

Conversation about International Programs at the U.S. Census Bureau*

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The purpose of the conversation is to showcase the work that goes on within the U.S. Census Bureau's International Programs.¹ This conversation took place face-to-face at the U.S. Census Bureau's Headquarter offices in Suitland, MD between Oliver Fischer, Katherine Condon and Kirsten West (outgoing Editor-in-Chief for SJAOS) on August 20, 2018. Oliver Fischer currently heads the International Programs and has been with the U.S. Census Bureau since 2006.²

*The views and opinions expressed in the conversation are those of the interviewee and do not necessarily reflect the policy or position of the Statistical Journal of the International Association for Official Statistics, nor IOS Press.

¹For more information regarding International Programs, see <https://www.census.gov/programs-surveys/international-programs.html>.

²As further background, Oliver did his undergraduate training at the University of Wisconsin-Madison, where he was first exposed to demography through a class taught by Professor Alberto Palloni. Oliver said that this class "opened [his] eyes into some of the demo-

Oliver will give us an introduction to the International Programs with regards to the history within the U.S. Census Bureau and its mission, before turning to the work of the International Programs which encompass the following specific areas:

- Technical Assistance: forms of assistance available³
- Training and workshops: examples of topics covered⁴
- Software products such as CSPro⁵ and DAPPS⁶
- Databases such as HIV/AIDS,⁷ International

graphic challenges that developing countries are encountering." He took two years off between undergraduate and graduate school and travelled to Patagonia, Bolivia and Peru. During this time, he volunteered by teaching impoverished blind Bolivian youth how to read and write braille, as well as visited La Paz, Sucre and other urban areas within Bolivia. He said of this experience that it "... gave me exposure of living in a developing country. While I am a child of immigrants from Germany, and had lived in Germany for some time, most of my prior international experience was in developed countries." Upon his return to the United States, he started graduate school at University of Texas-Austin to get a graduate degree in sociology with a focus on demography. After his first year in graduate school, Oliver did an internship at the U.S. Census Bureau. One of the benefits of this internship was that he learned about other areas at the Census Bureau – one in particular was International Programs. Oliver realized it "... exactly [merged] my professional aspirations..." He stayed in touch with International Programs staff after he returned for his second year of graduate school. Upon completion of his Master's degree in Sociology, he took a full-time position with International Programs.

³<https://www.census.gov/programs-surveys/international-programs/about/training-tech-asst.html>.

⁴<https://www.census.gov/programs-surveys/international-programs/events/workshops.html>.

⁵<https://www.census.gov/data/software/cspro.html>.

⁶<https://www.census.gov/data/software/dapps.html>.

⁷<https://www.census.gov/programs-surveys/international-programs/about/hiv.html>.

Database (IDB)⁸

- Tools such as Tool for Assessing Statistical Capacity (TASC)⁹
- Geospatial products,¹⁰ projections, Pop Clock¹¹

INTERVIEWER: Thank you for taking the time to talk to us about the International Programs at the U.S. Census Bureau. As an introduction, can you tell us about the history of the International Programs.

Thank you! Currently, the International Programs is within the Population Division (POP) of the Census Bureau, but it has not always been this way. In the past, the International Programs was a Division by itself. We have a 55+-year old inter-agency agreement with USAID. This agreement¹² pre-dates what we now know as USAID. So, there is a very long history of doing this type of work, which has been primarily funded by USAID.¹³

[However, with time the organizational structure has changed due to a number of factors. Partially, due to changes in how we are funded – we are currently operating entirely under reimbursable funds, rather than appropriated funds – and partially due to changes in the mission of USAID – that is in terms of what their focus is, i.e., moving to more of a country-directed focus, over conducting research in D.C. Oliver stated that this didn't mean that the research in D.C. doesn't directly support countries, but that USAID was looking for more of tangible "boots on the ground" kind of thing and having as much of the funding being either directly received or directly felt by the individual countries.]

⁸<https://www.census.gov/programs-surveys/international-programs/about/idb.html>.

⁹<https://www.census.gov/data/software/tasc.html>.

¹⁰<https://www.census.gov/programs-surveys/international-programs/about/global-mapping.html>.

¹¹https://www.census.gov/popclock/?intcmp=home_pop#.

¹²For more information on USAID – see: <https://www.usaid.gov/who-we-are>.

¹³The internal organization of the International Programs has changed over time. Oliver said that at one time the International Programs was an entire division and it was called International Statistical Program Center (ISPC). It was housed in a separate building. However, over time it was re-organized and moved into the Population Division. In addition, with the movement of the U.S. Census Bureau to its new building, the International Programs also was also physically moved to the new building. Today, it is one ADC area within the Population Division.

INTERVIEWER: Well, then let's go to the most interesting part of this conversation, about the specific areas that the International Programs does. Let's start with Technical Assistance.

Great! We have two branches focusing on technical assistance. Technical Assistance and Capacity Building is one branch; and the Training and Statistical Development is the other. Through these two branches we provide capacity building oriented technical support in three primary ways.

The first is our Washington D.C.-based training program, which, was revitalized in 2014.

Since 2014 we have been offering around eight workshops a year covering all aspects of census and survey taking.¹⁴ That is, from the demarcation of enumeration areas all the way through dissemination of results. What is unique about this program is that we get people from all over the world to participate. While some of our assistance is just focused on a specific country, I view these DC-based workshops to be our global training program. For instance, in the most recent workshop, we had participants from Botswana, Zimbabwe, Zambia, Viet Nam, the Dominican Republic and the US. The result is that the participants are coming with diverse perspectives and backgrounds. So, not only are they learning from our instructors but they are learning from each other.¹⁵

Mostly attendees are coming from resource-constrained environments, and they can then learn the approaches that other countries utilized to effectively implement their censuses and surveys. So, it is always interesting to watch their interaction and how they can learn from one another. Okay, so that's the Washington D.C.-based program.

Next, we have our regional workshop program.¹⁶ For these regional workshops, we identify a particular statistical need within a region and conduct a workshop that addresses that particular need – for instance, staff just returned from a regional workshop in Bangkok,

¹⁴An example of one of these Washington D.C.-based workshop announcements can be found – https://www2.census.gov/programs-surveys/international-programs/events/Understanding-the-Demographic-Dividend_June%2025-29.pdf.

¹⁵To learn more about all the places in the world that International Programs has done work – see: <https://www.census.gov/programs-surveys/international-programs/about/training-tech-asst.html>.

¹⁶Unlike the DC-based training programs, USAID gives us funding for these regional workshop program. This funding covers our staff and everything associated with Census Bureau staff – that is, travel, per diem, salary, etc.

Thailand. National Statistical Offices (NSOs) from 12 East Asian countries participated. It was co-organized with the United Nations Population Fund (UNFPA) and we sent two staff as instructors. The topic was on census data processing in a CAPI (Computer Assisted Personal Interviewing) environment.

For a lot of these countries, it is their first time doing CAPI censuses. So, the conversation mostly revolved around this [transition from paper and pencil] to CAPI and all the considerations that are associated with this transition. We do about five or six regional [workshops] a year. These are nice in that they are fairly low cost and we can have a good impact in a particular region because there's so many different countries represented.

The important issue for us is to get a good partner. For example, [UN]FPA,¹⁷ in East Asia and the Pacific, has been really great at identifying the appropriate people within the statistical offices to send. For instance, if we're looking at programming, they are not sending their most junior programmers. They are sending their best programmers so that we can ensure that at the end of the workshop that attendees can pick-up these things and run with it when they get back to their offices.

INTERVIEWER: With regard to the topics for these workshops, how do you decide about the topics that you present?

That's a good question. So, that's a conversation between us and the people/institutions that we coordinate with. While together we determine the subject [of the workshop], we let them drive the conversation, because they have a better feel of what is needed in the particular region.

To continue with the East Asia example, our workshops in this region just transitioned from training the countries who had conducted their censuses between 2013 through 2016 where the focus was more on data dissemination or product development, to countries who are now thinking about ramping up for the 2020-round of censuses. To have the greatest impact, we need to group countries by census date and target our workshops accordingly.

[One last thing regarding our regional workshop program], while we have done a lot of work with organizations like UNFPA, we are also trying to cast

our net a bit wider. As an example, we have partnered with Population Institutes of various universities. We conducted one workshop in the Philippines earlier this year with UPPI, which is the University of Philippines Population Institute.

Overall, it is a win-win. Our capacity-building oriented activities or workshops have a greater impact with regional workshops because the NSOs send senior programmers or senior staff who can then teach their colleagues in their home offices the skills acquired after the workshops. – [a trickle-down effect].

[Finally,] the bulk of our activity is through country-to-country initiatives. Previously, where we talked about the Washington D.C.-based workshop programs, and the regional workshop programs; now, we can talk about our country-to-country capacity-building initiatives. What this entails is where we have multiple trips to one country to work with their statistical office personnel in targeted aspects of building their statistical capacity – usually in preparation for a census or survey. These initiatives range in size from five to seven trainings through the course of two years, to 25 or 30 activities over the course of maybe three to four years.

One that I'll focus on now because it is exciting is the upcoming census in Malawi. We got involved in Malawi two years ago. The way we usually start a project is by doing an assessment. Often at the beginning of our projects we administer the tool for assessing statistical capacity which assists us in identifying where an NSOs technical and managerial needs lie. Our team then, in consultation with the NSO, develop a work plan to address the identified needs. In Malawi, we have provided around 16 to 18 trainings to date. They will be going to the field on September 3rd to start their census.

INTERVIEWER: That's really close!

Yes, it's exciting. The NSO-Malawi will be conducting a CAPI census and have already procured around 20,000 tablets.

This is a trend in census and survey taking throughout Africa. A number of countries want to transition from the traditional paper/pencil approach to tablets or smartphones to administer their censuses. Our team is working to determine how best to assist countries implement this approach. Yes, from a technical perspective, but also from a cost perspective because these tablets aren't cheap. We have tried to leverage our presence and relationships in this region by coordinat-

¹⁷UNFPA is United Nations Population Fund. For more information about UNFPA – see: <https://www.unfpa.org/about-us>.

ing tablet sharing arrangements between neighboring countries.¹⁸

Following the census, we will then assist the NSO-Malawi with developing preliminary tables and data visualizations, [as well as] a census atlas and what they call census monographs, or analytical reports – [all the output that one would expect from a census in the United States or other developed country] – as well as, coming up with the kind of provincial-level presentation that the Director General of this statistical office can go out and talk about to local officials, [as well as why statistics are important to the country].

INTERVIEWER: How do they get their field enumerators who actually collect the census data?

It varies by country. Oftentimes they'll go to schools and pick the best pupils that they have. Aside from traditional mechanisms, we found that a lot of the field staff also needed assistance learning how to work a tablet. So, the training now is longer than it used to be because there needs to be device-oriented training, as well as the traditional questionnaire-oriented training and interview techniques. That has been a challenge. Another challenge is there is no electricity in many of the remote areas in the countries we work. So, the enumerators and supervisors are provided with solar-power banks that they take with them to the field. They can also charge their tablets with the car that drops them off. There are many ways that we are working with them to make sure that this will work.

¹⁸As an aside I asked Oliver about privacy and confidentiality and security aspects of these tablets. He responded that they have worked with the Malawi staff in ensuring data and data security. In addition, CPro – which will be discussed a little later in the conversation – has some very good security safeguards. Further, Oliver stated that in terms of the software product that it meets the standards of these countries. Oliver went on to say that “the tablet-sharing initiative that we are trying to set up is that Malawi has their census this year. Zambia with a similar population size has it in 2020. And then Zimbabwe has it in 2021 or 2022. So, through our relationships with DFID and UNFPA and these statistical offices we're putting them all in touch in hopes that they can cost share these tablets. If not, there are also conversations about having each school within Malawi receive three tablets so that the students can get some exposure and experience with [this technology].” Overall, around 30,000 tablets were purchased for this endeavour.

INTERVIEWER: Sounds like this goes beyond basic census-type statistical survey kinds of training.

Yes! There are some extremely remote areas, where there is no wireless internet or cell service. So, the software we have must be able to let them push the data to their supervisor via Bluetooth. For this to be possible, the enumerator and their supervisors need to be in close proximity. After the enumerator transfers the data to their supervisor, the supervisor then rides a motorcycle or a boat to a given area and connects to a cellular network or to wireless and can then transmit the data back to headquarters. So, there are a lot of things we need to help them with in terms of utilizing this type of technology in rural underserved areas.

[Another example I wanted to mention,] is with regard to how we provide support. We generally do not send staff to a given country for multiple years; an exception is in Haiti.¹⁹ The vast majority, I'd say over 80% of the support we provide are two- to three-week missions; where, it's either a workshop or technical assistance. Workshops are more formal structure, classroom-ish; and technical assistance is kind of roll-your-sleeves-up, sit side by side with your counterparts towards a particular end. And it's all focused on strengthening capacity so that they can do more of this themselves in future surveys.

Our missions are structured [for a particular purpose.] For example, like I mentioned earlier, we are going to do a census atlas with Malawi. This will take two to three missions. The first mission will be an introduction to GIS²⁰ workshop. This will entail, the skills they will need to know or refresh to produce a census atlas. And then we will also work with the subject matter specialist to get the tables that the GIS folks will need to make the census atlas. Then they will have about two months without us. And they can email us questions that come up when we are not there.

Then when they think they have draft atlas prepared, we will send staff there to review and provide comments, as well as help them with structuring it in pages, so that it can be publishable [i.e., data visualization and dissemination aspects].

¹⁹Haiti is an exception by chance and by luck somewhat. Oliver said that they had hired someone for work in Rwanda who was fluent in French, as well as “a rock star demographer.” She had experience in the field, had lived in Rwanda for some time and just was a perfect fit for us in Haiti.

²⁰Geographic Information System.

Another example of this step wise approach to providing technical assistance is with the support we provide for census edits. We often send a subject matter specialist to a host country to provide assistance with developing the edit specifications. And then we have data processors to assist them develop the corresponding edit programs. In the first mission we may be teaching them how to program imputations or basic coding. They usually have a handful of very good programmers, but they need a bit more guidance to get them to the next step. And then when we go back for another mission, we will review the output to make sure that the data are getting cleaned as expected and teach them new skills, new coding skills that they can then apply to the remaining variables.

As you can see, there are these multiple aspects of our support where we may have three missions, or so, focused on one specific topic. It is all iterative. All in an attempt for progressive skill development, so that the quality of the product that is coming out of the process will be of a high quality.

That provides some more background on our third type of technical assistance – our country-to-country initiatives. And currently, there are [about] 15 countries where we are involved these types of partnerships.

INTERVIEWER: While we can come back to technical assistance, I want to make sure that we get as many of the other topic areas that are worked on in International Programs. So, the next one on the list, you have already talked somewhat about – training and workshops, so I guess how about we go on to software products? You have touched on CSPro, but then there is DAPPS. Could you talk a little about these software products?

Yes, [both CSPro and DAPPS] are some of most popular public domain products. CSPro is definitely our bread and butter. It is the Census and Survey Processing system. It was developed in 2000, primarily to assist users enter, edit and tabulate data. It was and is widely utilized throughout the world – primarily throughout Africa, Asia and the Middle East. In 2016, we released CSPro Android, which is our mobile data capture solution.

We've been surprised at how much it's grown since then. Like I mentioned, a number of African NSOs now want to use handheld devices for their censuses and surveys. Given that many of the NSO staff in these countries are trained and experienced CSPro users,

many have transitioning to CSPro Android for their CAPI data processing solution. That is, the CSPro skills developed for the desktop applications are easily transferrable to the Android version. There are obviously new things one will have to learn such as data transfer and case management. But the development of the application, the actual data entry application and then the post processing edits and tabs are all the same. That's excellent because a lot of the staff in these national statistics offices already have the skills with CSPro.

We anticipate [by mid-2019] that over a quarter of a billion people will be enumerated in a Census with CSPro Android. There are other countries in which we are working, like Madagascar, that are keying their information into CSPro on desktop.

Aside from Censuses, CSPro is used for a number of large surveys around the world, including ICF's Demographic and Health Survey and UNICEF's Multiple Indicator Cluster Survey (MICS). CSPro has been at the cutting edge for our counterparts, has got a bright future, and our team is very motivated and excited.

[Turning to DAPPS,] we used to create spreadsheets called PAS - Population Analysis System. [However] the system created too many files for our users, [which made file maintenance difficult, particularly for the new learner – i.e., seeing files everywhere, and there could be about 50 spreadsheets open at a time.] So, now we have created one system called Demographic Analysis Population Projection System (DAPPS). It integrates most of the functionality of PAS and then uses RUP (Rural Urban Projections) in the background to project populations using the cohort component methods. The idea is to assist users in creating population estimates and projections with ease. Response to DAPPS has been good to date and we are getting increasing requests for technical support on the product as countries prepare for updating their population projections following their 2020 round census.²¹

We also want to make this open-source, so that other folks can contribute to the development of the product because we only have around two people [at Census] dedicated to working on DAPPS. Given that there is this large interest, the hope is that we can get other folks to help us continue to develop the product.

²¹As a side note, Oliver mentioned that China is thinking about using DAPPS for their first run at creating official population projects which they have never really created before. In addition, they are also thinking to create population projections at the sub-national level for each of their provinces which will then feed into a national projection.

INTERVIEWER: That is a good segway to move on to the databases ... HIV-AIDS and the International Database.

We have been developing the International Database since the 1980s.²² The IDB disseminates our population estimates and projections for 228 countries and areas which have a population of 5,000 or greater and as recognized by the US Department of State. The data are used by multiple federal agencies for policy planning, as well as universities and the private sector.

Turning to the HIV AIDS surveillance database. The point of this resource is to capture data on HIV prevalence, incidences and AIDS reported deaths. The thinking is that there are many conferences and many smaller surveys where these important data are reported or captured. But that after the conference, the data are rarely seen again. So, what we do is we have a staff dedicated to scouring journals and going to these conferences and capturing these data. And then we put them on our HIV AIDS Surveillance database, so that they are stored in a centralized location, and can be found by others.

To be clear, it is not our staff going into the field and administering a survey, but rather we are developing a database where users can come to and find HIV AIDS incidence prevalence and reported deaths. At this point it is the gold standard database for these data. Our team recently went to the International AIDS Conference in Amsterdam, which takes place every two years. We had an update to the database scheduled for the first day of the conference. For this recent update, we included a map-based interface so that if, say, you are just interested in Zambia, you can click on the country and then it will zoom in and you can access all available data for the selected country.

INTERVIEWER: The next topic we have is TASC for statistical capacity assessment.

As I mentioned, hopefully a lot during this conversation, our focus is on strengthening the capacity of our counterpart NSOs. The idea behind TASC was to provide us a more systematic approach in developing a

baseline measure of capacity that we can use to guide our technical assistance and which we can measure against after our interventions.

So, what we do is we administer the TASC at the beginning of a project. The output provides us an understanding of the areas in need of technical support – such as data processing, cartography or data dissemination. We then use this information to develop a work plan that strategically targets and addresses the NSOs primary needs.

At the end of our projects, we administer the TASC a second time. We then compare the score to the baseline to see if we have been effective at strengthening capacity. This tool is unique in that most of the tools previously developed to assess the skill level of a statistical office was focused on external perceptions. These tools focused on the opinions of data users, or it looked at consultants and asked them, “What’s your perception of the statistical office?” The TASC, in comparison, is participatory in its approach in that it is an assessment of the statistical office by the statistical office.

With this participatory approach we do not compare scores across countries. And we also don’t release these scores to the public. It is important for people to know that we don’t do that. That’s not what this tool is meant to do. Because, for instance, NSO staff in the Middle East may approach the tool differently from NSO staff in Latin America. These different cultural contexts make comparing scores across countries impractical.

The way we use the tool is to look at the relative scores across the technical areas. This is how we assess where we should get involved.

This tool has been very popular. Again, like all of our tools, it is public domain so anyone can download and use it freely. The Inter-American Development Bank, we worked with them in translating it into Spanish. And then tweaking the tool to assess the capacity of not only National Statistical Offices but for the NSS (the National Statistical System). We piloted it in six countries and now it has been administered to all 33 countries in the Caribbean and Central and South America.

The World Bank has used the TASC in a number of countries. They’ve translated it into Arabic and into Russian. What is difficult for us is to really track – and this is true for all of our products – how widely it is being used. We hear from people like Inter-American Development Bank, or the World Bank because they contact us. So, when we receive emails from folks, or we meet folks at conferences, that is when we hear about the use. So, I would imagine that there are a good number of people that are using it that we are unaware of.

²²Oliver recalled that in graduate school he used the International Database. At that time, it was a way to give graduate students a way to learn more about demography and how to do demographic stuff, i.e., fertility, immigration and mortality. Oliver reiterated that it is a useful tool.

INTERVIEWER: I see we are coming up on one hour and we have one more item to discuss – the Pop Clock and geospatial projections – given the time, let’s focus on the Pop Clock.

The Estimates and Projections area (U.S. Census Bureau) does the US Pop Clock and then the International Pop Clock is taken from the International Database. We’ve got a branch called Demographic and Economic Studies. Loraine West heads that branch. She’s the one responsible for ensuring that it continues to tick.

It has also been neat because a lot of statistical offices [personnel] that have come here for work-study visits, have seen the Pop Clock and then are interested in creating one for their country. In my most recent trip to Cairo, Egypt I saw that they had a large POP Clock hanging outside of their Headquarters – on top of their office building.²³

There are a number of examples where our counterparts visit us at the Census Bureau, see some of our approaches or dissemination products and try to do something similar when they return home. They figure out how to make it work for them – [which is how technology all over the world is spread]. It’s amazing. It comes back to what we discussed earlier about context. How to make stuff context-appropriate [and how to interact so we all learn. While we may be the one’s leading the technical assistance missions, that does not mean that this information is going one-way – we learn a lot from our counterparts.²⁴

INTERVIEWER: I guess this would be a good place to end our conversation as it has been an hour. Thank you so much for taking the time to talk with us on the work done in International Programs at the U.S. Census Bureau.

²³I commented that while I was vacationing in Venice several years previously that I saw a Pop Clock for the city of Venice in the window of a pharmacy.

²⁴This allowed Oliver to come back to give credit to his staff for all their hard work and dedication so that the International Program Area is successful and productive. He noted that while the work can be quite demanding – for example with regard to just traveling, which Oliver said can be quite extensive due to remoteness as he pointed out during this conversation – the demands, he said are well worth it when one sees how the census results are being used in the countries that one has worked with.