Population, Health, and Environment in Nepal

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Edited Transcript—Jon Miceler

Thanks to the Woodrow Wilson Center for having us, and thanks you all for coming out on this blustery day. As Gib said, my name is Jon Miceler. I’m the managing director for the World Wildlife Fund’s Eastern Himalaya program. I have a pretty broad mandate of areas that I cover: Nepal; Northern India, specifically northeastern India; Northern Burma, where we’re actually not working yet because of political reasons, among others; and the Tibetan Plateau in Bhutan, if I didn’t mention that already.

So it’s a fairly vast area, interconnected with a lot of other areas in Asia, and I would say that Nepal is probably, for many different reasons, the core of that Eastern Himalayan landscape. Not geographically so much, but because of the amazing successes that we’ve been able to have there over our 40-year -- roughly 40-some-year history of working in Nepal, and specifically in the Terai region. And so, the PHE topics that I’m going to speak about today are from a very specific region in Southern Nepal, in a region called the Terai, and it’s a region that’s known as the Healthy Community, Healthy Ecosystem Project. I’ve added several slides in here at the last minute that are -- will help explain, give a bit more background, because I think there’s some of you out there, you may not have maybe been to the area, or know first-hand some of what we’re talking about. So without further ado, I’ll just jump right into it.

I want to give you a little bit of background about WWF’s -- the evolution of our conservation initiatives, starting with the era and going to the approach and the focus. When we began work in Nepal in the ‘60s, and really through the ‘80s, we were kind of what a lot of people associate with WWF: a straight-up species conservation organization. We weren’t so much involved in community initiatives. We were really trying to protect the great, iconic species of Nepal: snow leopard, tiger, elephant, red panda, that sort of thing. And we were focused on the establishment of management -- and management of protected areas in situ for conservation purposes. As population changes began to occur specifically in the Terai region, we realized that to get to our goal of species conservation, we really need to work much more with humans. And that was the advent of the Integrated Conservation and
Development Project, which you know, we were by no means the originator of, but very much took that up; looking more at how we can work through communities to get to our goal of conservation.

And then, really in the late ‘90s through the present day, we changed our paradigm a bit more to focus on landscape-level conservation, looking at entire, huge watershed eco-regions to try and bring about the conservation of whole ecological processes, because by benefiting -- by protecting a tiger, which was what we call an umbrella species, you’re actually protecting a whole host of species below that, and a whole host of ecosystems that are connected with the tiger. So you can begin with this umbrella species, and you can spread out, you can sort of cover a lot of ground by focusing on them. And this focus was really on ecological and ecosystem integrity, and sustainable livelihood, and that’s where we are today. As managing director for this program, I don’t personally have a huge amount of experience in PHE, but I am here today because I feel that it really is the future. The landscapes that we work in today, no matter where you’re doing conservation, whether it’s Congo, or the most remote areas of Northwest Nepal in places like the Dolpo, or in Tibet’s Chang Tang region, which is an average altitude of 15,000 feet -- there’s people everywhere now. And if you want to bring about conservation of these big, iconic species that need lots of area to roam, you have to work with the people that are living there. They have to buy in to your program, or you’re going to fail radically, and we realized that some time ago, and increasingly, we’re all about PHE-type projects.

So the focus of this talk is on the Terai Arc landscape, and it really is, in many ways, our flagship project in Nepal, and one of the flagship projects, really, in all of Asia. And it’s outlined here in this slide. The bluish areas -- I think that’s blue. Purple? I’m really colorblind, guys, it’s embarrassing. But the purple areas are the national parks and the protected areas, and what we were realizing earlier on is that these were becoming islands of protected areas, and outside, they were increasingly surrounded by, you know, these oceans of people. And we realized that if we really want to preserve something like the tiger, we have to enable this creature to roam, to keep its genetics diverse. We have to enable it one day to be able to walk from Chitwan -- I wish I had a pointer.

Chitwan Area, which is here, all the way up to Corbett, and areas in that -- north -- in Northern India. And so, we began looking at ways of linking that, and creating what’s essentially a green corridor, and that’s represented here. We’re by no means fully there yet, this is an ongoing project that will actually probably go on for a good time to come, because
we’re dealing with such immense human challenges, mainly in the form of increasing populations in these areas. But the idea, again, is to link up this entire area, which starts, essentially, in Rajaji National Park and cuts all the way across Nepal to Chitwan. And one day, of course, we have this vision for a region that will stretch from this area, Chitwan -- ah, where are we here -- all the way across Bhutan, Northeast India, to Burma, ending in Hunan province, so that you would have this massive green crescent stretching the length of the greater Himalayan chain and its satellite regions.

Some of the significance of the region, and why we’re so involved in it -- some of these numbers in the biodiversity area are a bit dated. We’re actually finishing up our latest tiger census, and those numbers will be out this summer, but they’re roughly in there -- 400-some rhinos, 300-plus tigers, elephants, two/three Ramsar sites -- does everyone know what a Ramsar site is? It’s a high-altitude wetlands-type protected area -- not necessarily high-altitude, but a wetlands area. And please, if you don’t know some of the terminology, just shout out and I’ll be happy to answer that.

A couple of world heritage sites -- Chitwan and Suklaphanta. The economy is probably from -- the economy and livelihood, from the PHE point of view, some of the most important -- it’s the “Rice Bowl” of Nepal, meaning lots of the food is actually grown there that supports the country. It’s also a huge revenue base for the country in the form of timber, eco-tourism - that number dropped a bit during the Maoist insurgency, of course. And then, it’s a massive trade backbone because it borders India. There’s actually no real border there, you can just sort of walk across and have -- there’s not even a fence or anything. A couple places there’s a stone that marks the border, but that’s it. And then livelihood -- this is where most of Nepal’s population lives, and it’s increasingly where a lot of Nepal’s population is migrating to. Living in a vertical environment is really difficult, and it’s much easier to make a living in a flat environment. This is a simplistic statement, but it’s really, really true -- a lot of Nepal is very vertical, and a lot of people who grew up generation after generation in the Mid-Hills and higher saw ways of making an easier living by living in the Terai, and so there’s been a lot migration from the hills down into this region, and because of that, that has really been the catalyst that has caused a lot of degradation of the environment. A lot of these people bring cattle with them. Very, very poor, most of them own less than a hectare, and most of them are forest dependent.

I put this slide in kind of thinking that this crowd would be pretty young, and I think that there’s probably no one here over the age of 90, I would say -- And if there isn’t anyone, that
means none of you, including myself, have had the luxury or ever will have the luxury of seeing what an intact Terai was like, sort of when the British were still there. And even post-British, and you know, post -- well, not really. It was already pretty impacted after the British pulled out of India in ’47, but this gives -- these next couple slides give a bit of an idea of what it was like. I snapped this shot out of a relatively low-flying plane flying over the Assam/Bhutan border. And Bhutan, obviously, is this beautiful forested area -- Bhutan has enshrined in its constitution that it will never let more than 60 -- 62 percent of its land cover has to remain under forest in perpetuity. The border, obviously with the Assam Dwars area is right in here, and what we have here is an incredibly fragmented landscape; tiny little islands of forest amidst this kind of sea of humanity. And the pressures, of course, on Bhutan are immense, but they have managed fairly well to keep this tidal wave of people back. And it’s sort of indicative of what a lot of the landscape actually looked at one point, and this next slide will show it to you even more.

This is kind of what it would have looked like when the first Mount Everest surveyors were trying to make their way up towards Everest during the Victorian era. Relatively intact with bits -- bits of clearing in places like that, but really, a really, really intact ecosystem. This is actually -- this photo was just taken two years ago, and it’s the last remnant, big area of intact sort of Terai ecosystem, and this is taken in Northeast India on the border of the state of Assam and Arunachal Pradesh, and the reason it’s so protected is because it’s restricted. China claims this whole area, and India controls it. In 1962 they fought a war over it, and even though the Chinese won, basically, they pulled back over the Himalaya before the snows came and never rolled back in, but it’s still a very relatively uneasy peace, and because of that you have this incredible forest that is frozen in a state of conservation, much like that amazing strip of land separating North and South Korea, where you have all that wildlife, because it’s sort of a no-go zone. There are a lot of tribal groups in here.

But this is what it used to look like in Nepal at that time. Today what we’re dealing with is a bit more like this. The photo on the left, of these young ladies, is indicative of what goes on every day, all day across the Terai: this endless pursuit of firewood -- yeah, of firewood for cooking. The photo on the right is what we want to get back to, and this is actually a successful regeneration forest in, I’m pretty sure it’s the Suklaphanta area, which is a park in extreme Northwestern Nepal -- Southwestern Nepal. So that’s where we’re trying to get, and the population pressures, cattle, et cetera, et cetera are keeping us from that, but we’re getting there increasingly through PHE initiatives.
Some of the root causes and threats of environmental degradation and biodiversity loss -- there's many, many of these, and any one of these I could speak on for this entire talk, so I'm just going to have to rush through it. Forest conversion, overgrazing, forest fires, extraction of timber, human wildlife conflict, degradation of the Churia watershed -- Churia is a Nepali word meaning “middle hills.” So it's that strip between the Middle Hills -- the lower Middle Hills and the Terai. Anyway, it keeps you out of the Himalaya.

How we're dealing with these things, these issues are forest management, restoration, alternative energy, and conservation based livelihoods. Some of the other threats that we're constantly facing are the biological threats -- and this is obviously where we spend, as a conservation organization, spend a lot of our time thinking about -- invasive species, use of agro-chemicals, loss and decline of wildlife populations, and balance of predator/prey populations, and flooding. And some of the ways that we deal with this are habitat management, species management, anti-poaching, and research monitoring, and I'm really not going to have a whole lot of time to discuss much of these, but feel free to ask questions at any point. Some that are more pertinent to PHE initiatives are the cross-cutting issues like population growth, low agriculture, inadequate access to resource management, cross-border issues. And the way that we deal with this are policy work, trans-boundary initiatives -- trans-boundary being between India and Nepal -- communication and education, and partnerships, public and private partnerships and such, working with communities.

The focus of this talk is on our successful communities initiatives, and the idea here is that, you know, if we're going to protect these unique habitats and species that they support, we're going to have to do that through appropriate mechanisms, through working with the communities that are there. And this approach, initiated in the Eastern Himalayas, was expanded with the help of Johnson & Johnson, a supporter over the last four years, and it's called our Successful Communities model, and it's derived from WWF’s four-plus decades or so of global experience in sustainable development, helping people manage local resources. And it was developed following an assessment of needs carried out in five sites across Nepal, and we basically -- my colleague has come up with this brilliant line, the four noble truths. Anyone know where this is taken from, the idea of the four noble truths is taken from?

All right, right. So, many conservation groups that are similar to WWF, when they are thinking about a community-based initiative, will often think about the lower three: economic empowerment, natural resource management, and local governance, and they have
their hands full with that. WWF is really, really focused on these four, specifically community health and education, and that in some ways differentiates us from some of the other organizations that are out there in the field working with us, and such.

Just a quick plug for our people that have supported us, and none of what we have done there -- very little, anyway -- could have been done without USAID and Johnson & Johnson, so we are grateful to them for enabling all this to happen, both past, present, and future.

The Terai Arc -- the place in the Terai Arc landscape that we’re going to focus is where this little yellow dot is coming up, and it’s the Khata Corridor, and Khata’s a little region there sort of in the buffer zone area between Bardia and Katarniaghat Wildlife Sanctuary, which is actually over the border in India, and it’s an area that we have spent a lot of time restoring linkage, actual forest cover linkage between the two areas -- again, so we can hopefully facilitate the movement of big species between these two protected areas, tigers, rhinos, elephants, et cetera.

So just some baseline information to give you a little idea of what we were up against when we came in. Obviously very, very resource-poor, average family less than a half-hectare of land. Does everyone have any idea what a hectare is? I didn’t until not too long ago, until I actually got out and walked one. It’s 10,000 square meters, and that probably doesn’t mean much either, but it’s not a whole lot of land, and less than a hectare -- less than a half-hectare of land is actually what most of these people are dealing with, and it’s very hard to eke a living out for a relatively large family size on one of these plots of land. Population is about 18,300 people, with an average per capita income of about $48, so it’s really fairly poor.

Three hours walk to the nearest clinic -- actually, during the Maoist insurgency, which really got up and going in the mid-90s to late-90s and the early part of this current decade that we’re in, that clinic that I’m referring to collapsed, and so there was essentially no clinic there, which is extremely traumatic. I mean, imagine if we had no hospitals nearby or anything like that when you have little kids. It’s just an absolute nightmare for little kids.

Dysentery, eye infections, pneumonia, all sorts of these very, very common diseases are part of daily life in this area -- were, anyway. Risk of HIV/AIDS -- there’s not a lot to do, there’s not a lot of ways to make money in that area, so a lot of men actually leave home and work nine months or more of the year in India. They’re not with their families, they visit brothels, some of these people, and then they bring these diseases back home and it’s just disaster. In-home cooking, this is an obvious one. Again, when you’re cooking over an open fire with
little kids in the room, you’re breathing that smoke multiple times a day, and it causes eye infections and respiratory -- chronic respiratory illness.

So those are some of the issues that we were dealing with when we came in, and actually in some cases are still dealing with. The threats and opportunities are sort of pictured here. Rather than listing a whole endless number of sentences, I just wanted to put these photographs up. And the one in the upper-left hand corner here, again, is what goes on all day during daylight hours, mainly by women, they’re the ones out collecting this. And this is just collecting timber for use in the house, and largely for cooking. This represents encroachment. You once had incredibly intact forest, but as more or people move down from the hills or come up from India to find more land, they move into these buffer zones areas, and slowly encroach over time. And it’s very hard for a government in Nepal, especially a new government with a shaky mandate still, to resist that, especially with this new Maoist government that is supposed to be of the people in a big, big way, to not -- to say that you can’t use the land, or something like that, for a protected area, really kind of can come across as elitist, and so they avoid statements like that sometime. But what ends up happening is you get situations like this, where it’s, you know, an entirely human landscape. Cattle is a massive problem. Many of these people keep cattle, and these cattle are almost useless except for dowry purposes. They don’t give milk. And so they’re kept, and they’re let loose, and they eat until the ground is manicured to like golf-course like perfection, it’s astounding, and it just goes on for mile after mile. They allow -- they don’t allow a forest to regenerate in any way, and without a certain amount of understory, you can’t have deer, and deer of course are the biggest prey for tigers, et cetera.

All of these problems were greatly exacerbated by the Maoist insurgency, which is represented by this photo here. The Maoist insurgency was perhaps most intense in some of the Terai areas, and this Kahta area suffered quite a bit. During that period of time there was complete collapse of government and social systems, and basically there ways -- people had to rely on themselves. There was, however, one group that were still functioning, and that’s what we abbreviate CFUGs, or community forest user groups. And WWF and some other organizations figured, well, this is sort of an obvious avenue to work through to reach the people. These are organizations that arose out of the communities, they’re members of the community that come together to protect forests. They sort of take care of themselves, and so it was an obvious way to reach the communities by working through them, because they weren’t targeted by the Maoists or anything like that.
In order to identify these threats, WWF designed a PHE project program with five major outcomes, and some of these outcomes I’m going to quickly run through. The first is improved basic healthcare facilities and services, and what existed in this area of Khata before was just this building here. We’ve built the top floor here, and we turned this into a permanent community managed health clinic, with basic tools that you need to sort of offer a community, you know, a really baseline level of medical services. And then we employed a full-time what we call Auxiliary Nurse Midwife. It’s a really interesting term, I don’t know the origin of it. Do you have any -- [laughs] you don’t know either. Anyway, I’ve meant to ask you about that.

A direct result of doing these two things are these numbers that I list here: 729-some patients receiving health care, nearly 3,000 patients receiving general check-ups, 28 community members trained in first aid -- and this one is particularly important, because when you invest in training, obviously, a group of people in the skills, they then take that out to the villages and places where you as an organization, due to your own human resource and funding limitations, can never reach. And so you greatly expand your reach, obviously, by training up a cadre of people that can then head out into the field and reach people that you wouldn’t normally be able to reach. Reproductive health and family planning was, of course, a major, major issue. I mean, it’s actually, in some ways, the root cause of a lot of our problems in the Terai’s population, people being there -- does anyone have an idea of why so many people were able to come into the Terai?

It was malaria eradication, getting rid of the mosquitoes. Not to say they’re not still there, they are still there, but that was the reason that so many people have been able to come and really thrive in that area, and now we’re dealing with intense, intense population pressures, and all kinds of nationalistic issues that are coming up because, you know, as people differentiate themselves over land issues, they often point to their ethnic background, claiming to be indigenous in certain places, and that’s actually led to this current fighting that’s going on right now as I’m speaking, between the Tharu people and the Madheshi, which has actually blocked us from access to our main project site in the Terai, Chitwan.

Anyway, this reproductive health and family planning aspect of the project has been incredibly successful, and what we did was we trained 32 female community health volunteers to become advisors in family planning, and then 15 youth peer educator groups with 20 -- roughly 20-some people in each of those. And then these folks again went out and were able to hold conversations in communities that we could never do. Even other Nepali
people from Kathmandu could not enter homes in the Terai of different, completely different ethnic groups and talk about these incredibly private issues of reproduction and that kind of thing. The result was couples using family planning increased from 4,000-some in 2006 to 4,400 in 2008, and the contraceptive prevalence rate jumped from 43 percent in that period of time to 73 percent, which is a -- is really amazing, actually, in an incredibly conservative society such as the tribal groups in the Terai are.

Improved sanitation and drinking water -- all across Northern India and down into Bangladesh and places like that, you have a lot of trouble with naturally occurring arsenic in the water, and it’s a real problem. And you know, you just -- you don’t even know you’re suffering from it until later. You get all these kinds of terrible outbreaks on the hands. I think probably many of you know what I’m talking about, what arsenic poisoning can do over time. And what we did to try and mitigate that was to provide 172 of what we call “Kanchan” arsenic filters. These filters were distributed in areas with a really high level of arsenic. Forty-four safe drinking water hand pumps, and these hand pumps actually drill far below where a lot of the arsenic lies, and reaches the aquifers that are usually free of arsenic. And then the creation of nearly 800 inexpensive latrines, were constructed to improve sanitation in the area.

Just catch up with myself here -- improve conservation awareness is obviously a strong point for us. Again, we provided a lot extension materials and distributed these through people that we trained, some 375 people were provided with this sort of literature and graphic representation of what we’re trying to talk about, and through that, we were in turn able to reach probably over 4,000 people through campaigns, cultural programs on issues of population, health, and environment. Conservation management, this has again been a very successful one; 136 biogas plants with toilets attached.

Biogas has just been an amazing thing, and it’s going to happen more and more across developing areas of the world. We’re going to initiate -- China’s been fantastic with this, but we’re going to ramp up a lot of our efforts in areas of Eastern Tibet, because there’s ones that you can do with high altitude -- but in the Terai it’s been incredibly successful, and we’re going to really, really increase the number of these that we’re putting in, because -- I’m going to move quick, here, now -- it greatly reduces sickness in the household due to respiratory illnesses that are in turn caused by the burning of wood over an open stove. Huge amounts of forest, we estimate 712 metric tons of fuelwood -- and then it saves women a massive amount of time, we put 3 hours a day but it’s actually far more than that, out every day
collecting wood. Stall feeding and introduction of improved breeds of cattle, mainly cattles that actually produce milk for kids and people to drink has also been a successful aspect of this program.

Impacts, population and health: affordable and reliable health services, significant increase in contraceptive use, improved water, sanitation, equaling the reduction of diseases, 20 percent of the population with access to arsenic-free water. We obviously have a long way to go on that. Impacts, environmental impacts: increased forest cover, a reduction of human/wildlife conflict, conservation-supportive communities, because we really create a strong awareness of the linkage between conservation and their own benefit.

Some of the lessons learned -- this is an obvious one, but I should state: integrated PHE programs really have far-reaching effects on people and environment. Building these projects on existing community institutions is a really cost-effective and produces -- way of going about things, and produces quick impacts. Multi-level stakeholder coordination is critical. An endowment is a really, really important one. We have a roughly $15,000 endowment established, but this needs to be embellished over the years so that this is able to remain sustainable. So that’s, of course, funding is always an ongoing challenge no matter what you’re dealing with, and getting government buy-in from this and support is critical too, and that’s something that we’re working with, with the new government, because it increases the trust amongst communities if government is involved. And then, of course, a well-defined monitoring plan in order to figure out if you’re being successful or not, is very, very important.

Just basically, very quickly scaling up: support from USAID and Johnson & Johnson has helped in establishing this foundation for multi-year population, health, and environment, and this is kind of what I was talking about, this initial fund of $15,000. But this will enable us to scale up from where we started here in Khata, as well as in other areas. We’ve recently -- WWF has recently partnered with the USAID’s Office of Population and Reproductive Health and Johnson & Johnson on a $3 million, three-year global development alliance, which is supporting scaling up all over the world in DRC, and Kenya, and Nepal. And then finally, Nepal -- in Nepal, our project is taking results from the successes that we’ve had in the Khata corridor, and lessons learned from other PHE projects in other countries, and scaling them up in other areas of the Terai, like the Lamahi bottleneck and the Basanta corridor, which are two areas that are very similar to the Khata corridor.