Novartis AG

Novartis AG - Special Call - Novartis AG

Monday, November 13, 2023 10:30 AM

Event Participants

Executives 7

Maria Victoria Cuevas-Pautonnier, Vasant Narasimhan, Lutz Hegemann, Thierry Diagana, Sujata Vaidyanathan, Paul Penepent, Klaus Moosmayer

Maria Victoria Cuevas-Pautonnier Executive

Good morning, and good afternoon. Thank you so much for joining our 10th Annual ESG Investor Event. This year, the focus is on impact and health equity, which are two vital topics in our industry. We have five esteemed speakers starting off with an hour of presentation followed by Q&A. [Operator Instructions]

The information presented today contains forward-looking statements that involve known and unknown risks, uncertainties and other factors. These may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. For a description of these factors, please refer to the company's Form 20-F and its most recent quarterly results, Form 6-K, that respectively were filed with and furnished to the U.S. Securities and Exchange Commission.

We'll now hear from Vas on key highlights of our progress, then I'll hand over to Lutz.

Vasant Narasimhan Executive

Thank you all for joining today's ESG Investor Day, where there is an opportunity to learn about Novartis' approach to building trust with society and continuing to endeavor to be one of the leaders on key ESG topics that influence our sector as well as influence the broader world.

At Novartis, ESG is deeply integrated into what we do. We believe this is fundamental for us to drive the value we want to drive for our shareholders, for patients, for society and for our employees. ESG is not something here that we do on the side. We do it in the center.

Now a few points I'd want to highlight with respect to our approach to ESG. We've carefully considered what are the material ESG factors for our company. And top, top, top on our minds is access to medicines. We continue to endeavor to be one of the leaders in access to medicines, both on our innovative portfolio as well as the work we do in Global Health.

On the Innovative Medicines side, we reach over 250 million patients a year with our

innovative portfolio. We believe that is one of the highest in our sector. In addition, we continue to be one of the leaders in addressing Global Health topics, whether it's our work in malaria or leprosy or emerging work in sickle cell disease, amongst other programs that we continue to operationalize. So access to medicines is a place where we invest and we believe is fundamental to the long-term success of our company.

I am also pleased with the progress that we continue to make on our Global Health pipeline. We've committed to invest over $250 million over 5 years in neglected tropical diseases. And we continue to have one of the broadest portfolios in treating malaria, including cryptosporidiosis, flesh leishmaniasis, many of the critical diseases we know we need to discover new medicines to enable populations to live healthy lives.

We also want to address some of the other major ESG topics that, of course, are fundamental now in society, one of those being the environment, where we continue to be on track to achieve our goals with respect to carbon, waste and water. And you'll hear more about that over the course of the discussions today.

In addition, we continue to ensure that we are leading with respect to how we treat our employees, how we think about human rights, how we think about a diversity as well as overall diversity in the workforce. In every one of these areas, we have dedicated efforts to ensure that we're progressing against our clear stated goals.

I also want to say a word that we understand that it's going to be critically important that Novartis is up to speed and compliant with the emerging regulations that are being put forth around the globe. We have dedicated efforts to ensure that's the case. And I'm confident that we are in a position that we will be fully in line with the EU, U.S. and other jurisdictions' regulations with respect to ESG.

In closing, I want to thank you all for your interest in our commitment to ESG as Novartis. We believe this is part of the ethos of our company. This is something that we take great pride in from a leadership team. And I can speak for all of the employees at our company, we want to be a leader in these areas. And if we do that well, we'll achieve our mission to reimagine medicine and continue to have the impact we want to have around the globe.

Lutz Hegemann Executive

Hello, everyone. I would like to add my personal welcome to that of Mavic and Vas, and thank you for taking the time to join us today for your time and interest in engaging on this continued discussion around ESG today with a specific focus on impact and health equity.

Let me just take a moment to reflect on today's agenda. I'll start by giving a bit of an overview on equitable access to innovative medicine as you just heard from Vas, which is the North Star of what drives in Global Health but also in the core business. And then we will have the specific pleasure to do a deep dive into our very broad and deep pipeline that we have for new molecular entities addressing neglected tropical diseases, an area that I'm always proud to speak about and an area which I believe truly differentiates us and where we add unique benefit to society and to those patients that need medicines for these diseases the most.

And Thierry Diagana, who is the Head of Global Health Research; and Sujata Vaidyanathan,

who is the Global Development Head for this portfolio, will take us through some of the projects and the operating principles. And then we will shift gears and we'll speak about the evolving ESG reporting landscape. And it is no coincidence that our Chief Accountant, Paul Penepent, who is Head of Finance Reporting & Accounting, is going to lead to this discussion. Because as many of you know, we took last year the decision to move the nonfinancial reporting into the finance organization so that we apply the same rigor to our nonfinancial reporting as we apply to our financial reporting.

But let me start by taking one step back and focusing on innovation and access and why this truly matters to us. You may recall that those two themes have consistently and year-over-year been highlighted through our materiality assessments and that those areas are those where we truly believe that we can create value. This is future-proofing our core pipeline against unmet medical needs but also then broadening access to those medicines, which, to me, go hand-in-hand. And sometimes broadening this access requires almost the same level of creativity as the discovery of medicines required. And then we'll spend some time to discuss the mandate and the approach in the Global Health unit.

A separate part where we believe that we create value is on the human capital front and why we are not going into detail here. We strongly believe that diversity, equity, inclusion, the culture that under the leadership of Vas, we have fostered and nourished even in difficult times, like the COVID-19 pandemic, and ultimately the talent base are truly means to create value. Then we have other factors that predominantly mitigate our risks, the environmental sustainability targets. You are all aware of the fairly aggressive targets that we have set for ourselves across climate, water and waste.

Our ethical standards, an effort which is led predominantly by our Chief Ethics, Risk & Compliance Officer, Dr. Klaus Moosmayer, who will be joining us for the Q&A part. And then the enablers, and that takes me back to the reporting that I had mentioned earlier, which is also now increasingly being acknowledged externally. Just last month, we were called out by the World Business Council for Sustainable Development as one of the role models in transparent reporting, which, of course, is a recognition externally that we do value. But ultimately, why we do this is because we feel it's the right thing to do.

We are reaching more patients with innovative medicines. We are creating sustainable social and economic impact. And ultimately, through those actions, we are building trust with society.

Now our core business alone, and Vas has said that at many investor meetings, in itself drives significant impact to society. We reach a large contingent of patients, more than 250 million patients worldwide. And we believe that this is one of the largest footprint that exists in the industry. We have a fairly extensive pipeline that addresses unmet medical needs and cutting-edge technologies, whether it's gene, siRNA or radioligand therapies that fulfill unmet medical needs.

Over the last 20 years, we had 40 new drug approvals. So we see that, that pipeline also translates into medicines that make an impact. And just recently, we had a few very significant innovation highlights, whether that was the early breast cancer approval for KISQALI, SCEMBLIX for chronic myeloid leukemia, PLUVICTO for prostate cancer, iptacopan.

I'm sure that you have all followed those highlights very closely. And if we do this right and if we do this consistent, then in itself, we are driving a positive impact on society.

And that needs to be the focus of all of our operations. And then other metrics, other measures that we take complement this in order to reach even more patients.

Now specific on the innovation and access challenge. And here's an external graphic that shows how as countries become less and less developed or less and less financially resourceful, the gap widens. And there's three parameters that are outlined here. And this is a schematic, this is not true, accurate data. But it shows that even in high-income countries, we see the number of clinical trials as a driver of innovation to decline as countries become less and less economically successful.

And even in high-income countries, you have heard me speak about this in previous meetings, there is an increasing gap between those patients that are well-served and those that are underserved.

And then as we gradually move into less-developed countries, we see that the access to innovative medicines fades the soonest and then access to basic health care, of course, follows suit. And no matter which segment a country looks in, there's always gaps that we can fill, whether that is in universal health care, where obviously in low-income countries, the gap is the largest. But even in Innovative Medicines, when you reach the middle-income segment or the lower middle-income segment, we have significant gaps to fill. And that is ultimately the mandate of bringing innovation to as many patients as possible and what drives our agenda in access to innovation.

Now internally, the way that we look at it, and I thought this is important here to highlight as well, is that we look at ESG as a framework to manage business risk while delivering impact, which then creates value for stakeholders. So ESG essentially is a framework that highlights factors that we must do as a baseline to manage our material risks, whether that is risk in the governance or risk towards the environment. And of course, those also entail opportunities, but the predominant focus here is on risk management.

And then impact is where we can create value for our stakeholders. And those elements impact risk and return need to sit together in order to optimally define the business. They cannot be separated. And as you had heard Vas say earlier, the impact discussion is not something that we want to take in isolation or separate from the business, but it needs to be an integral part of it.

Now on the access specifically, you are probably all familiar with the Novartis Access Principles, which we launched in 2017 and which still today define our actions as we are approaching the continuum of research development and go-to-market strategies. And our commitment early on was that for 100% of launches, we have a global access strategy. We have accomplished this for the last few years. And it really shows that, early on, we are serious about access and access cannot be an afterthought after we have launched medicines successfully in high-income countries.

On the right panel, you see a few selected examples. And these are by no means comprehensive. But we need to look at the clinical diversity strategy. We have adaptive

development programs where we modify medicines for vulnerable populations. And Sujata Vaidyanathan will show a few examples later.

We also need to keep an eye on affordability. You are all aware that we have a tiered pricing framework, which is enabled by our emerging market brands. And I will share examples just in a minute.

Our unique approach in Sub-Saharan Africa, where we have shifted from a margin- or profit-led model to an impact that model. Or the recent example with the Access to Oncology Medicines Coalition, where we piloted a new approach of a voluntary license that enabled a medicine for oncology for noninfectious disease to be the first one that was administered through the medicine's patent pool.

And then, and I believe this is the hardest to do, is the work that we do with health care systems, where we have harmonized our approach to health system strengthening across all teams at Novartis. And you may be aware of the great work that the US Foundation is doing to address disparities of care in the United States with a specific focus on Black populations.

Let me share two real-life examples to bring this a bit more to light. I was in Ethiopia just a few weeks ago and hadn't had the opportunity to visit this country for 5 years and was really impressed with the work that happens at the Black Lion Hospital, which is the largest hospital in Addis Ababa, serving the majority of Ethiopia as a tertiary care facility on chronic myeloid leukemia.

If I take you back 20 years ago, in 2004, we started a donation program in partnership with the Max Foundation on Glivec, which was called the Glivec International Patient Assistance Program. And through this program, so far, we have been able to reach 2,000 patients who have benefited significantly from this program. And the treating physician, the head of the oncology unit, was very passionate about sharing the significant impact that this medicine had, had on a predominantly young population in Ethiopia, which is, on average, younger than the global average.

And of course then, those outcomes have a disproportionate impact on the -- also from a socioeconomic perspective because those are young people who essentially stand in the midst of their professional career and productivity. But in addition to it, this commitment in this program has also catalyzed the development of health care provider capabilities. Even a few years ago, when I was there in Ethiopia, there were just a handful of hemato-oncologists. And now this has grown in parallel with the program to 30 hemato-oncologists. So you could argue that over 20 years, this capability has reached now tenfold of what it used to be.

And then lastly, and you have heard me say previously, that we always aim with these interventions towards the sustainability that becomes, to some extent, independent of us doing the heavy lifting. And while we continue with our commitment on the Glivec patient access program, the government of Ethiopia is now financing second-line treatment for CML patients who progress or are resistant to Glivec so that we have created here a new mechanism that the government fully owns and funds on the basis of this catalytic investment that we did 20 years ago. So to me, this was a brilliant example which essentially fulfills all the criteria that we take into account as we are designing those programs.

The second example takes us to Entresto and the benefit of the emerging market brands that we have launched. And as you can see here, the dark blue bars are those patients who have benefited from Entresto through emerging market brands in low- and middle-income countries. And the light green bars are those that are linked to the originator brand. And you can see by volume and, with that, by impact at the patient level, the emerging market brands exceeds those of the originator brands.

This is being helped through affordability but also through health system strengthening partly done through our foundation, who looks at social determinants of health, moving from a treatment more towards a preventative approach. And then the R&D efforts, where we currently have a Phase IV study in Chagas disease-related cardiomyopathy ongoing. The study is now fully recruited with over 900 patients. We expect first results in a year. But it shows that Entresto, beyond its core indication, also has a role to play in some of the most neglected diseases.

And you see very nicely how the three components of our Access Principles, R&D, affordability, health system strengthening, are reflected in this approach here. And I'm very happy to say that we have also addressed the historic lack that existed between launching Innovative Medicines in high-income countries and low-income countries. Here's a time gap, which as you know historically was several years, up to 10 years, we were able to reduce to just 2 months. So that this benefit reached essentially every corner of the world within a very, very short time period.

Now of course, these are only just two examples. There is many more programs and approaches that we have put in place, some of which had been profiled last year and in previous years. But essentially, what you see here is that we have a toolbox of many approaches and that we have a complementarity of what the core business does by implementing the Access Principles and where Global Health comes in to complement those efforts across three dimensions.

It's across the portfolio, where Global Health focus on neglected tropical diseases, and we'll hear more about it in just a moment; on geographies, where Global Health focuses on geographies where classical market dynamics simply don't work, the biggest example being Sub-Saharan Africa; but also income brackets, where in partnership with our core business colleagues, we reach some of those patients that cannot be reached by classical business approaches. And this is working extremely well. And our goal is that through this collaboration, we accomplish more for the company than the two parts would achieve just operating independently.

Now in closing, let me just address a question that may be top of mind for many of you, and that's the future of Global Health after the Sandoz spin. And what you will see here on this graphic is that the Global Health programs, whether this is malaria, Chagas disease, sickle cell disease, leprosy but also our community health programs remain with Novartis. Particularly, the four diseases have always been with Novartis. They were partly operationalized through Sandoz, but they are really part of our DNA, so they will continue.

What will be transferred to Sandoz is the former so-called Novartis Access portfolio, which was a generic portfolio, and Sandoz is stepping in existing supply contracts that we have,

particularly with nongovernmental organizations. And also, of course, Sandoz, being the largest antibiotic manufacturer worldwide, will fully own this portfolio while we'll contribute to the AMR Action Fund that, as you know, has brought together several private sector players together with the Wellcome Trust, with IFPMA, with the Bill & Melinda Gates Foundation to help spur drug discovery in the antibacterial space.

It's also important to highlight that the targets that are reflected in the sustainability-linked bond remain totally unchanged as a consequence of the Sandoz spin because they have always been geared towards those programs that Novartis runs, either the Innovative Medicines or the Global Health flagship programs.

In Sub-Saharan Africa, we're now fully focus on Innovative Medicines, which was a trend and a change that we've made independent of the Sandoz spin already. This has been accelerated through the Sandoz spin-off. And we'll have now Novartis focusing on Innovative Medicines and the generics portfolio will be fully owned by Sandoz and also exclusively marketed by Sandoz. And on the R&D part, this has always been the engine room for Global Health in the past. And that's certainly going to continue without any change.

On that note, I would like to now hand over to Thierry Diagana and Sujata Vaidyanathan to talk about our pipeline and our portfolio against neglected tropical diseases. As I said earlier, it always fills me with pride to hear about and speak about this unique portfolio that's taken a long time to establish.

Thierry has been leading now the Global Health Research unit, previously called Novartis Institute for Tropical Diseases, for over 10 years and has truly built up a very robust growth in terms of breadth and depth pipeline. Sujata has been a great partner for many years. She's a very accomplished drug development scientist. And I couldn't wish for two better colleagues to lead to this portfolio.

Without further ado, I would like to hand it over to Thierry and Sujata.

Thierry Diagana Executive

Thanks so much, Lutz, for this very kind introduction. And this is really a real privilege to be able to present our Global Health pipeline, which I believe is really one of the richest in the industry. So if I can have the next slide, please.

So this is a schematic representation of our Global Health pipeline. And I won't have time to go through each and every one of them. So I'd like to kind of walk you through some of the key highlights. As I said, I really believe that it's one of the most extensive global health pipeline in the industries. We have seven new chemical entities currently in human clinical trials across six disease areas.

And as it's been mentioned a few times by Vas and Lutz, we have both depth, like in malaria, where we have four novel agents in or near the clinics, three actually in clinical development and one that's about to enter clinical development, all of them addressing the issue of drug resistance, which just say a few more things in a few slides, as well as the potential to dramatically simplify the dosing regimen to support the malaria elimination goal.

And we also have breadth with a number of neglected tropical diseases, such as dengue, leishmaniasis, Chagas disease, cryptosporidiosis, all diseases that have been long neglected for IND. This pipeline truly leverages the full scope of the innovative powers of Novartis' research capabilities. All of these molecules, on novel mechanism of actions. And every single one of them are first-in-class for this disease area. So truly, a very strong pipeline, and we're going to try to give you a little bit more of a flavor of some of its content in the next few minutes.

So if I can have the next slide, I just want to reiterate that Novartis is extremely proud of its long-term commitment to Global Health R&D. This is something that we've done over decades, as Lutz mentioned. This is the result of years of commitment to research and development in this area.

And often, we're asked the question, so why do we do this? And we often start by saying that this is the right thing to do obviously because market incentives fail to generate the type of incentives that are required for innovation in the global health space.

That's just simply those incentives are not existing and are not working for patients, underserved patients, in low- and middle-income countries. Yet we know we have the science to address those challenges, which is why Novartis has a long-term commitment to step up and meet those challenges with the science of the 21st century.

But beyond the ethical and social responsibility, we also understand that these health challenges are also increasingly becoming geopolitical imperatives. By 2015, it is -- 2050, excuse me, it is estimated that the world population -- 3/4 of the world's populations will be in the global south. In the next 3 decades, half of the population growth will actually happen in Sub-Saharan Africa and 1/4 of the world will be Africans.

In addition with this, climate change would also affect disease burden worldwide. And we're going to see a comeback and the resurgence of diseases that have disappeared from primarily other geographical region, where the disease were actually not present for a long time. And I'll back to this. And finally, we will also create values for all of our stakeholders through social impact as well as capturing the financial incentive that have been put in place to incentivize R&D in the neglected tropical diseases, such as the PRVs, which also ensure that we're actually focusing on the most significant unmet need.

So if I can have the next slide? So just like any other disease area at Novartis, we leverage the full spectrum of our capabilities along the continuum, from research to commercial. I think you've heard this from Vas. We really think that Global Health R&D is core and central to our mission at Novartis. And we're having the all-access pass to all of the capabilities that Novartis required for innovative therapeutics in the 21st century.

We have [the reverse] of phenotypic high-throughput screening for infectious disease. We utilize the full spectrum of medicinal chemistry, state-of-the-art structure-based drug design as well as innovating in pharmacology with novel animal models while leveraging machine learning and artificial intelligence to basically accelerate drug discovery process as well as enhancing our trial capabilities. So we really are considering Global Health challenges to be met just as any other disease areas with the full spectrum of our capabilities at Novartis.

So if I can have the next slide. So as mentioned several times during the introduction, the unmet needs for neglected tropical disease and Global Health challenges is massive. 2 billion people essentially do not get access to the medicine they need. There is more than 1 billion people who suffer from neglected infections.

And a number of underserved patients primarily living in low- and middle-income countries are finding themselves under the so-called triple burden of disease, where in addition of infectious disease, emerging infectious disease such as COVID or dengue and noncommunicable disease, which are increasingly becoming a major factor of morbidity and mortality in low- and middle-income countries. So we understand that we need to prioritize and address those unmet needs so that we're best positioned to address them.

So we start by looking at obviously the WHO global health priorities. And they broadly fall in three categories. Emerging drug resistance issue, and that's a very big problem for malaria right now, where we're seeing mutations that confer drug resistance to the first-line therapies, artemisinin combination therapies, which basically are threatening the efficacy of these very important drugs.

The second categories are basically drugs that do not -- are poorly effective broadly sometimes for populations but also sometimes for subpopulations within the low- and middle-income countries or toxic that basically limits their use. An example of that are Chagas disease or leishmaniasis. And then finally, there are cases such as dengue, for example, where we simply have no approved therapies. So this is the criteria that we use to prioritize our portfolio.

If I can have the next slide. So malaria is probably our best and most-often cited story. It's been a major focus of Novartis over the past several decades. We delivered more than 1 billion treatment worldwide. And through this delivery, we've had a very significant impact on the reduction of malaria mortality and mobility over the past few decades, which is captured on the central panel.

But we also understand that we cannot address and there are signs that drug resistance towards artemisinin, as I mentioned, is becoming a very serious threat.

We're also seeing an uptick following the COVID pandemic. There's been a gap in the national malaria control programs, which have introduced now a really growing problem. We've seen reports in Eritrea fairly recently, where we have now these double mutants, which not only have resistance to artemisinin but also are not detectable with the standard diagnostics, so really very serious threat that we are meeting with the most innovative pipeline in drug discovery that I just showed to you earlier with innovation. And we hope that together with innovation in vaccines and vector control, these new therapies will really truly enable malaria elimination.

I will now let my colleague, Sujata, Head of Development, illustrate to you how we hope to see this new anti-malaria compound that we are discovering in our labs reach the millions of patients that we hope to serve. So Sujata, over to you.

Sujata Vaidyanathan Executive

Thank you, Thierry. I'll take the baton from here from research. I'm really very pleased to share with you our malaria portfolio. Our malaria portfolio is strategically targeted towards addressing unmet needs. COARTEM is a very widely available medicine to treat malaria, and you heard from Thierry about it.

However, the dosing regimen is not optimal for the most vulnerable patient population and so, therefore, is quite complicated.

So on the first swim lane, you see we have a development program to address this, where we are testing a new formulation of disbursable tablets for neonates and infants less than 5 kilograms. This has the potential, when approved by health authorities, to introduce this formulation for this patient population, a really unmet need.

The next development program is for the treatment of uncomplicated malaria in the next swim lane. The current standard of care in uncomplicated malaria is artemisinin-based combination therapy. However, there is emergence of resistance mutations against artemisinin. Our drug, ganaplacide, is a new chemical entity.

And the combination of ganaplacide with lumefantrine is really a novel non-artemisinin-based combination with broad spectrum of activity. It is a solid dispersion formulation and is once-a-day dosing, thereby helping with compliance as well. Additionally, we're also evaluating a triple combination, which has the potential to be a single-dose cure for uncomplicated malaria.

Finally, on the third swim lane, you see development program for severe malaria, where we're testing cipargamin, which is a fast-acting non-artemisinin anti-malarial, has a potential combination injectable. And all of this work that we do is really supported by our partners, such as MMV, EDCTP, Wellcome Trust, PAMAfrica and the WANECAM consortium, so really comprehensive portfolio in the treatment of malaria.

For the next slide, I hand it back to Thierry to speak about the other Global Health disease areas that we work in.

Thierry Diagana Executive

Thank you, Sujata. So you've heard about our impact in malaria, and in fact, just really pretty deep and pretty significant effort that has been really very known commitment from Novartis. And I just want to now tell you a little bit more about how we're prioritizing our R&D portfolio across Global Health in other disease areas.

And to do that, we use really this kind of Venn diagram schematic that's on the left. We first look at the unmet need that we just mentioned, working through some of the global health priority of the WHO, for example. But then we really take a deep look at science. We really try to understand how the disease is understood, how the impact of a direct-acting compound that basically address the pathogen that's actually causing the disease. Do we have the kind of workflow and drug discovery flow chart that allow us to best deploy our science?

Also, look for disease area, we can find partners that can help us bridge out some of the scientific gaps and enable access to patients in places where it's sometimes difficult to reach

those patients. So a good example of this is dengue. We have had very long-standing efforts, where we actually pioneered the discovery and the characterization of structure of some of the nonstructural protein of the dengue genome.

We've had a very strong phenotypic efforts, where we discovered actually the precursor to a frontrunner, the NS4B inhibitor, EYU688, which is expected to be in Phase II clinical trials very shortly now, and really have been able to advance the case of dengue research across the board with partners, such as the Wellcome Trust and today, the National Institute of Health in the U.S., which is partnering on some of the follow-up efforts in the dengue space.

So what I'd like to do now is to advance to the next slide and let again Sujata come in to illustrate how those partnerships play out in the clinical trials and the development of some of those disease areas in addition of malaria, where we're hoping to make a significant impact. Sujata, over to you.

Sujata Vaidyanathan Executive

Thank you, Thierry. Great, we already have the next slide. So another new molecular entity, as Thierry mentioned, is LXE408, which is actually being developed in collaboration with our partner, DNDi.

This is a first-in-class. As Thierry mentioned, we have many first-in-class in our portfolio. This is a first-in-class kinetoplastid proteasome inhibitor. It's being developed in multiple indications based on its mechanism of action. Currently, we're running a Phase II study in India for the treatment of visceral leishmaniasis, which is the most severe form of leishmaniasis, also known as kala-azar.

It is a life-threatening disease caused by the leishmania parasite, which are transmitted by female sandflies. A Phase II study for this molecule is also planned to be done in Africa later next year. We're also developing this molecule in Chagas disease, where there's a real unmet need. And I'll speak to this a little bit more later.

However, handing it back to Thierry in the next slide, where he'll articulate more on the Global Health strategy and its increasing relevance in the context of climate change. Thierry?

Thierry Diagana Executive

Thank you, Sujata. If I can have the next slide, yes, perfect. So I mentioned that earlier in the introduction that we view this work as kind of future-proofing the portfolio of Novartis. We've all seen the impact of climate change with the dramatic change of the distributions of some of the vectors for the disease that we're actually currently working on.

Two examples fairly recently were the first locally acquired cases of malaria in the South of the United States, in Florida and Texas, and more recently, in Maryland, actually, where a case of locally acquired falciparum malaria was actually reported. We're seeing the increasing spread of the vector for dengue, the Aedes aegypti, which is now pretty much present in the South part of the United States as well as the south part of Europe.

We've seen a dramatic increase in the number of cases of dengue in the south of France, for example, over the past couple of years. And it's largely considered as a fact that local

transmission of disease such as dengue, West Nile virus is likely to increase in part of the world that have been historically immune to or not really affected by those diseases.

We view this as kind of, as I said, an exercise of really risk mitigation and future-proofing the portfolio. We've seen the impact of COVID. And it is estimated that climate change and urban densification in tropical regions will actually increase cross-species viral transmission by 4,000-fold by 2070. So it's really crucial that we build a pipeline that anticipate those threats and allow us to meet them when they materialize.

So in the next slide, I just want to -- before I let my colleague, Sujata, actually go into more details into our approach to enabling access to clinical development, I just want to go back to this pipeline and just again hope that we have conveyed to you the breadth and the depth of this pipeline, addressing several very important neglected infectious disease, such as malaria, leishmaniasis, Chagas, cryptosporidiosis.

We're meeting the challenge of the emerging infection with escalating potentials such as dengue and Nipah. We're working on noncommunicable disease as well. We haven't talked too much about the research we're doing in this space. But sickle cell is a priority, and we have a pipeline here with molecules that will be functional or potential in genetic cure to this disease, which are increasingly prevalent in the global front. But Novartis are very proud of our commitment to this research.

But it will be nothing if those innovations were not reaching patients.

And Sujata will tell you how we hope to ensure we will do so with our clinical development program. So thank you again for having given me the opportunity to highlight our pipeline. And I will hand it over to Sujata to walk you through our development and the Access Principles that we're deploying through this. Sujata, over to you.

Sujata Vaidyanathan Executive

Next slide please. Thanks, Thierry. Great. So as Lutz mentioned early on, our commitment to Access Principles is fundamentally meant to link clinical development and planning for early access throughout the development life cycle. And adaptive development as part of the lifecycle of drug development, clinical trial diversity and leveraging external partnerships are some of the levers that can actually positively influence this triangle.

We can move to the next slide, please. Our focus is to consistently plan for access, ensure diversity in clinical trials and work with our partners to accelerate, bringing innovation to the more underserved patients, irrespective of the geography that they live in, reaching more patients with innovative medicines, creating sustainable social and economic impact and building trust with society. Beyond value creation, these are just the right things to do. And in the next few slides, I will share a few examples of how we do this.

If we move to the next slide, please. So talking about adaptive development. Chagas disease actually affects 6 million people worldwide and up to 30% of chronically infected people develop cardiac disorders. So when we were developing Entresto, we saw the potential for treating chronic heart failure in these patients, given the huge unmet medical need. So as part of the adaptive development efforts, we're currently running a clinical trial to assess the

safety and efficacy of Entresto in patients with chronic Chagas cardiomyopathy.

Additionally, in this study, we're also exploring potential disease biomarkers that could then help beyond this program for future development of drugs in Chagas disease, such as LXE408, given the rich pipeline that we have that Thierry and his team are working on. At the same time, we're also working with partners in this space to increase disease awareness, fostering synergies in controlling the disease and promoting access to diagnosis and treatment of Chagas disease.

The next slide, please, where I'll speak about another example of how we incorporate Access Principles early on. Thank you so much. Here is another example in sickle cell disease. I know we haven't mentioned much of sickle cell disease so far. But here, really an example of how we've leveraged our capabilities.

Sickle cell disease is a debilitating disease. Approximately 1,000 children are born with this disease every day in Africa. And about half of them will die before the age of 5.

The current treatment for sickle cell disease is hydroxyurea. And it significantly reduces the sickle cell disease-related mortality. Knowing this, we actually developed a child-friendly pediatric formulation of hydroxyurea. It is a film-coated tablet that helps mask the bitter taste of the active ingredient. And it dissolves in water, thereby enabling easy administration to young children.

This formulation is currently approved in Ghana. And we're working with partners such as governments and health ministries to actually expand access to patients in the Sub-Saharan Africa region.

Moving to the next slide. I now want to talk a little bit beyond just drug development. It is a known fact that there's a lack of racial diversity in our clinical trials. And ethnic minorities are underrepresented in our clinical trials. So we actually looked at our clinical trials, and we ensured that 100% of our U.S.-based Phase III studies have evaluated and incorporated diversity and inclusion principles already during the planning and feasibility stages.

And as Lutz mentioned earlier, additionally recognizing that there is more to this and that we alone cannot address this, we actually pledged a 10-year commitment with Morehouse School of Medicine and 26 historically Black colleges and universities and medical schools. And this effort is called Beacon of Hope to co-create effective, measurable solutions for health equity. And we're very pleased to see that other companies and tech companies have joined us in this effort.

Similarly, in EU, we're a lead partner in the IHI initiative, where efforts are being made to ensure equitable representation of underserved population in clinical research and building sustainable infrastructure to improve recruitment and retention of underserved patient population. Can we move to the next slide, please?

So in summary, I hope we've impressed upon you that we have quite an extensive, innovative Global Health pipeline addressing unmet needs in underserved patient populations. Additionally, we also have made a long-term commitment as part of the 2022 Kigali Declaration with a significant commitment over a 5-year period to fight against neglected

tropical diseases and malaria. We also recognize that long-term partnerships are key to catalyze the R&D efforts and to make sure it is sustainable as it creates value across our stakeholder community.

With that, I will hand it over to Paul.

Paul Penepent Executive

Thank you, Sujata, and welcome, everyone. I'm pleased today to be able to discuss with you some of our ESG reporting operations, our approach and our objectives of how we are moving forward in this space to meet the other evolving regulations and requirements for our external reporting.

Next slide, please. So as you are aware, we are operating in an evolving external environment for ESG reporting. Regulations are changing at varying paces across various markets in which we operate in Switzerland, the U.S., the EU and other markets. This requires a company such as Novartis to adapt their internal processes and procedures to be able to comply with these requirements.

We continue to be proud of our current position and our accomplishments today. As Lutz mentioned in the beginning, we were recently recognized by the World Business Council for Sustainable Development as a leader in transparent and effective sustainability reporting in 2023. We'll continue to advance and invest in our ESG reporting, integrating it further into our company reporting processes and procedures.

This will reinforce our ESG reporting foundations with finance taking an ever-increasing active role to drive our ESG reporting and with a view and objective to align this more closely with how we manage and operate our financial data and our financial reporting. This will position us well to meet the current and the future ESG reporting requirements as they evolve and come.

We have good engagement with our management and the Board and their respective committees within our reporting governance models. We have clear disclosure guidelines in place at the global and the country level. And we are refreshing our materiality assessment, which continues to inform us on our ESG strategy and disclosure requirements for the future.

Next, slide please. As you can see, there are significant new and emerging regulatory standards that we are managing across our markets and as a company at the consolidated level. We believe we are well positioned and prepared to meet the requirements of these regulatory standards. And we're well prepared to manage our ESG processes, our reporting structures according to the new regulations. And we'll be ready over the next 3 years to fully comply.

As you can see, starting in 2023 for our reporting in '24, we'll be subject to the mandatory Swiss regulations. And we are currently adapting our Novartis in Society report, which you will see when we release that at the end of January as part of our annual reporting, which will be fully in compliance with those regulations.

We also need to plan for the periods beyond 2024. And we have started to adapt our

reporting processes and procedures to meet the significant disclosure requirements of the CSRD and the corresponding EU Taxonomy. Our current plan is to apply the CSRD parent company exemption, meaning our fiscal year 2025 consolidated company disclosures would be aligned to the CSRD and EU Taxonomy.

This would bring forward our consolidated company disclosure timeline by 3 years versus what is required for non-EU-headquartered company. This approach, we believe, is in best interest for our stakeholders but also reduces the reporting burden on our EU subsidiaries that must comply earlier than our Swiss-headquartered parent company.

We also continue to closely monitor other emerging markets and other emerging regulations, expecting to be impacted by California, as you can see, climate disclosures. We have the ISSB and the SEC, to a greater extent and a degree. But we're still awaiting further guidance on what those regulations will entail.

Next slide, please. So as you can see from this slide, we track very closely our compliance and our preparedness to meet the various regulations. We are well prepared. And we continue to drive towards the compliance as it evolves.

So what does this mean for us? As I mentioned before, our Novartis in Society report will be adopted in -- for our '23 reporting to comply with the Swiss requirements under Article 964 of the Code of Obligations. In 2024, we have the Swiss Climate Ordinance that takes effect, which is requiring us to do a mandatory TCFD-style reporting, which is very much aligned with what we do today in our Novartis in Society report, which we have complied with for the past 4 years.

The CSRD requirements which have over 1,000 qualitative and quantitative data points which need to be assessed for disclosure based on materiality to the company. The CSRD also introduces the mandatory double materiality, which considers both the financial materiality and impact materiality. This year, we conducted a gap analysis against the CSRD and the EU Taxonomy. And we see from that gap analysis a clear approach and a clear path forward to resolve any gaps that we have in order to comply with the reporting requirements at the -- in 2025.

So next slide, please. So in summary, we are well prepared and well positioned to manage our reporting requirements in the evolving landscape that we face. We continue to adapt our ESG reporting in line with the requirements of the standards. We've put in place a dedicated ESG reporting team within finance and embedded ESG specialists in our operations. And we'll continue to invest and build on our ESG reporting capabilities within the organization to meet the external requirements and our stakeholders' needs.

We continue to invest and pioneer as well in our measurement of impact with our close link and collaborations with Value Balancing Alliance and recently the International Foundation for Valuing Impacts. We remain confident in our ESG reporting structures that will enable us to continue to deliver high-quality and compliant ESG data.

But we also recognize that as the landscape changes and the regulations evolve, we'll need to continue to evolve our processes and our procedures, maintaining an agile approach to be able to adapt our processes and procedures in order to meet those ever-increasing and

evolving reporting requirements. This will also include our preparedness to move from limited assurance to reasonable assurance over the coming years and putting in place a robust standardized processes, procedures and control frameworks in order to achieve that objective.

Thank you for your attention. And I turn it over to Lutz.

Lutz Hegemann Executive

Thank you very much, Paul. Thanks again, Sujata and Thierry, for taking us a bit deeper into your respective areas of responsibility.

Now in closing, let me also present the full ESG picture. And what you see here on this rather busy slide is the different ESG pillars, innovation and access, human capital and environmental sustainability, and the targets related to those, both long-term targets and the near-term targets for this year.

And we spoke about innovation and access. I mentioned the sustainability-linked bond. We are making very good progress on the patient reach target both with strategic innovative therapies but also with the Global Health flagship programs and are confident that if we project out for the full year, we'll be reaching those targets that we have set for this year.

On human capital, we're also making good progress. And I'm very happy to remind everyone that we have renewed our EPIC pledge in September this year, expanding it based on the development that has taken place in this space. As you may recall, when we started to put our EPIC pledge forward, there was no regulatory framework. Now countries have caught up with their regulations. So we have adapted and further enhanced the EPIC pledge that we have now made public in September.

And then -- and here, I have to give credit specifically to Steffen Lang, our President of Operations, that we are making very good progress against the targets that we have set for carbon, for waste and for water. And some of the targets, essentially we are very close to reaching already now. So we'll be overreaching a bit by the end of the year. But again, here, of course, we take a long-term perspective, up to 2030, for the neutrality targets and for the net-zero targets that we have on carbon up until 2040.

But all in all, I'm very confident that we are making the desired progress that we do it year-over-year and that we are not just focusing on the long-term perspective but have targets for each and every year that hold us accountable to make steady progress essentially also in the near-term time horizon.

We're also very happy to see that our efforts are being acknowledged by the external ESG rating agencies. And across the board, we see that we were able to hold last year's scores or improves the scores and that those scores are among the leaders in the industry across all the different ESG ratings, whether that's MSCI, Sustainalytics. Access to Medicines Index, obviously matters to us a lot with the access focus, but then of course, also the CDP disclosures on climate and water, where we now reached an A rating in both of these scores. And it's nice to see that also by industry peer comparison, we are performing very well.

Now let me conclude with just highlighting a few statements here. As I hope it became very clear throughout today's meeting is that our focus on innovation and access continues that we see this as the main driver of value for society, for the company and also helping to mitigate risks. Our ambition is to create impact. And we believe by doing our core business very well, doing it consistently and reliably that we are fulfilling unmet needs in the medical front and that we are able to broaden the benefit of our medicines to as many patients as possible.

Our Access Principles remain our guiding principles. I believe the examples that we shared on Entresto but also that Sujata shared on hydroxyurea, sickle cell disease are very clear proof points that these Access Principles are still very much live and guide our efforts across the research development and go-to-market continuum.

Thierry and Sujata showed that we have an extensive pipeline in Global Health, which goes beyond just reusing existing medicines but are truly bringing the innovation power of our biomedical research institutions forward and essentially have the same ambition level to innovation for some of the most neglected diseases as we have for some of the most prevalent diseases.

I believe the example in Ethiopia showed that long-term commitments and partnerships can drive tremendous benefit. This is not -- these are not issues that can be fixed overnight. But we sometimes need multi-years, if not decades-long commitments and partnerships. Early access planning, clinical trial diversity are critical success factors, as Sujata reminded us with the examples that she had shared.

And then lastly, and Paul alluded to that, we are well positioned to meet the existing or emerging ESG reporting requirements. I believe it was the right decision to move the nonfinancial reporting to the financial reporting team, who know how to do this year in and year out. And we want to use the same standard, the same rigor for our nonfinancial reporting as we have been doing for our financial reporting for so many years.

That brings me to the end of today's presentations. And I would now like to introduce the question-and-answer panel. And I would like to extend a very warm welcome to Klaus Moosmayer, our Chief Ethics, Risk & Compliance Officer, who is joining us for the Q&A. And I would like to invite Mavic Cuevas back here onstage because she will be moderating the Q&A part. Thank you.

Maria Victoria Cuevas-Pautonnier Executive

Thank you so much, Lutz, and thank you so much for our speakers. [Operator Instructions] Let's start off with the questions we've received from the web.

So the first question is coming from Christopher from Neuberger Berman. This question, I guess, is for you, Lutz. Could you explain your shift to impact-led model in Sub-Saharan Africa? And how does an impact-led model actually work?

Lutz Hegemann Executive

Yes. In 2018, we reviewed our strategy that we deployed in Sub-Saharan Africa. And Sub-

Saharan Africa, as many of you know, is home to about 1.6 billion people. And it has the largest gap, if you take the slide that I showed earlier, between what essentially good health coverage both basic and for innovative medicines would look like and where we currently stand.

So we felt that through a classical business approach, even with Access Principles in mind, even with all the flexibility that the core business uses in order to make our medicines accessible as widely as possible, we wouldn't be well positioned in order to address that very significant challenge or opportunity that exists in Sub-Saharan Africa.

And we said, "Well, let's sort of pivot the business from a financially driven business to an impact-driven business that is financially sustainable." And there were a few things that we did. So before even we combined the organization now at Novartis as a one single, unified organization, we did that in Sub-Saharan Africa, was we said a fragmentation of our organization is not capable of addressing the varying needs that exist very often with one institution or with one part of society.

And then secondly and probably most importantly, we said, "Well, let's not measure just the financial performance, but let's measure patient reach as a surrogate for impact," so that we wanted to find ways to bring our medicines to as many patients as possible. And we proved that by essentially saying, "You need to reach more patients and not just you need to grow your financial return." And that worked extremely well. It really motivated the organization, but it also drove the right behavior in that we are not withholding, for instance, a medicine from Sub-Saharan Africa in order to protect margins.

And in effect, what we now see in Sub-Saharan Africa that the patient reach increases year-over-year and very nicely so, the financials follow suit, which previously was not the case. And just through that mindset shift towards this creating impact in Sub-Saharan Africa, we are doing good for society, but we are also essentially helping grow the business, which historically has and this year is expected to outgrow the margin and the GDP growth. So I think that to me is what we mean by an impact focus.

I would have loved to have a better way to measure impact than just counting patients, which is a very crude metric. But that was the best that was available at the time. And as Paul alluded to, we are, in parallel, also now advancing methodologies to better quantify the impact. And as you all know, there is disease adjusted life years, quality adjusted life years, all of that needs to be factored in.

But the most robust, even though very simple metric, that we could apply was the patient reach, and that has done the trick in changing the mindset of the organization, driving the right behaviors. But for the next time around, hopefully, we will then have better metrics that are more representative of what impact means in this setting.

Maria Victoria Cuevas-Pautonnier Executive

Great. Thank you, Lutz. Let's go to the second question we received from Francesca from Mackenzie Investments. If U.S. drug pricing gets corrected down to European level, how is R&D going to be funded by pharma?

And I guess, Lutz, would you be able to address this?

Lutz Hegemann Executive

Yes, I'd be happy to take a first shot at it. I think it's fair to say that our industry is not a stranger to price pressures. And we have seen this in Europe essentially year in, year out. And now of course, the U.S. comes with price pressures that have a very significant magnitude.

And I don't want to downplay this. But I believe that a truly innovative pipeline with medicines that change the standard of care will be rewarded.

Because that is truly what helps treat diseases that were previously not treatable, what will add quality life years to patients with a terminal illness. And we need to focus on that innovative itch, which I believe society will reward one way or the other. That said, of course, we need to take those factors into account. But we are going to stay the course and focusing on truly innovative medicines to drive an advancement in the standard of care.

Maria Victoria Cuevas-Pautonnier Executive

Thank you. The next question is for Paul. Paul, where -- how does your team keep up with the evolving ESG reporting landscape? And what are the main external resources used to educate your team more broadly on these reporting standards? Thank you, Lily from Aristotle, for submitting the question.

Paul Penepent Executive

Thanks for the question, Lily. So I think on the reporting, we've integrated within Novartis the various teams that come together. So we have, in my team, a Head of Reporting & Assurance for ESG Data. And he's built up and continues to monitor the standards and the regulations on reporting. That's also complemented by our sustainability and ESG office, where we have the head and a team in that group that also is monitoring standards and feeding that back into us.

And then to integrate it together, so we have a forum, we've created an ESG Reporting Committee, where we come together each month on a quarterly basis not only to review the quality of our ESG data, the current trends but also to review emerging and upcoming standards and what's happening in the regulatory space that we can share across. And then an additional element of the internal network is our legal team, who also keeps in close contact and understanding what's happening on the regulatory front, particularly when it comes to the SEC and the SEC reporting requirements.

Externally, we tap into many different organizations that we belong to. For the Swiss requirements, for example, we stayed very close to Swiss holdings, where we have a reporting team and a reporting committee that also addresses the ESG and ESG reporting matters. And we stay close with other external bodies. Our external auditors are a good input and training ground as well as selected consultants. Most importantly, it's learning and reading ourselves, going to the websites and keeping abreast on the current trends and what's happening through various committees we belong to and self-learning for my team and my extended team.

Maria Victoria Cuevas-Pautonnier Executive

Thank you, Paul. There's another reporting-related question. But I think this one is for Klaus. Have you assessed the impact of the corporate sustainability due diligence mainly on your supply chain reporting? Over to you, Klaus.

Klaus Moosmayer Executive

Yes. Thank you, Mavic, and thank you for the question. I would like to maybe split the answer in two parts: first, on the content; and second, on the reporting. So on the content, third-party risk management, the supply due diligence, which is a subgroup of third-party risk management, is always and was always an essential part of an effective ethics, risk and compliance system.

So this is, for us and for many other companies, not new. We have started years ago with a comprehensive third-party risk management, which goes, by the way, far beyond classical anticorruption topics. We included very early the topics which are now on the agenda of the European Commission, especially on human rights, also on environment and health and safety topics.

So we have since years a system in place, which we are continuously further developing. And we are also in exchange with the regulators, of course, to make our voice heard when it comes to the practical challenges, especially on Tier 2 and 3 suppliers and sub-suppliers. On the reporting, we report already since years, if you have a look at the Novartis in Society Integrated Report, quite detailed on our supply chain and our associated risk management of the supply chain.

We have now to wait how the draft regulation will further evolve and what will be the specific additional -- potential additional reporting obligations. But what I can say is from a content point of view, we are very, very, very satisfied and content and sure that we will also comply with our future reporting obligations. Thank you. Back to you, Mavic.

Maria Victoria Cuevas-Pautonnier Executive

Thank you so much. Shifting gears a little bit on diversity in clinical trials because we've got a question from Pauline from Federated Hermes. Maybe for you, Lutz. Thank you for sharing your efforts to improve diversity in clinical trials. Could you share also what is your approach to diversity in R&D teams?

Lutz Hegemann Executive

Yes, happy to start and then I'll invite Sujata for additional comments. I think it's fair to say, and some of you may know that I spent many years in the R&D organization before taking on the Global Health & Sustainability responsibility, I think that, in fact, we do have one of the most diverse R&D teams in the entire industry.

Operating from many different locations, R&D is, by definition, a global effort, where we have teams and centers in many different parts of the world. And that's also reflected, by the way, in the R&D leadership teams, which strike me as being highly diverse in terms of nationality, in terms of gender but also in terms of thinking styles when it comes to different backgrounds,

physicians, scientists that really embrace that diversity. But I'll let Sujata comment on that.

Before doing that, I would also like to remind you that the drive for diversity in leadership is not exclusive to R&D but extends to the entire company leadership. And over the years, we have developed approaches that hold us accountable to making sure that diversity is being implemented. Because it doesn't just fall out of the skies.

But for instance, we always ensure that we have diverse slate of candidates, that we have diverse interview panels. We have trainings against unconscious biases in decision-making and many more activities to make sure that we select the right talent with an eye on diversity as we are composing teams. But Sujata, maybe real-life examples from the recent past that you would like to add.

Sujata Vaidyanathan Executive

Yes. Thank you so much, Lutz. I think you articulated it very well, I think, in terms of having the interview panels, the candidate panel, et cetera. But then also following through on it, to ensure that not just having diversity on the team level but when we implement our clinical trials, assessing them against our diversity metrics is also a very important and key piece of it.

Our geographic footprint also helps us with this, where we have -- where we run our clinical trials in regions where the disease actually exists. So that brings in that regional diversity. And our teams are spread across the world. In Global Health, we have a team -- a big part of the team that sits in Hyderabad in India, in Basel in Switzerland, in the U.S., in Sub-Saharan Africa. So I think it's not just one piece, but it's a [indiscernible] make sure that we accomplish this.

Back to you, Mavic.

Maria Victoria Cuevas-Pautonnier Executive

Thank you, Sujata, and thank you, Lutz. The next one is coming from Alex from Robeco. Regarding the Global Health portfolio, can you speak how local affordability is systematically factored into the access strategies for the Global Health portfolio? Maybe, Lutz?

Lutz Hegemann Executive

Yes, I mean, this -- thanks for the question. I mean, this is really front and center of our deliberations. And on one slide, I shared a number of approaches that we are actively employing, which first step is the tiered pricing as a consequence of the -- and enabled by the emerging market brands. But we go beyond that with shared value model propositions and, I mean, even all the way down to strategic donations. So our belief is that pricing should not prevent ultimately patients in need from getting access to the medicines.

But in doing that, what we see more and more being a critical barrier is the readiness of the health system to deal with this innovation. There's no point in bringing a second-line treatment to a community if the first-line treatment doesn't exist or patients are not even diagnosed. And we have had some, I would say, awakenings, for instance, in the sickle cell disease program that Sujata alluded to, where the thinking initially was how can we bring disease-modifying treatments into sub-Saharan Africa, given the high prevalence of sickle

cell disease there? And then as we were planning, we saw that first-line treatment hydroxyurea is totally out of reach for many patients. But even worse than that, that most patients who have the disease aren't even identified through newborn screening.

So we always need to look at the entire continuum of care and not just focus on the affordability question. This is important, but it needs to be seen in the broader context.

And now with the model that we are deploying in Sub-Saharan Africa, where essentially we almost take, in spirit, a nonprofit approach, meaning that we reinvest the money we make in Sub-Saharan Africa into this health system strengthening and into Access Principles and approaches to me is the most holistic approach that we, as a private sector player, can take. We are constantly learning, of course, and looking at opportunities to even strengthen our propositions. But it all comes back, I would say, to this holistic and integrated approach that we need to take to access.

Maria Victoria Cuevas-Pautonnier Executive

Thank you. The next question relates to the slide you presented earlier on the ESG targets. And the question is from Francesca from Mackenzie Investments. What would you identify as the main variables that could pose a threat to achieving your long-term targets? And I guess, I would pose this question to both you and Klaus.

Lutz Hegemann Executive

Yes, I mean, the world has become very unpredictable. And of course, these targets have been set and defined ambitiously in the world we currently know. But if we just consider what a pandemic can do, what a war can do to essentially disturb the global infrastructure, then I wouldn't say that the targets are totally risk-free. Because they always need to be interpreted with the world we know and the best of intents. Obviously, we look at the risks very systematically, also risks to attaining those targets.

But I wouldn't say it's entirely risk-free.

On the other side, I think there's also technology being developed that hopefully can help accelerate getting to some of these targets. Thinking of the environmental targets, I do hope that we'll see more technology helping us come online up until 2040, when we want to be net zero on the climate dimension. So it's a bit of the opportunity that potentially comes through new technologies, but then it also derail us at global or regional scale that are very difficult to predict. But we need to account for those, we need to be vigilant and we need to be prepared.

Maria Victoria Cuevas-Pautonnier Executive

Klaus, anything to add on that?

Klaus Moosmayer Executive

Yes. I can echo Lutz. And maybe it's a good moment in time to speak a little bit about the value of proper assurance, risk management and crisis management for ESG as well. At Novartis, we understand risk management very holistically. This includes also the ESG team.

So in our annual risk workshop and the preparation, the ESG team plays a significant role.

Because it's a lot about the reputation of the companies and targets, which we discussed today, the company has said publicly and we want to achieve.

We look, from the risk point of view, of course, internally or from internal risks, other topics in the company. And you just have witnessed the transformation of Novartis, which is going very well and is not putting our ESG targets at risk. And we look, of course, also at external developments, geopolitical crises. We need to manage crises. We need to manage with foresight to supply chain.

There was one question about supply chain as well.

As you know, on the E pillar, on environment, we need to work together with our major suppliers or all suppliers to achieve our environmental targets. So we have internally focused risks, externally focused risks. And again, I want to really highlight this, we have comprehensive, holistic risk management, which takes all the ESG topics also into the risk matrix. And you will find a very detailed view on this also in the upcoming Novartis in Society Report in the risk section. Back to you, Mavic.

Maria Victoria Cuevas-Pautonnier Executive

Thank you so much. I'm just conscious of time. We have 4 minutes left. Maybe we address two questions from the web. And both questions are for you, Lutz, if we can address in 2 minutes each.

The first one is from Lily from Aristotle. When it comes to partnerships, what is the role of Novartis versus its partners? And how is Novartis affected if it loses partners or partners lose their funding? That's the first question.

The second question is from Pauline again from Federated Hermes. It was interesting to see the link between climate and changing disease burdens. Thank you for sharing the emerging evidence and focusing on this. Can you update us on the work you are doing regarding the development of a biodiversity strategy? Nature has been the traditional source of new pharmaceuticals.

And it would be interesting to see your impacts and dependencies identified with reporting against the Taskforce on Nature-related Financial Disclosures framework?

Lutz Hegemann Executive

Yes. Thank you for those two questions. Let me start with partnerships, which are truly a critical enabler for what we do in Global Health, whether that is in the research and development space but also partnerships with organizations on the ground that help us reach more patients. Personally, I think that those partnerships, where you have a shared vision and then complementary skills, are the most powerful partnerships. And those are very often around those capabilities rather than the funding that comes with it.

We, of course, appreciate organizations that co-invest, like the Bill & Melinda Gates Foundation, reduce some of the financial burden of doing work in areas where there is very limited, if any, financial return. But that, to us, is not the main criterion for entering partnerships. It's really about that complementarity and skills. Of course, we always regret if

we lose a great partner. So far, that has not really happened.

And I hope that there will be sufficient support for those partners in their environment that we continue on that partnership journey, which I find really being very well positioned in order to make an impact at scale.

Now on the biodiversity question, certainly acknowledge the statement that preceded the question itself. What I can say is that, first of all, we believe, of course, that our climate, water and waste-related target in itself are a main contributor to retaining the biodiversity that we currently enjoy. We feel a great responsibility for nature as a whole because we believe that planetary health and human health are intrinsically linked. And I'm sure we'll have an opportunity to discuss that in greater depths.

Very procedurally, we are currently in the midst of doing a biodiversity assessment, almost like an audit. We expect this to take us pretty much until the turn of the year. And then based on that, we'll develop a very clear action plan, very much like what we have for climate. And then we can also think about targets that we want to set. But it's very clear to me that human health and planetary health are inextricably linked.

And that's where we currently stand on that journey.

Maria Victoria Cuevas-Pautonnier Executive

All right, perfect. I think we have one last question. If we can address very briefly, 30 seconds. Let's see if that's feasible. Wow, how did your team achieve plastic neutrality well ahead of the targets?

How did you eliminate PVC in packaging? Lutz, would you like to take that one?

Lutz Hegemann Executive

Yes. I'm not the expert here. I would love to, of course, also have the opportunity to put more sort of flavor behind it from the environmental team. But what I can say is that it's two things. I think it is a very high level of engagement and creativity of all our associates, who take this very, very serious and are personally highly motivated to contribute to it.

So we have seen solutions being proposed from the operational level. And that's where great ideas come from because that's where the work happens day in, day out. And that we have mechanisms to make sure that those ideas are being heard, implemented and taken to scale. So we could have not done it without a very, very significant engagement from all of our associates around the globe.

And then that's being paired with very clear directions and an encouragement from the top to really be at the forefront of eliminating plastic from our sites, replacing this, making sure that we put the right incentives out also to those who supply us. But it's been a very -- I mean, I was very, very, I would say, impressed by the scale with which we have been able to make this shift.

What's currently holding us sometimes back are regulatory requirements that still require virgin plastic for certain steps in the value chain, for instance, the blister packaging. We are

also actively working with regulators to help influence that to the extent we can.

Maria Victoria Cuevas-Pautonnier Executive

Perfect. Thank you so much. This concludes our webcast. Thank you so much for the speakers for an engaging discussion. And of course, thank you to our investors and analysts, who took the time to join us today.

Thank you for all your questions as well. And we appreciate your ongoing dialogue. Thank you.