

IFPRI Podcast Series Episode 3: Will Travel For Data, to Papua New Guinea

Sivan: Hi and welcome to “Research Talks”, a podcast series that explores how research is making an impact on people and policies (with a focus on the ‘how’), brought to you by IFPRI. I am your host, Sivan Yosef, and today we will look at how researchers go about collecting data, painstakingly, from the ground up, in very remote places, so that food and nutrition policies can be backed up by evidence. Here is a preview from Emily Schmidt, a senior researcher with IFPRI, working in Papua New Guinea.

Emily: The first task was to go to Papua New Guinea and not spend time in the capital per se, but actually get out in the field and try to understand how rural households, which is really our focus in this project, are surviving; how they're making a livelihood. What are their challenges, where do they see their opportunities?

Sivan: In April 2015, climate scientists noticed something scary and severe forming in the Pacific. They crunched the numbers and they all arrived at the same conclusion: a very strong El Niño event was forming. Now, El Niño is a regular and yearlong event that pushes west winds and warm water across the tropical Pacific, toward South America. Some places get more rain. But others get drought. Unfortunately, the Pacific region got drought.

News reporter: The current El Niño is shaping up as one of the strongest in the past half century.

Sivan: El Nino did substantial damage in Papua New Guinea, a country in Oceania and Australia’s closest neighbor. The farmland in Papua New Guinea was devastated. The Australian government approached IFPRI to talk about agricultural resilience in the country. Emily Schmidt, who you heard earlier, was in that meeting.

Emily: The Australian Government, the Department of Foreign Affairs and Trade came to IFPRI to discuss about potential opportunities for IFPRI to begin engaging in Papua New Guinea. The largest share of their overall development assistance, as I understand, does go to Papua New Guinea, so it's a really important donor to that country.

There were large areas of the population that were facing significant food insecurity situations. However, there was very little data to back up, or understand, or target efficiently any type of food aid. So, they came to IFPRI and they were quite interested in how we could start to build up some of these databases and data systems and really more robust data-driven analysis to start talking about policy and development assistance.

Sivan: Why has there been historically such little data?

Emily: This is due to a lot of reasons. First of all, Papua New Guinea is really far away. It's just a remote location. It's not remote for Australia, but for a lot of the rest of the world it is. And then again, its topography is pretty daunting. You're going from very flat lowlands on the sea level to quite high mountainous regions. At the same time, you have heavy, significant rainfalls. So, you can imagine just maintaining road infrastructure, or any type of infrastructure within some of these very rural less developed areas is quite difficult. Now, that has created one of the most bio-diverse countries in the world. But in terms of being able to get in and actually run any type of a survey or anything that would be nationally representative, it's very cost prohibitive.

Sivan: So IFPRI agreed to do this project, and you and another colleague were basically the leads, right?

Emily: That's right. So, Todd Benson and myself were sitting in the meeting with the Department of Foreign Affairs and Trade, and we were both quite keen and interested to look into some of these issues largely because Papua New Guinea is a country that hasn't been explored as much in terms of more robust socioeconomic data systems. So, this ended up being quite a big challenge, and something exciting that we were pretty interested to collaborate on.

Sivan: Did you know much about Papua New Guinea before the project started?

Emily: My grandfather was stationed there and spent quite a bit of time in Papua New Guinea and my grandmother was from Australia. I'd only learned about Papua New Guinea through a few letters between my grandfather and my grandmother during World War II. How I started with IFPRI was working in the Ethiopia office, and I was lucky enough to collaborate with, who I think were some of the original thinkers around building data systems to inform policy in Ethiopia. They all put in the Ethiopia rural household survey when Ethiopia was at a very similar state with very limited information systems and data collection back in the late 1980s. And now Ethiopia has very talented enumerators, really good survey firms that are all locally built, and they're informing their own policy. So, I think there's a big opportunity to do something very similar in Papua New Guinea.

Sivan: IFPRI embarked on a proof of concept in the country, just to get an idea of whether there was capacity to do research, and to get a basic snapshot of food security. The last consumption expenditure survey was implemented in 2009 – that's a decade ago. There was a demographic and health survey underway but it was running into delays due to logistics and financing problems.

Emily: The first task was to go to Papua New Guinea and not spend time in the capital per se, but actually get out in the field and try to understand how rural households, which is really our focus in this project, are surviving; how they're making a livelihood. What are their challenges, where do they see their opportunities? These are people who are, day to day, similar to anyone going through and finding ways to feed their families and have welfare.

And what I did find is, of course, Papua New Guinea is nothing similar to anywhere I've worked in Africa. The crop systems are different; they're largely root-based, whereas in Ethiopia and other places, they're largely grain-based. So, one challenge that comes about is in grain-based systems you have a harvest. You have production that is planted; it grows up out of the soil. But this is all harvested in a season. When you have a root-based crop system, you're not going in and harvesting everything at once. So, measuring root crop systems is a really large challenge because all of your produce is underground.

Sivan: And then you did focus groups.

Emily: We linked with World Vision International, and they were starting programs in four areas of Papua New Guinea lowlands. So, the survey that we put in was in these four areas. One of the first areas were in Madang province, in the Middle Ramu area.

So in order to get to Middle Ramu district in Papua New Guinea, you'll be on a road, a forestry road, so it's quite slick. It's a clay-based soil. So, if it rains, it's as if you're driving on ice. And that's important; because it did rain, you're on that road for about four hours and then you're on a dinghy with, you know, an outboard motor for about eight hours to get to one of the places where we were working. It happened to be that on one day when we were sitting in a focus group, we saw clouds rolling in, and the breeze started to pick up and this was a breeze that was quite welcome; because as I mentioned, it's a tropical climate. So it cooled down a bit, and we were thinking, you know, this could be quite good until all of a sudden we realized there was a serious tropical storm that was coming in.

So, it took us a long time to get out of there. We ended up waiting overnight. We left early in the morning with the boat. We had quite a bit of difficulty to get upriver, and when we finally did get to the place to meet up with our vehicles to go back on that forest road, that forest road, it was not passable.

And at this point I learned about something that's extremely important in Papua New Guinea culture, which is called wantok; and wantok in Tok Pisin which is the language that Papua New Guineans speak means, if you think about it, it's "one talk." So, in other words, they speak the same language, or they are of the same kinship group.

One of the forest access vehicles who is in the forestry business, which are these massive, huge tractors with amazing traction on their wheels, more like tanks, rolled up out of nowhere and happened to be a wantok of one of the small public motorized vehicle transportation fellows who were sitting at this boat landing. You can think of them as small minibuses—in rain and on very muddy roads, they're just not going to get anywhere. The forest vehicle pushed our mini bus van, this public motorized vehicle up and down all of these forest access roads; because it was the only thing that could get up and down these roads until we got to the land cruisers on the paved road where we were able to move back into town. And it was at that moment it became clear that this type of social security network is often what is very important to some of the welfare and livelihood of individuals in these rural remote areas.

Sivan: Can you talk to me a little bit about how all of the different partners shaped the project?

Emily: World Vision was absolutely critical to the entire survey implementation. They knew the area, they had the resources in terms of boats and vehicles, and on the ground knowledge to move our survey teams and help with survey logistics.

So we linked with UNICEF and they have linked with the University of Papua New Guinea, and they were very open to thinking through ways we could collaborate. So, they actually loaned, they procured and loaned us the anthropometry equipment, so these are scales and height boards looking at the height and weight of children and understanding if children have the appropriate nutrition to be growing properly. We were able to go in measure children, and then we donated all of those resources to the local health posts by request of UNICEF. So, that was just a lovely external thing that occurred.

The University of PNG also identified that iodine deficiency is an important issue in rural Papua New Guinea. They had requested that we collect salt samples in order for them to do iodine deficiency tests. We collected the salt samples and sent them to the University of Papua New Guinea to do the lab tests on iodine samples. In terms of iodine deficiency, we do see a large variation across different salt brands. And this is something to really start thinking about in terms of how are salt brands marketed, and how are they regulated. We also found that more remote populations just don't have access to marketed salt or iodized salt.

Sivan: Emily's team launched the pilot survey at the end of April and had all of the data collected by the end of July, a three-month data collection effort full of many more transportation difficulties and adventures. They collected household surveys from more than 1,000 households. And then they went to Washington DC to analyze the data. But they didn't go about data analysis in... the usual way.

Emily: So, the data all get loaded on to the cloud at this point, even from Papua New Guinea, and we have all of the data here in Washington DC; and at this point there is a choice and these choices have trade-offs. One is we can sit as researchers. We tend to love to sit and sift through data and categorize it, and put it into different buckets, and redo it, and re-categorize it, and rethink. And this is part of our daily lives. However, as I mentioned before, a large goal of this program is to strengthen capacity within country. We invited government officials to come to Washington DC and actually work with us on the data. And this was really important; because again, they have more localized knowledge in terms of what they see and what they know in Papua New Guinea that can inform some of the results that are coming out of the household data analysis. So, we spent two weeks together looking at the data and trying to understand and make sense of what we were seeing in terms of results.

Sivan: So what were the results?

Emily: We find that about half of our sampled individuals are under the poverty line. And the poverty line sits at about a dollar and 25 cents (\$1.25) in Papua New Guinea per day per person. So this is saying that a large share of the population, more than 50% of the population that just aren't consuming enough food. And we have an even larger percent of the population of our sampled group that are not eating enough protein. So this is quite a shocking indicator.

We find that about 32%, or a third of the children in our sample are stunted in their growth. So that means that they're too short for their age. The stunting results also tend to be inter-generational. You can imagine a mother that's malnourished may be birthing a child that is already at a lower level of nourishment and of growth.

Sivan: What is your team planning on doing with these results?

Emily: So, these results now have been communicated a lot to policymakers within Papua New Guinea as well as development partners that are working on Papua New Guinea, specifically. We gave an evening course to the University of Papua New Guinea that is looking at data-driven policy analysis. Most of the students in the course are from a government department. The University of Papua New Guinea courses were also designed to help students identify key Master's theses that they want to explore for their final Master's thesis. Anyone can download these data and also begin to start looking at them and coming up with their own analyses. We've learned a lot of about Papua New Guinea, but also about how to build and strengthen analysis systems within country and find ways to evaluating solutions to some really large development challenges.

Sivan: A big thanks to Emily for sharing her adventures and results from this project, which is only just beginning. For our listeners, you can read up more by googling IFPRI and Papua New Guinea, there are tons of fascinating papers. You can even play around with the entire dataset, if you're feeling wild and researchy. And don't forget to subscribe to our podcasts so you don't miss a single episode from IFPRI. Til Next Time!