finalise the technical rules of how the Paris agreement will work.

While the agreement was ratified in record time by more than 180 countries in 2016, it doesn't become operational until 2020. Before then, delegates must sort out common rules on measuring, reporting and verifying (checking to avoid the misreporting of) greenhouse gas emissions, and on how climate finance is going to be provided.

"The rulebook is the thing that will absorb most of the negotiators' capacity at this year's COP," said Camilla Born, from the climate change think tank, E3G.

"It's no surprise, as agreeing the Paris rules is both technically and politically a complicated task - but it is worth it!"

Right now, that rule book runs to several hundred pages with thousands of brackets, indicating areas of dispute.

But what about limiting emissions?
Under the Paris agreement, each country decides for itself the actions it will take when it comes to cutting carbon. Some observers believe that the changed mood and the urgency of the science will prompt action.

"We are hoping that at COP24, countries will make declarations of how they will raise their ambitions by 2020. This is a very important moment," said Fernanda Carvalho with campaign group WWF.

"Two years is a short time span for that to happen. Countries need to act fast."

Why is the UN process slow-moving?
There is much frustration with the snail-like pace, especially among some campaigners who feel that the scale of the threat posed by rising temperatures hasn't been fully grasped by politicians.

"Governments across the world have completely failed to protect their citizens," said a spokesperson for Extinction Rebellion, the social movement that pushes for radical change on climate issues.

"Instead, they have pursued quick profit and big business. We need this to change. At COP24, we want to ensure that the focus is not just on getting the technical Paris rulebook as robust as possible, but also that governments do not lose sight of the bigger picture. We are not doing enough."

Others involved in the UN process say that real progress is being made in tackling one of the most complex problems ever faced by the world.

"You have to recognise that things that negotiators and others have worked so hard to put in place are making a real difference," said Achim Steiner, who heads the United Nations Development Programme.

"We have a $300bn renewable energy economy at work today - it's not peanuts, it's an energy revolution that has unfolded on the back of, yes, a sometimes sticky climate negotiation process."

How much of a role will money play in making progress in Poland?
Many developing countries see progress on issues around finance to be critical to moving forward. They have been promised $100bn every year from 2020 as part of the Paris agreement.

Some are sceptical about what they see as foot-dragging and obfuscation by richer countries when it comes to handing over the cash. Negotiators say that moving forward on finance is the lynchpin of progress in this meeting.

"A key finding of the recent IPCC report, and one that has often been overlooked, is that without a dramatic increase in the provision of climate..."
finance, the possibility of limiting warming to 2C (to say nothing of the safer 1.5C goal), will irretrievably slip away," said Amjad Abdulla, chief negotiator for the Alliance of Small Island States.

Are there concerns the meeting is in a country reliant on coal?
Yes - among government negotiators and observers alike. The fact that the conference is taking place in a strong coal region, in a city that is home to the biggest coal company in the EU, is troubling to many. Poland is highly dependent on coal, getting close to 80% of its electricity from the fossil fuel - and the widespread use of lower quality coal to heat homes, especially in the colder months, leads to smog and respiratory illnesses. However, the Polish government says that it is sticking with the fuel, and has announced that it is planning to invest next year in the construction of a new coal mine in Silesia.

This bullish approach has drawn condemnation from some.
"We hope that the Polish government will seize this opportunity to embrace and promote a just transition that guarantees that the energy system is transformed while leaving no one behind," said Sébastien Duyck, a senior attorney at the Centre for International Environmental Law. "Unfortunately, this week's announcement by the [meeting's] Polish presidency that it will include coal companies as sponsors of the COP sends a very worrisome signal before the conference even begins."

Will President Trump and the US feature at all?
Although the US has withdrawn from the Paris agreement, it cannot leave until 2020, so its negotiators have been taking part in meetings and have not obstructed the process. America is expected to participate in COP24. However, given the President's well known love of coal, it has been reported that the White House will once again organise a side event promoting fossil fuels. A similar event at the last COP provoked outrage from many delegates.