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## **Vandana Shiva: We Must Fight Back Against the 1 Percent to Stop the Sixth Mass Extinction**

*Amy Goodman:* New research finds at least a third of the Himalayan ice cap will melt by the end of the century due to climate change, even if the world's most ambitious environmental reforms are implemented. A report released earlier this month by the Hindu Kush Himalaya Assessment warns rising temperatures in the Himalayas could lead to mass population displacements, as well as catastrophic food and water insecurity. The glaciers are a vital water source for the 250 million people who live in the Hindu Kush Himalaya range, which spans from Afghanistan to Burma. More than a billion-and-a-half people depend on the rivers that flow from the Himalayan peaks. We speak with world-renowned environmental leader and ecologist Dr. Vandana Shiva about climate change, seed sovereignty and her new book, "Oneness vs. the 1%." Shiva is an Indian scholar, physicist, and food sovereignty and seed freedom advocate. She was born in Doon Valley in the Himalayan foothills.



## Transcript

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**AMY GOODMAN:** This is *Democracy Now!*, [democracynow.org](http://democracynow.org), *The War and Peace Report*. I'm Amy Goodman. A shocking new [report](#) finds at least a third of the Himalayan ice cap will melt by the end of the century due to climate change, even if the world's most ambitious environmental reforms are implemented. The report released Monday by The Hindu Kush Himalaya Assessment is the culmination of half a decade's work by over 200 scientists, with an additional 125 experts peer reviewing their work.

It warns rising temperatures in the Himalayas could lead to mass population displacements, as well as catastrophic food and water insecurity. The glaciers are a vital water source for the 250 million people who live in the Hindu Kush Himalaya range, which spans from Afghanistan to Burma. The region is home to the most ice in the world, after Antarctica and the Arctic. And over a billion-and-a-half people depend on the rivers that flow from the Himalayan peaks.

We turn now to the world-renowned environmental leader and ecologist, who was born in Doon Valley in the Himalayan foothills, Dr. Vandana Shiva. She's an Indian scholar and physicist, as well as a food sovereignty and seed freedom advocate. Dr. Shiva is also an alternative globalization author who's written more than 20 books. Her latest, *Oneness vs. the 1%* and *Who Really Feeds the World?* She founded Navdanya, "nine seeds," a movement promoting diversity and use of native seeds. In 1993, Dr. Shiva was recipient of the Alternative Nobel Peace Prize, the Right Livelihood Award.

Vandana Shiva, welcome back to *Democracy Now!*

**VANDANA SHIVA:** My joy to be with you again, Amy.

**AMY GOODMAN:** It's great to have you with us. The title of this book, *Oneness vs. the 1%*, explain.

**VANDANA SHIVA:** Well, oneness is the recognition that, A, we are part of one planet, and we are one humanity. And unless we live with that consciousness and shape every moment of our production and consumption with that consciousness, we are going

to destroy ourselves, which we are. The melting of the glaciers is one of the very severe indicators.

The 1 percent, of course, is the symbol of the concentration of wealth under the rules of the neoliberal economies, that are basically, on the one hand, turning every natural resource into a war zone. Even the Venezuelan issue is really a war over oil.

But war over seeds, that's my life's work, to keep seeds free, because they literally are a war over control of seeds, by a poison cartel of three—Monsanto and Bayer, Syngenta and ChemChina, Dow and DuPont—all of them with their roots in Hitler's Germany and finding chemicals to kill people. No wonder they're still killing people. No wonder they're killing our butterflies and our bees and our pollinators.

And every indicator is showing we are not just in a severe climate catastrophe; we are in the sixth mass extinction. And both the species extinction and the climate catastrophe are two sides of the same coin.

**AMY GOODMAN:** Let's start with Monsanto. Last month, India's Supreme Court ruled that Monsanto's patent for Bt cotton seeds is valid. You've questioned if a seed is an invention and can be patented. Talk about what Bt cotton is and why this matters.

**VANDANA SHIVA:** Amy, I was in the Supreme Court. I'm an intervener in that case. And Monsanto does not have a patent on Bt cotton. And the Supreme Court did not give it a patent on Bt cotton. The only way it could have done it is by striking down India's law, Article 3(J) of our patent law. And I had a role with our Parliament: to shape the amendments after the WTO trips forced us to amend our laws. 3(J) says plants, animals and seeds are not human inventions, therefore they're not patentable, because a patent is only granted for that which is invented.

So, what is the Bt cotton? There are only two kinds of GMO seeds that account for most genetically engineered crops around the world. One is a family of crops called Bt crops, like Bt cotton—

**AMY GOODMAN:** What does "Bt" stand for?

**VANDANA SHIVA:** *Bacillus thuringiensis*, a soil organism which produces an endotoxin, which becomes a poison only in the gut of the caterpillar family. But in the plant, it's a readymade toxin, with

a very broad spectrum of harm. And it's supposed to be a pesticide-producing plant. In fact, in the United States, it was approved as a pesticide. As a pesticide-producing plant, every cell of the plant is releasing a toxin at very high levels. It's supposed to control the bollworm pest. The bollworm has become resistant, which is in the nature of evolution. Life evolves to overcome threats.

And the Bt does not—Bt cotton seed does not have a patent, for the simple reason our laws don't allow it. Monsanto was illegally collecting royalties via Indian seed companies, because they couldn't do what they did in this country, which is sign licensing agreements directly with the farmers. In India, they signed the licensing agreements with the companies—with a lie that they had a patent. They signed on the U.S. patent, but India is a sovereign country, and patent laws are sovereign laws.

When they wanted to extract more royalties and the price of seed jumped 80,000 percent, this is the main reason why the suicide belt of India, where now 310,000 Indian farmers have committed suicide, it overlaps largely with the cotton belt. And 99 percent of the cotton seed is controlled by Monsanto. We have an anti-trust case in the Indian Competition Commission saying 99 percent seed is a *prima facie* monopoly. Eighty thousand percent jump in seed, and it doesn't work to control the pests. Farmers got into debt. That's the driver for farmer suicide.

When the Indian companies said, "We can't keep paying. Our farmers are dying. We can't extract more royalties," Monsanto sued them, using patent law, infringement. That's when I was involved. I was called to intervene in the High Court, and then I intervened in the Supreme Court. The attempt of Monsanto was to knock down India's law. They failed. Its control over media, that's why it's so important to have *Democracy Now!*, Amy, because the media is so totally in the hands of the poison cartel. They lied about what happened in the Supreme Court that day.

**AMY GOODMAN:** What happened?

**VANDANA SHIVA:** They lost. No, the Supreme Court said, "You go back to trial. It's between two of you. It's not an issue of us knocking down the law." They wanted to declare the genetically engineered Bt as a chemical for which they wanted a product patent, which means wherever it would have existed, no matter

where, it would have been their property. And the existence of Bt in the seed would have been an infringement of their patent.

They totally lost with their agenda. And the only way Monsanto has functioned anywhere in the world, whether it be Brazil or Argentina or their attempt in India, is illegally. They are not just trying to shape law when they don't get their way. They changed the WTO system by saying, "We are the patient, diagnostician and physician, all in one. We have to prevent farmers from saving seeds."

That's what shaped my life. That's why for 31 years I've been saving seeds and started Navdanya. And I want to give to you, Amy, our love for the seed, because when the suicides in the cotton belt started—'til then I was saving crop seeds, food crop seeds—I went down and said, "I'm going to start a cotton seed bank." Took a long time. We retrieved native cottons. We multiplied it. Farmers grow organic cotton. In the villages where the farmers are growing organic cotton, Bt cotton has come down 60 percent.

And then we work with the Gandhi Ashram. It's 150 years of Gandhi's birth anniversary, and nonviolence was his dedication. This is a nonviolent scarf, handspun, handwoven, handprinted, with indigo, which was also at one time—

**AMY GOODMAN:** Indigo.

**VANDANA SHIVA:** Indigo.

**AMY GOODMAN:** The dye.

**VANDANA SHIVA:** Dye. You know, we used to have slave conditions for growing indigo, and Gandhi led the first satyagraha, the noncooperation, said, "We would rather die than grow indigo." And that's what triggered so much of the freedom movement. That's with love to you for democracy, for all life on Earth. That's democracy.

**AMY GOODMAN:** And this is being made by?

**VANDANA SHIVA:** By women.

**AMY GOODMAN:** In?

**VANDANA SHIVA:** In central India. The central India is called Vidarbha. It is the place where Gandhi moved to create his final ashram, to create a totally democratic society. And for him,

democracy began with economic democracy. You've got to produce what you need. That's why he pulled at the spinning wheel. And for me, the seed is today's spinning wheel.

**AMY GOODMAN:** Talk about Bayer.

**VANDANA SHIVA:** Well, Bayer, everyone thinks they began starting with aspirin. They began, for Hitler's Germany, making Zyklon B, the gas that was used to kill millions in the concentration camps. They were part of IG Farben. IG Farben was the cartel that was tried at Nuremberg. One of Bayer's inventions is heroin.

**AMY GOODMAN:** Heroin.

**VANDANA SHIVA:** Heroin. And it was called "heroin" because it made you feel like a hero. I think one future program you could do, Amy, is how the devastation of our societies, how the destruction of the economy of Mexico has created the drug trade; how the devastation of rural America, as well as the unemployment in the industrial belt, has created the opioid crisis; how Punjab, the land of the Green Revolution, 75 percent youth are now drug addicts.

So, Bayer bought out Monsanto. Bayer bought—so, Monsanto today is Bayer. And it's a German company. But these are global companies. They have no home. They have no loyalty. They are accountable to no citizens. All of them work through tax havens. You know, if you know—I think it's—which is the place in America that's a tax haven, where all of the companies are registered? Delaware. Delaware. All of—including Monsanto. So, Monsanto was bought out by Bayer for the simple reason that they wanted to erase the name of Monsanto, which has become such a dirty name.

But when I did this book, *Oneness vs. the 1%*, I wanted to really figure out, you know, what are the stocks, what are the ownerships. That's when I realized that the majority stocks in all the corporations that rule our world are owned by the investment funds, which is where the billionaires stock their money. The biggest, BlackRock, the second biggest, Vanguard, they were nothing 'til the 2008 Wall Street disaster. Last year, BlackRock was \$6 trillion—\$6 trillion. They lost 30 percent with one case, of Monsanto's Roundup Ready causing cancer. It's a Californian case of Dewayne Johnson. And the jurors ruled that—

**AMY GOODMAN:** Roundup Ready is the pesticide.

**VANDANA SHIVA:** Roundup is the herbicide that kills everything, but it has been known by the World Health Organization to be a carcinogen. Monsanto attacked the World Health Organization, like they attacked me, like they attack anybody who speaks the truth and tells good science.

But a Californian jury has ruled. And the day the ruling came, Bayer lost 35 percent. So, when people feel, “Oh, these guys are too powerful,” I say, “They’re just three. We are 300 million species. We are 7 billion people. We are more.”

And secondly, they are a bubble, that has exploded with fictions of financial multiplication, with rent collections. Basically, Monsanto and Bayer are nothing but rent collectors. They are the lifelords of today, like feudalism had the landlords. They do no work. They do nothing. They don’t breed seed. They make poison, and then collect rents. I think we need a better world in terms of how we grow our food.

**AMY GOODMAN:** So, chapter two of your book, “The Money Machine of the 1%,” there you’re talking about these hedge funds, these large corporations.

**VANDANA SHIVA:** I’m talking about the large corporations, but I’m also talking about the mechanisms of the neoliberal economy, which puts in place ways to make the money machine keep growing, at the cost of life of the people and the planet. So, it’s not an accident that we are in an ecological catastrophe, where IPCC, the climate body, as well as the biodiversity convention panel are saying that we have 10 years to change.

The money machine—I name it the “money machine” to talk about the new ways in which money is being created and accumulated. Intellectual property rights and patents is central. It’s a rent-collecting system. Not paying taxes is a second. Look at Amazon, wanting to come to New York. It destroyed India’s systems. It’s destroyed India’s taxation systems for its own facility. And now—

**AMY GOODMAN:** How? How?

**VANDANA SHIVA:** Well, they got the government to create one uniform tax and to all be paid on digital, on computers. A little corner store in a little town cannot do it. They get wiped out

overnight. And meantime, the reason Bezos became richer than Bill Gates is because of India. And he's acknowledged it.

**AMY GOODMAN:** Explain that further.

**VANDANA SHIVA:** Well, by changing the taxation systems.

**AMY GOODMAN:** How did he change it?

**VANDANA SHIVA:** By putting influence on the government of India, because just like there's a federal structure in America, and your taxation system in Massachusetts is different from the taxation system of Oregon, Oregon is different from the taxation system in New York, they made it one uniform GST.

Before that, Bill Gates—and I have a story in there, how Bill Gates and the other IT industry worked to get cash banned. They called it the “war on cash.” Now, 90 percent of India's economy is cash. Overnight, everyone lost their lifetime savings. Everyone was made poor. Everyone was made vulnerable. Demonetization is what it was called, and the GST. These are the two things that are being debated in our national election lead-up right now.

Bezos is now working with our dear Bill Gates. They want a 0 percent duty—0 percent duty—on e-commerce. Does it mean that when they ship things, they don't ship goods? No, they ship goods, but with zero taxation. The person on the ground in a real local economy will be paying a tax. As it is, they have become more expensive. The real economy has been made artificially more expensive because of the cheating by the money machine.

**AMY GOODMAN:** How did Bill Gates come to exert such power?

**VANDANA SHIVA:** Well, as is known and is in the book, Bill Gates did not invent anything. The BASIC program was made by some mathematics professors in a college. The Office operating system was by a software engineer, and he bought it for \$50,000. He's built an empire by creating patents on software. And the first WTO meeting in Singapore gave him tax concessions, which is why all the IT industry moved to India. The fact that Silicon Valley became India Silicon Valley is because they could save \$40 billion annually by paying lower wages for the same work. It was an outsourcing of software, all for Bill Gates. With his accumulation of money and making any communication system illegal, like the



communication system through real currency and forcing digital payments, he's the one who gains, because all the software for all the digital economy, he collects rents and royalties on that.

And then he started to put some of his money into philanthropy. And everyone thinks, "Wow! He's such a generous man. He gives so much." But I've done an analysis in the book. Every place he gives to is his former future markets. I'll give you a simple example. So, the first generation of GMOs, the Bt cotton, the Roundup Ready soy and Roundup Ready corn, have started to breed superpests and superweeds. So now they're trying to get new GMOs based on gene editing and gene drives. In gene editing, not only is Gates financing the research, he has created a company for the patents. It's called Editas. So, he will collect rents when gene editing is pushed through.

And worse, in the United States, half the farmlands are overtaken by superweeds. The most important one is Palmer amaranth. Amaranth is a sacred crop for us. We eat it. Now, the U.S. Defense system DARPA and Bill Gates have joined hands for a new technology called gene drives to push species to extinction. And they want to drive the amaranth to extinction. And there's a footnote in that report saying, "Oh, yeah, there will be a food insecurity impact on India. They eat amaranth." No, there will be a food security impact on the world. There is an—this is an acceleration of the race to extinction. It is immoral. It should be made illegal.

**AMY GOODMAN:** A recent report by Oxfam India reveals billionaire fortunes in India increased by 35 percent last year as the poorest remained in debt. Globally, Oxfam found that billionaires' wealth increased by 12 percent in the past year, with the 26 richest people owning the same amount of money as the world's poorest half, the world's poorest 50 percent. Economic inequality hits women and girls the hardest. This is Oxfam Executive Director Winnie Byanyima speaking at the World Economic Forum in Davos last month.

**WINNIE BYANYIMA:** So, last year alone, we saw billionaire wealth increase by \$2.5 billion every day, while the wealth of the bottom half of humanity, 3.8 billion, was dropping by \$500 million a day. ... I'm here in Davos to call on governments to wake up and

take up their responsibility and tax fairly, tax wealth and put money in the public services that people need.

**AMY GOODMAN:** That's Oxfam's executive director. Vandana Shiva?

**VANDANA SHIVA:** Yeah, Winnie's a dear friend, and I released the German version of their report two years ago. And they're the ones who followed up the Occupy movement's 1 percent naming. And they constantly release annually, at the celebration of party of the 1 percent—right now it's a collapsing party—the Davos meeting, where they show.

Now, can you imagine, every day, \$2 billion added to the wealth of the thieves, the stealers, the casino players? And not only are they accumulating more wealth, they're converting the real lives of people into their wealth. My work is on seeds, to prevent seeds from becoming the wealth of these giants. And Bill Gates has a very big role in pushing GMOs in Africa, through the Alliance for the Green Revolution in Africa, pushing patents on seeds, against the laws, the sovereign laws that countries like India have created. But they are privatizing water. He is part of geoengineering the extremely false solution to the climate crisis, the melting of glaciers. And I remember in 2009 we did a study on the third pole, on the Himalayan ecosystems, the impact on climate change. And all the pressure was put by the polluters to say, "Deny that the glaciers are melting. Deny." Our government flipped overnight to say, "They're not melting; actually, they're increasing."

So these new reports are extremely important. And the Himalaya, Himalayan snows don't just support the people in the Himalaya; they support half of humanity, because all the rivers for the most densely populated part of the world emerge from the Himalaya. And the consequences of this are huge. But the most important thing is, those women in Ladakh, with whom I work, the Women's Alliance, they don't use one drop of oil or one ounce of gas. They are totally in a renewable energy economy. And they're being punished. That's why climate justice is such an important part of avoiding climate catastrophe.

**AMY GOODMAN:** So, how does it feel to come to the United States? Because what you're saying, the denial of the effects of climate change is very Trumpian.

**VANDANA SHIVA:** Well, sadly, in that case, it was President Obama, because he flew into Singapore to tell the governments, “Stop pushing for legally binding emissions.” He flew into Copenhagen after having received the Nobel Peace Prize, and called the five worst polluters—India, China included now—and said, “Let’s get rid of the legally binding convention.” And that’s why Paris is merely an agreement. It’s not the legally binding U.N. Framework Convention with emissions that were legally binding.

And it was in the middle of the negotiations he announced, “We’ve come to an agreement.” And that’s when **Evo Morales, the president of Bolivia, got up and said, “We were here to fight for the rights of Mother Earth. We weren’t here for the rights of polluters.** And all of us are negotiating inside the hall. Five people get together and say, ‘We’ve come to an agreement to destroy the Earth.’” That’s why he worked on the rights of Mother Earth and called many of us to become the drafting team for the draft declaration, Universal Draft Declaration on the Rights of Mother Earth, which is available for people. And the work on the movement for the rights of nature has grown out of that, out of the failure of Copenhagen.

**AMY GOODMAN:** So you’re talking about 10 years ago, in 2009.

**VANDANA SHIVA:** Ten years ago, yes.

**AMY GOODMAN:** When President Obama flew into Copenhagen at the U.N. climate summit.

**VANDANA SHIVA:** Which is the tragedy these days, that the 1 percent money machine has become so powerful that it actually controls the political machine in a very big way. And we know the elections of the U.S. was Facebook handing over to Cambridge Analytica the “technology” angle, and you got the first artificial intelligence president based on algorithms of hate—hate for women, hate for blacks, hate for Muslims, hate for migrants. Now, you can’t run democracy on the hate machine. **And you can’t run democracy by the hate machine being fueled through the divide-and-rule policy of the 1 percent to destroy our oneness, our solidarity, our recognition that we are one humanity and can be strong when we fight for the rights of the planet and for our basic rights to food and water and livelihoods and justice and democracy.**

**AMY GOODMAN:** You are famous for describing corporate control, challenging corporate control, but then also coming up with alternative systems, what you call **food democracy**. Explain.

**VANDANA SHIVA:** Yeah. So, we've just done a book on biodiversity, agroecology and regenerative organic agriculture, which is 31 years of our practice and research, because I can't see thinking separate from action. We find we can feed two times India's population—two times India's population—by conserving biodiversity, providing more nutrition per acre, the more biodiverse the system, and organic systems produce more nutrition. Farmers earn 10 times more by not spending precious money on chemicals and big machines.

And the Monsantos and the Bayers of the world are imagining an agriculture without farmers, farming without farmers, farming with drones, farming with spyware in the tractors, farming with robots, farming with artificial intelligence. They're talking about digital agriculture where you don't need people. But that means no one to care for the land, because agriculture means care for the land.

We need the Green New Deal, which is such an amazing discussion in this country. And the Green New Deal has to be to put more people on the land, just like during the Dust Bowl in the Depression. Hands healed the Dust Bowl. We need hands to heal the planet. We have solutions to climate change, because it's only through taking the excess carbon and the excess nitrogen out of the air, can we heal the broken nitrogen cycle and the carbon cycle. Ecological farming, biodiverse-intensive farming does that. And we only need to add 2 percent, and 10 years we can solve the climate crisis. With 0.5 percent organic matter, we can get rid of the drought.

**AMY GOODMAN:** Explain exactly what you mean, to the nonfarmer audience.

**VANDANA SHIVA:** So, the basic problem of climate change is that the planetary boundaries have been ruptured. There's a limit of cycling of carbon, of nitrogen and other minerals and elements. By taking fossil fuels out from underground and burning them at a very high speed, 600 million years of nature's work—20 million years being burned every year—we are putting too much carbon dioxide into the atmosphere, which is why we have climate change. We use some of this fossil fuel to then make nitrogen

fertilizers, which emits a nitrous oxide, which is 300 times more deadly for the climate.

You get rid of chemicals, you get rid of fossil fuels, and you start doing organic, all that excess carbon can be pulled back by the plants and put back in the soil, which is why I wrote the book *Soil Not Oil*. When you put nitrogen-fixing plants, the pulses—you know, everyone's now talking of plant-based diets, proteins from plants. We did it in India forever with our lovely dal, our pulses. They fix nitrogen nonviolently. You don't have to blast fossil fuels at high temperature to fix atmospheric nitrogen. The plants have the intelligence to do it, peacefully, and give us good protein, the same way, while fixing the broken nitrogen cycle, which if you look at the planetary boundaries graph, the nitrogen cycle is and the biodiversity system is the most abused.

And in every one of these problems, whether it's hunger or the chronic disease epidemic or climate change or species—you know, the pollinators on our farm are six times more than the pollinators on the forest. And now, every year, we offer a 1-month course on the practice of biodiversity, agroecology and organic food systems. Everywhere, the world is being healed, with a lot of solidarity, a lot of oneness, between ourselves and the web of life, and a reclaiming of that, our intelligence. Intelligence will never be artificial. Real intelligence is what makes us live. Life is intelligence. Intelligence is democracy.

**AMY GOODMAN:** Vandana Shiva is an Indian scholar, environmental activist, food sovereignty and seed freedom advocate, and alternative globalization leader and author. She's written more than 20 books—her latest, *Oneness vs. the 1%* and *Who Really Feeds the World?*

This is *Democracy Now!* I'm Amy Goodman. Thanks for joining us.