



AI for Climate and Nature Grand Challenge virtual information session transcript

Recorded on June 20, 2024



Rebecca Meyer:

Let's get started. Just by way of introduction, my name is Rebecca Meyer and I'm an engagement manager at Luminary Labs. Luminary Labs is a strategy and innovation consultancy based in New York, and we've been engaged by the Bezos Earth Fund to run the AI for Climate and Nature Grand Challenge. My colleagues at Luminary Labs are also here today joining us behind the scenes and they'll be sharing information and links throughout today's session. And we're all just really pleased to see the turnout and the interest in the Grand Challenge today. Diving into the purpose of today's session. We're here to share more context on the goals of the Grand Challenge, as well as key details that will be important to keep in mind as applicants start to develop their proposals. We'll also answer questions submitted through the registration page at the end of today's session.

And as I mentioned, the session is being recorded. We'll publish that recording as well as frequently asked questions on the Grand Challenge website following the session. Given the volume of attendees, we've disabled the chat for today, but if you have technical issues, you can reach out to hello@aiforclimateandnature.org and nature.org, and a member of our team is monitoring that inbox and will be in touch. I'd love to hand it over to Amen from the Bezos Earth Fund who's joining us today for this session to introduce himself.

Amen Ra Mashariki:

Thank you so much, Rebecca. Hello to everyone and great to see so many people who are interested and excited to partner with us, us being the Bezos Earth Fund, to really understand and see where modern AI can have an impact on climate and nature. This is a really great opportunity to share information on how we're thinking about this Grand Challenge, but also what we see as a really powerful, impactful initiative. Just a quick background, I'm the director of the AI and data strategies at the Bezos Earth Fund, Amen Ra Mashariki. I come to you by way of a fairly technical background. All of my degrees are in computer science through doctorate, but across my career, I've focused all of my computer science technology background in specific areas, whether that be healthcare, whether that be in urban environments as a chief analytics officer for New York City, head of AI for a energy startup, or



director of the data labs at WRI or head of urban AI at NVIDIA and now at the Bezos Earth Fund.

And so the way that I tend to think about things across my career is how do we use technology, specifically AI, to have a tremendous impact as a force multiplier for shifting the way that we engage with society and such. And so excited to have this conversation and share with you how we're thinking about this initiative. Thank you, Rebecca.

Rebecca Meyer:

Thanks Amen. We're really grateful to have Amen joining us to share more about this initiative and about the Bezos Earth Fund, and we'll get into that in just a second. I've introduced myself so I won't go back into that, but very grateful to be here today to speak about this exciting effort. And so we'll now share more context on the vision for the Grand Challenge. And Amen, I'll turn it back over to you to talk about how this Grand Challenge supports the broader vision of the Bezos Earth Fund and maybe we can start with that.

Amen Ra Mashariki:

Absolutely. Thank you so much, Rebecca. So the Bezos Earth Fund is a ten-billion-dollar fund focused on providing solutions and impact in the climate and nature space over this decisive decade. So we're looking at getting out a billion dollars a year from 2020 all the way to 2030, which we see as the decisive decade. And so we are really impact-driven. There's a quote that I like that's been around the internet and that is, "you don't rise to the level of your goals, you fall to the level of your systems." And so one of the things that we think about at the Bezos Earth Fund is how do we support things from a systems perspective such that we can drive positive impact, push things over those tipping points. And so we don't just think about point solutions, an effort here and an effort there or research here and the research there. We really think about really building and growing and investing in systems to drive impact in climate in nature.



And also specifically on the AI side, impact is so important and you'll hear that word a lot during this call and a lot from me in general. We don't just think about measurement, we don't just think about modeling, we don't just think about data. It's, we think about those things in a very big way, but we think about them in the service of having impact, clear, precise impact on the ground. So just going into a little bit, I'm going to give you some inside baseball on the Grand Challenge, the AI for Climate and Nature Grand Challenge. We didn't come to this by happenstance. We really strategically thought through the best way to provide philanthropic support, specifically around AI for climate and nature. And so it really started and it's ending in us listening and us engaging the larger community, not so much working from the inside out, but starting from the people who have been on the ground, doing really important work in this space.

And so that starts from small things like partnering with Columbia University and President Minouche to host an AI dinner where we brought a group of people who have been thinking about this from the climate's perspective, from the nature perspective, and then from the AI perspective. We think about that in terms of the suppliers and the demanders, the suppliers of AI and the demanders, the people who could possibly use AI to have an impact, the people in the climate and nature space who've been doing this amazing work. All the way to hosting an innovation workshop in San Francisco led by Noël Bakhtian, where we brought together over 60 practitioners, researchers, again, from the climate and nature side, all the way to the AI side, come together and talk about the challenges and the possibilities and try to think through how can we be innovative to provide solutions. Again, we were solely in a listening mode there. We published a really amazing report thanks to the leadership of Noël Bakhtian. And so we published a report that you have access to, and so I encourage you to read that report.

We partnered with and supported Columbia University Climate School to do a report on the ecosystem, the organizations that are on the ground, doing work in AI for climate and nature. The way that I always talk about it is that this report identifies the signal in the noise, right? It's a landscape assessment report. Who's doing what and who's doing what well and how are they doing and where can we go from here? And so it's an amazing report that you also have access to that we partnered with



Columbia University Climate School, Pierre Genting, who's a really big thought leader in this space and his team, Burhana, Mather and others to really put a really powerful report together in cooperation with the climate school. And again, this was about going out and hearing from people on the ground. We didn't, at the Bezos Earth Fund, didn't create this concept of AI for climate and nature, but we want to scale it, we want to grow it, we want to invest in it, and so we wanted to do this landscape assessment report.

And that gave us a sense of what the community looks like, what the ecosystem looks like. And we knew at that point the best way to continue to support and grow this ecosystem was to do a \$100 million Grand Challenge initiative. And so why? There is a need and then there's an opportunity. And again, we didn't create this from Whole Cloth. We partnered with one of the most well-regarded and known organizations in the intersection of AI and climate and nature, CCAI (Climate Change AI). They worked with Center for Open Data Enterprise as well as Data Innovators to do... So Climate Change AI as a nonprofit, work with these other organizations to do a full assessment of Grand Challenges and who's been doing Grand Challenges and how those Grand Challenges have been having an impact, if they have been having an impact and why they've been having an impact. So again, we didn't just wake up one day and decide that, "You know what? A lot of people are doing Grand Challenges, it's a cool thing to do, so let's just kind of jump in and do a Grand Challenge.

We worked with climate Change AI and their partners to really dig in and understand what has been the impact to date, what has been the drivers of that impact, and where we, Bezos Earth Fund, the AI portfolio, can drive impact based on what they're seeing, again, listening, listening and engaging. And so you also have access to that report, this amazing report that they've done as well. And so we really think digging into that report will give you a strong sense of what we saw as the need and then the opportunity. But briefly what I will say is the key driver with this Grand Challenge, as you may have already surmised, is we have the AI community and we have the climate and nature community. And where we've understood is that success has been through a really thoughtful and powerful integration of those two communities.



One can't lead without the other. And so to bring those two together, I always say, is a fairly non-trivial pursuit.

And so this Grand Challenge is not about identifying the coolest and the hottest AI solution to a problem, but it's about identifying an intractable problem in climate and nature, identifying a modern AI solution to that and then working through these complex questions and processes to bring climate and nature challenges and AI together to provide an impactful solution. And that's the key need for this Grand Challenge, and bringing all of these organizations, all of you to the table to engage in that process is the opportunity.

Rebecca Meyer:

Great. Thank you, Amen. And the reports that Amen just referenced are in the chat, so you have access to those. They're also linked on the Grand Challenge website. I'll now talk a little bit about the structure of the Grand Challenge and how it will work. The Grand Challenge will award up to \$100 million in grants over three rounds of funding. We're currently in open submissions for the first round of the Grand Challenge. So each round of the Grand Challenge will have two phases. This particular round focuses on driving impact in sustainable proteins, biodiversity conservation, and power grid optimization in addition to visionary wild card solutions. And we'll dig into those focus areas a little bit more. So for each of these, we're curious to understand how AI might be able to address that intractable problem that Amen was mentioning, and unlock further impact. For sustainable proteins, what we're exploring is how can we feed the Earth's growing population without harming the environment.

For power grid optimization, we want to understand how we can ensure our power system is ready to operate and support net zero and energy transition plans being developed in countries around the world. For biodiversity conservation, how can we protect endangered animals and preserve genetic diversity? And then for wild card solutions, we're really interested in how we can drive a visionary application of AI to mitigate climate change or protect nature outside of those other three areas. If you have a powerful idea for how to apply AI to an intractable climate or nature problem, we want to hear about it. There are more resources for each of these topics on the Grand Challenge website. And just a note that regardless of focus area, all



submissions will be scored with the same criteria, and that includes the wildcard submissions as well.

So let's talk through what this first round focusing on those focus areas will look like. The first round will include two phases. In Phase 1, which we're in right now, applicants will attend a virtual webinar, will review resources on the Grand Challenge website and consider how AI might address climate and nature challenges. At the end of Phase 1, applicants will submit proposals through the Grand Challenge website to describe their idea, and up to 30 proposals will be selected as seed grantees at the end of Phase 1. Those 30 seed grantees will advance to Phase 2 where they'll participate in an innovation sprint. During that innovation sprint, seed grantees will receive teaming support, mentorship and resources from AI experts as they refine their proposals and start to plan for implementation. At the end of Phase 2, teams will submit detailed implementation plans to articulate how they'll bring their idea to life, and up to 15 teams will be selected as implementation grantees at the end of Phase 2.

So why participate? Why put your energy and your time into participating in the AI for Climate and Nature Grand Challenge? The first is certainly funding. Awardees will earn funding at the end of each phase, and we know that funding is really critical to being able to implement, right? But there are a lot of other reasons as well to consider participating in the Grand Challenge. Another is collaboration. So awardees will receive support to collaborate and partner with researchers, practitioners, and innovators. Awardees will also get recognition, so they'll be celebrated at the AI for Climate and Nature Summit in 2025, and they'll be recognized publicly through Bezos Earth Fund communication channels. Awardees will also get targeted support and resources from AI experts, and this is especially true in Phase 2 during the innovation sprint.

And finally, impact. I think we're all here to understand how we can make a greater impact in climate and nature, and the Grand Challenge will help practitioners and researchers create and scale new climate and nature solutions using modern AI for impact explicitly. I'd like to hear a little bit more from Amen. I don't know if you have



more context to share or thoughts on why teams should consider participating in the Grand Challenge.

Amen Ra Mashariki:

Yeah. Thank you Rebecca. Going back to a little bit of what I talked about before, two things. One is integrating AI capability with climate and nature challenges hasn't been done at the scale that we need it to be done to have an impact in this decisive decade, and this is an opportunity to really bring together organizations that have not worked with each other historically, AI companies, tech companies, the suppliers and the demanders. But not only that, in order to have an impact, you can't just bring those two entities, you have to work with community organizations, you have to bring in government institutions, non-governmental institutions. So we are clear that there is a need for thoughtful, and I'm trying not to use the word robust here, but thoughtful and clear collaboration in order to have the impact that we're looking at, and we're looking for a five-X, ten-X type of impact. So it's important to really team up and find partners if you don't already have, but through this process would be a good way to do that.

Rebecca Meyer:

That's great. We'll talk a little bit more about partnership in the next section, so that's a great preview for what's to come. We're now going to move into the details of the Grand Challenge, and we'll start first with submission expectations. In Phase 1, proposals will respond to specific questions on the submission form, which you can find on the Grand Challenge website. Proposals for the first phase should articulate a transformative vision for on-the-ground impact. So it's really like the idea of how you might use AI for impact. In Phase 2, implementation plans will build on those Phase 1 proposals, those ideas, and they'll describe quantifiable outcomes and articulate a clear plan to implement the solution described in Phase 1.

So this is a question we've gotten a lot over the last week or so since the challenge has launched. Who can submit proposals? And we think of this in two groups. So lead entities, these are the teams that can actually click submit on the submission form, they are the leads for the proposals themselves, and these entities could be



academic institutions all over the world or US-based 501C3 organizations. These entities can submit proposals on their own or they can choose to partner with other organizations. Contributing entities can support lead entities in developing their proposals, and these can be any type of entity. It could be private sector companies, non-profit organizations based outside of the US or even other 501C3s or global academic institutions that want to partner up with a lead entity. And contributing entities will be in that partnership role for Phase 1 and two.

Let's talk a bit about awards. So the Grand Challenge will award up to \$100 million in grants over three rounds. This first round, which is the round that we're talking about here today, will award up to \$31.5 million in funding. In Phase 1, up to 30 awardees will each receive a \$50,000 grant and an invitation to enter Phase 2. In Phase 2, up to 15 awardees will each receive an implementation grant of up to \$2 million. Following Phase 2, implementation grantees will bring their solutions to life over the course of two years, and at this point they'll be testing, iterating, and reporting on the effectiveness of their approaches. Awardees will also convene in person at the AI for Climate and Nature Summit in 2025. Details on the focus and structure of future rounds of the Grand Challenge will be shared at a later date. So this information is just pertaining to Phase 2 round one of the Grand Challenge.

One key piece of information is selection criteria. So how will submissions be evaluated? And note that selection criteria apply to all focus areas including wild card submissions. These are published on our website, but I'll also walk through them now. So the first selection criterion is impact, the extent to which the submission articulates a transformative vision for impact in its target climate or nature focus area. Second is viability, the degree to which the submission considers the abilities of modern AI and identifies practical opportunities to apply it while also articulating potential resource gaps, risks and constraints. Suitability, the extent to which the submission addresses a problem that AI is uniquely suited to solve. Scalability, the degree to which the submission can be scaled and adapted to different global contexts and environments, multiplying impact. And finally, societal benefit, the extent to which the submission creates direct societal value, considers accessibility and equity for diverse stakeholders and provides mitigation strategies against any potential risks or harms. So this is how all submissions in Phase 1 will be evaluated.



In Phase 2, the selection criteria are the same general categories, so impact, viability, suitability, scalability, and societal benefit. But there are advanced expectations for depth and rigor because teams will have had the opportunity to refine their ideas further and consider what implementation will look like. So for example, the Phase 1 impact criterion was the extent to which the submission articulates a transformative vision for impact in its target climate or nature focus area. But in Phase 2, what we're looking for is an implementation plan that identifies transformative and quantifiable outcomes for sustained impact, so really thinking about the way that they may quantify impact and also continue the impact in the future. I'll spare everyone walking through each one of these in detail, but encourage everyone to read the selection criteria in detail on the Grand Challenge website to learn more.

As far as timeline goes, we're currently in the open submissions phase period of Phase 1, and of course we're at the information session right now on June 20th. The submission deadline for Phase 1 is on July 30th, 2024, that's in just under six weeks, and we expect to announce Phase 1 awardees in the fall. At that point, Phase 2 will begin with the innovation sprint, so that's in late 2024. And then we expect that the final submission deadline for Phase 2 when teams will submit their implementation plans is in early 2025, with the announcement of Phase 2 awardees shortly afterwards. And then next year, the Bezos Earth Fund will convene the AI for Climate and Nature Summit, which will bring together awardees as well as other stakeholders in AI for climate and nature.

Potential applicants can learn more about the topic by visiting the Grand Challenge website, which you should have links to in the chat. On the site, visitors will find resources on each of the focus areas and on the intersection of AI, climate and nature. You'll also find those published reports that Amen referenced earlier from Columbia University, the report on the San Francisco workshop, as well as the CCAI report on Grand Challenges, and those are also linked in the chat. If you're interested in participating in the Grand Challenge but you're not planning to apply, so you're interested in serving as a reviewer, a mentor, or a contributor in some form, you can share your interest through the website. There's an interest form page where you can sign up. And you can stay informed about the Grand Challenge by signing up for the



newsletter, also on the Grand Challenge website, and that newsletter is where we'll share program updates and key resources for teams to consider.

I know that most folks here are planning to enter the Grand Challenge, so if you're interested in entering, you will need to submit your proposals by 5:59 PM Eastern Time on July 30th, 2024, which again is in just under six weeks. We strongly suggest that you submit well in advance of the deadline just in case of any technical issues so that you have time to resolve them. I also would encourage everyone to take a look at the submission form now so that you can get a sense of what questions are being asked and what you'll need to collect beforehand. It'll also give you time to read through the Grand Challenge agreement.

We'll now turn to Q&A. So thank you all for submitting questions in advance. Given the volume of questions that we received, we won't be able to answer every single question today, but we collected the most frequently asked questions and we'll walk through those. I'll actually start with a question for Amen. So one question that we got a lot is what modern AI means in this context, realizing that we're looking at ways to use modern AI to address climate and nature challenges. So I'm curious to hear from you, how does the Bezos Earth Fund define modern AI?

Amen Ra Mashariki:

Yeah, thank you so much, Rebecca. So it's an interesting question and I'll try to answer it in an interesting way, which is, if we were doing a Grand Challenge for you to build the car of the future, it wouldn't make sense for you to use a Ford engine from the 1960s. While that would work and the car would have all of the functionality that you would want from the car, the engine itself is outdated for probably any number of reasons. And the way we think about AI technology, we know that within the past two to five years, AI capability has shifted dramatically from the last 20 to 30 years. And so what we're looking for are you to take advantage of the innovations that have just recently happened in the AI domain. So to be even more specific, many of you have heard of this concept of foundation models. So how are you thinking about foundation models, this new concept that's been used, it's self-supervised learning, even broadly speaking, generative AI, even with respects to Chat GPT, but specifically



the technology called Transformers, which is a type of deep learning model, Transformer.

Speaking of which, LLMs, which is a type of foundation model. And then even how do you think about what we've seen with this theory of accelerated compute. How are you using accelerated compute or GPUs? And so thinking about all of these new advances that have just happened within the last five years and how to use that to solve some of the clear challenges that we are facing and the crises that we're facing in climate in nature. And so we want to understand how you'll take advantage of these advances, hence modern AI.

Rebecca Meyer:

Great, thank you for sharing that. Another question that we got a lot that I'm curious to hear your thoughts on is what types of solutions the Bezos Earth Fund would most like to see. I'm wondering if you could share a little bit more about that.

Amen Ra Mashariki:

Yeah. I want to be as helpful and as vague as possible here, and so I'm going to walk the tightrope. I think continuing with the conversation that I started earlier, we're really looking for impact on the ground. We are not looking for innovations in AI, we're not looking for marginal success, and we're not looking for just measurement and doing something that measures something and gives us more information and more data. While that's helpful, what we are looking for is using all of those things to actually have an impact. And so for us, the most powerful application, whether it's in sustainable proteins, biodiversity conservation, wildcard or electrical grid optimization, we are looking for how you're taking AI, applying it to a particular intractable problem, but then driving the impact and quantifying and measuring that impact within the two years of your work. And so any challenge, any submission that really identifies, here's where we are and here's how we've been moving at this rate, with AI, we believe we can be here and move at this rate. I mean, those are the things that we are really interested in.

Rebecca Meyer:



Great. Yes, I recognize the need to walk the line of vague and open honestly, but also providing more context, so thanks for sharing that. I'll walk through some questions that we got on eligibility and partnerships. So one question that we saw a lot was, can organizations submit or contribute to more than one application? It sounds like there are a lot of entities out there where there's multiple team members or different teams that are all interested in submitting proposals. And yes, organizations can submit more than one application as a lead entity or as a contributing entity. You're not limited in the number of submissions that a given organization can submit. A second question that we got a lot is, "My organization is not a 501C3 entity or an academic institution, how can we participate?" We touched on this a little bit in talking about lead entities and contributing entities, but really nonprofit organizations, private sector organizations and government entities from all over the world that aren't subject to U.S sanctions can partner with lead entities to submit proposals.

In addition, individuals across the globe can support the challenge by reviewing applications, mentoring teams during Phase 2 or contributing in-kind resources, and in order to express interest in supporting the challenge in that way, you can sign up on the challenge website through the interest form. So there are multiple ways to get involved in this first round of the Grand Challenge, and we'd love to see broad participation from across the globe. Another question that we got was whether all applications in this first round require partners, and they do not. So eligible entities that can be the lead, so global academic institutions and U.S 5 0 1 C 3 entities can apply to the Grand Challenge without a partner. We also got a number of questions on solutions scope. So I think Amen spoke to this a little bit, but one question we got is, how broad or specific should the focus of a submission be? And there I would really encourage folks to look through the selection criteria. I think those will be good guideposts for how to develop your submission and how specific or broad the submission should be.

So again, those five equally weighted criteria are impact, viability, suitability, scalability, and societal benefit. And they're equally weighted because they're all really important. So I would encourage folks to read through those carefully as they put together their proposals. We also got a question of whether it's possible to



propose a solution that aligns with more than one focus area. So we realized there are intersections between these focus areas and the wildcard category can include a broad range of solutions, however, applicants do need to select a single focus area for their proposal, so would suggest selecting the focus area that best aligns with the idea being submitted. We also got questions about the wildcard category and specifically what types of solutions we're seeking in the wildcard category. I think we've touched on this a little bit, but I would say the wildcard category includes solutions that use modern AI to address a significant problem in climate change and nature loss. So again, all the same selection criteria as the other focus areas and a problem of equal weight.

We also got some questions on the Grand Challenge agreement, and the big question we got there was whether applicants are required to sign the Grand Challenge agreement, which is published on the AI for Climate and Nature Grand Challenge website. It's also linked to in the submission form. The answer is yes, all entities submitting an application to the Grand Challenge, whether as a lead entity or a contributing entity, have to sign that Grand Challenge agreement in order to be eligible as an awardee. You have to attach the signed PDF to your submission. So I would encourage folks to go to the Grand Challenge website, read through that Grand Challenge agreement and prepare for submitting uploaded PDF with your signature and the signatures of representatives from any contributing entities that are supporting on your proposal.

We also got some general inquiries. One was on the submission evaluation process. Who's going to review my submission and how will it be reviewed? So in Phase 1, all eligible submissions that we receive will be scored by a multidisciplinary group of experts in climate, nature and AI. The top scoring submissions coming out of that multidisciplinary group will then advance to a smaller judging panel, which is going to also be composed of experts at the intersection of AI, climate and nature. Judges and reviewers will score all of those submissions according to those selection criteria. So you have all of the information about what they'll be looking for. And reviewers and judges will be reviewing submissions in English. So this was also a question around language of whether you can submit in other languages. We expect reviewers and judges to review submissions in English.



Another question that we got is who else is involved in the administration of the Grand Challenge? So Luminary Labs is supporting in the administration of the Grand Challenge, as I mentioned before, and of course the Bezos Earth Fund is leading the AI for Climate and Nature Grand Challenge. We're also very fortunate to have the support of Radiant Earth, which is supporting the administration of the Grand Challenge as a fiscal partner, and they'll provide technical assistance during phases one and two. So you'll see them listed on the website and you may see some communications from them over the course of the first round of the Grand Challenge.

And lastly, and I may seem like a broken record, but one question we did get a lot is when is the submission deadline? I know I've said this a few times, but I'm just going to hammer it in as someone who loves to remind people of when things are due. The deadline for submissions is by five P.M. Eastern Time on July 30th, 2024. Again, that's in just under six weeks, and those six weeks can go by quickly. Proposals have to be uploaded through the submission portal accessed on the Grand Challenge. Website. Submissions received through any other channel will not be reviewed or considered for grant funding, so they have to go through that submission portal. We also ask that folks submit your proposal at least one hour before the deadline just to ensure your completed submission is received. Late submissions will not be accepted. So the earlier the better, but at least one hour before the deadline is what we're suggesting.

So those are the most frequently raised questions that we got. There are some other questions that we'll be publishing on the Grand Challenge website under FAQs, and we expect to update that over the course of the open submissions period. But we're starting to come up on time a little bit, and I'm going to wrap us up there. And just note that published answers, so what's written on the Grand Challenge website, will be considered final responses. If you have additional questions, you can send those to hello@aiforclimateandnature.org, and our team is monitoring that inbox and will be responding to any inquiries there. As far as next steps go, another next step is please add hello@aiforclimateandnature.org to your address book to make sure that important messages aren't marked as spam. And you can visit aiforclimateandnature.org to sign up for the newsletter. You can also review all of the



materials that we shared today. We'll be publishing these slides as well as the recording in the coming days, and any of the links shared in the chat are published on that website as well.

Thank you so much for joining us today. It was a pleasure to be able to speak to this and thank you Amen for joining as well and speaking to the vision of the Grand Challenge and of the Bezos Earth Fund. We are so looking forward to seeing your submissions later this summer. Thanks everybody.

Amen Ra Mashariki:

Thank you everyone. Thank you Rebecca and Luminary Labs.