

# Capacity development in household surveys experience from the centre for development data training initiative

Shelton Kanyanda<sup>a</sup>, Hugues Kouadio<sup>b,\*</sup>, Kevin McGee<sup>a</sup> and Alberto Zezza<sup>a</sup>

<sup>a</sup>*Development Data Group, World Bank*

<sup>b</sup>*Institute of Statistics and Applied Economics (ENSEA), Africa Center of Excellence (ACE), Abidjan, Côte d'Ivoire*

**Abstract.** Household surveys remain the major source of official statistics for monitoring development policies particularly in developing countries. In the context of rapid developments in data needs, extensive methodological work, data processing and use at national and international levels and a remaining capacity gap despite efforts for statistical capacity building in last decade, it is critical for training centers to keep up to speed with international best practices. This paper show that the approach of the Centre for Development Data Training initiative (C4D2 Training Initiative) is highly effective and stand to have a long-term impact on household survey capacity in Africa region. It is made of several components all of which aim to bolster capacity development in the region. It harmonizes and improves the quality and sustainability of training on household surveys through increased local capacity and greater dissemination of best practices, creates a network among participants and trainers to facilitate knowledge exchange on best practices as well as survey harmonization across countries. Taking advantage of benefits, the initiative should endeavor other regions subject to their interest and embrace the use of virtual and web-based training.

Keywords: Household survey, RTCs, C4D2, capacity building, Africa

## 1. Introduction

Household surveys remain the major source of official statistics for monitoring development policies particularly in developing countries where other sources of data and statistics are often inconsistent and unreliable. Many developing countries remain deprived of quality data primarily due to low or inconsistent funding streams and limited technical capacity [1]. Household surveys do not receive their fair share of resources to produce the required quality data – a situation more prevalent in low to lower-middle income countries particularly in Africa, a region that has gone through different cycles of statistical capacity development over the past 60 years [2].<sup>1</sup>

In the 1960s, soon after receiving political independence, most African countries experienced substantial rise in statistical capacity including national household surveys programs and at regional level, regional statistical training centers were established to support this transition and for continued training of statisticians. However, within two decades, political turmoil and declining economies saw national statistical systems including national household surveys program derailed [2]. After a decade, renewed efforts by national governments and development partners in the 2000s brought some stability to national statistical systems that led to more resilient national household surveys program in Africa. In 2004, the African Development Bank approved a US\$22 million to support statistical capacity programs in Africa within the context of International Comparison Program for Africa (ICP-Africa) [3].<sup>2</sup> Equivalent

\*Corresponding author: Hugues Kouadio, Institute of Statistics and Applied Economics (ENSEA), Africa Center of Excellence (ACE), Avenue des Grandes Ecoles, 08 BP 03 Abidjan, Côte d'Ivoire. E-mail: hkouadio@ensea.ed.ci.

<sup>1</sup>Pali Lehohla page 1.

<sup>2</sup><https://www.afdb.org/en/knowledge/statistics/statistical-capacity-building>.

to US\$7.2 million was allocated to support Statistical Capacity Program for the period 2014–16 [4].<sup>3</sup> In 2017, the Cape Town Global Action Plan for Sustainable Development Data prioritizes statistical capacity building as essential action area for achieving the scope and intent of the 2030 Agenda and provides a framework for its planning and implementation. Despite such efforts, statistical capacity gaps remain and curtail further development of household surveys programs. Deliberate efforts should be put in place to build sustainable statistical capacity in Africa and other low to lower-middle income countries to close statistical capacity gaps for proper measurement and comparability of global indicators like the Sustainable Development Goals (SDGs).

Understanding the limited statistical capacity in the region coupled with the dire need for collection of complex indicators for global monitoring through household surveys, an alliance was formed between the World Bank, a group of Italian organizations, and other African institutions to develop a pool of capable instructors from regional statistical training centers and officials from the national statistical systems in Africa with the required skills to implement high quality household surveys with a focus on measuring welfare. Since the early 1960s, regional statistical training centers (RSTCs) have been at the center of developing statistical capacity for national statistical agencies and in the region more broadly. However, rapid developments in data needs, extensive methodological work, data processing and use at national and international levels require training centers to keep up to speed with international best practices. According to the Global Network of Institutions for Statistical Training (GIST), a quick scan of the current scenario of the training courses on official statistics being offered and methods adopted in their delivery by global and regional institutions reveals a very wide range and diverse approach.<sup>4</sup> The differentiated approach is a result of mandates of each of the institutions, available expertise and clientele needs. However, measuring welfare requires a harmonized approach to the collection and aggregation of data. Regional statistical training centers advance the statistical capacity in the region and their programs are developed and adapted to fit the needs of national statistical offices and the entire national statistical system.

<sup>3</sup>[https://www.afdb.org/fileadmin/uploads/afdb/Documents/Boards-Documents/Multinational\\_%E2%80%93AR\\_-Statistical\\_Capacity\\_Building\\_Program\\_for\\_Managing\\_for\\_Development\\_Results\\_%E2%80%93Second\\_Annual\\_Work\\_Plan\\_APRV\\_-\\_09\\_2015.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Boards-Documents/Multinational_%E2%80%93AR_-Statistical_Capacity_Building_Program_for_Managing_for_Development_Results_%E2%80%93Second_Annual_Work_Plan_APRV_-_09_2015.pdf).

<sup>4</sup>Global Network of Institutions for Statistical Training (GIST) Concept Note, page 1.

In an effort to harmonize training on household surveys to measure welfare and statistical technical capacity in Africa, a statistical capacity development initiative was established through an alliance of eight partner institutions in 2017. This initiative, called the Center for Development Data (C4D2) Training Initiative, is the culmination of a partnership between the World Bank, the Bank of Italy (BdI), the Italian Institute of Statistics (ISTAT), the Italian National Institute of Health (ISS), the Italian Agency for International Development (AICS), the Eastern Africa Statistical Training Centre (EASTC), and the *École Nationale Supérieure de Statistique et d'Économie Appliquée* (ENSEA), and the United Nations Economic Commission for Africa (UNECA). The Initiative aims to develop statistical capacity of African regional statistical training centers by exposing instructors to the most recent methodological advancements and best practices in data collection and statistics focusing on household surveys. To achieve this goal, the initiative focuses its efforts providing training to instructors from RSTCs to equip them with the necessary materials and knowledge to, in turn, conduct their own trainings at their respective RSTCs. In addition to training the instructors, the Initiative also supplies them with complete teaching packages to use in their courses, works with them to revise and harmonize their training syllabi on household surveys, and more generally support them in their training of students at the centers as well as officials from national statistical systems in Africa. The training centers have shown commitment and a strong interest in receiving technical support in enhancing the availability, quality, use and usability of microdata from household surveys in the region.

The approach to capacity building adopted by the C4D2 training initiative harmonizes and improves the quality and sustainability of training on household surveys through increased local capacity and greater dissemination of best practices, creates a network among participants and trainers to facilitate knowledge exchange on best practices as well as survey harmonization across countries. This approach has proven highly effective in the region and stands to have a long-term impact on household survey capacity in the region. The initiative has also quickly responded to the capacity building challenges brought by the COVID-19 pandemic by switching the mode of delivering training from face-to-face to remote training. Furthermore, a web-based survey of NSOs has been introduced to solicit the challenges being faced during the pandemic.

This paper presents the context, history of the C4D2 training initiative, the approach of the initiative to ca-

## Box 1: The center for development data

**The Centre for Development Data (C4D2)**

The C4D2 Training Initiative is housed within the Centre for Development Data (C4D2), a Rome-based hub for fostering methodological innovation, providing specialized technical assistance, and strengthening capacity in household surveys in low- and middle-income countries. It is coordinated by the Living Standards Measurement Study (LSMS) team in the World Bank's Development Data Group (DECDG) and is supported by the Bank of Italy as well as other partners, including the Rome-based UN agencies with whom C4D2 is closely collaborating. The Centre's mission is to facilitate the production of high-quality, timely, relevant data on poverty, inequality, agriculture, and rural development to inform country-level policy making and investment decisions to catalyze poverty reduction, food security, and growth.

capacity development and key achievements and benefits of that approach, as well as highlighting recent development in statistical capacity development needs in the region following the COVID-19 pandemic.

## 2. History of the initiative

Household surveys remain a vital input into national statistical systems (NSSs) serving as the primary source of data for monitoring the SDG indicators, developing national accounts, consumer price indices, and socio-economic analyses for developing and monitoring the impacts of national policies. Despite their central role in NSSs, household surveys in Africa still suffer from substantial shortfalls in support from international development cooperation efforts [1]. Beyond enhancing data availability, support to improving survey methods is critically needed in most developing countries, especially considering the expanded scope of household survey data requirements for tracking progress towards national and global development targets. The need to renew and sustain national statistical capacity to produce the necessary data based on international best practices is more important now than ever before if the SDGs are to be realized, particularly in low to lower-middle income countries.

Seeking to address this dire need for improved statistical capacity in Africa, in 2017 the World Bank together with its Italian partners began exploring alternative approaches to capacity development in the region that would not only have a wide-ranging impact but also lead to a robust and sustained improvement in statistical capacity. Consultations with experts involved in statistical capacity development in Africa and beyond highlighted the need to strengthen existing curricula for statistical training centers by enhancing their focus towards generating statistics for monitoring the SDGs and the impact of government policies through household surveys.

Following these expert recommendations, the World Bank, four Italian institutions (AICS, ISS, ISTAT, and BdI), the UN Economic Commission for Africa, and two regional statistical training centers in Africa

(EASTC and ENSEA) formed a Partnership to contribute to the development of a sustainable system for monitoring the SDGs and other key development policy goals by supporting capacity development on household surveys in statistical training institutions in Africa. The project, referred to as the *Centre for Development Data Training Initiative* (C4D2 Training Initiative), provides theoretical and practical training in the design, implementation and dissemination of household surveys to trainers from statistical training centers as well as statisticians and officials from national statistical systems in Africa engaged in sample surveys.

A Steering Committee was formed with membership from all the eight institutions in the Partnership to provide strategic guidance and direction on the implementation of the Initiative. The Steering Committee also provides inputs to annual work plans and budgets, reviews progress reports against proposed results and meets in person or virtually twice a year. The Rome-based Centre for Development Data of the World Bank serves as the secretariat of the Training Initiative.

The initial success of the initiative led to two more regional training centers in Africa – the School of Statistics and Planning (SSP) of Makerere University in Uganda and the *Institut de Formation et de Recherche Démographique (IFORD)* of Cameroon – requesting to join the Initiative in 2018. The Steering Committee accepted their participation as observers with participants from their centers able to join the C4D2 Training initiative programs.

This brought the total number of African regional statistical training centers participating in the initiative to five. It is also important to note that ENSEA has two other sister institutions which share the same curriculum and rotate instructors. These are *École nationale de la statistique et de l'analyse économique (ENSAE)* of Dakar, Senegal and *Institut Sous-régional de Statistique et d'Économie Appliquée (ISEEA)* of Yaounde, Cameroon and have helped to reach a wider audience. These RSTCs are hosted in six countries spread across the continent, ensuring broad coverage of the region and a wide reach. Figure 1 below displays the countries which host the RSTCs and Box 2 presents a brief description of each institution, their history, curriculum, and roles.

## Box 2: Partnering regional statistical training centers

**École Nationale Supérieure de Statistique et d'Économie Appliquée (ENSEA)**

The École Nationale Supérieure de Statistique et d'Économie Appliquée was established in 1961 to offer courses to officials from the Statistics Offices from Francophone countries in Africa and Haiti. The target has been extended to non-francophone countries to ensure statistical training should not suffer from language barrier. The training combines theory and practice by mobilizing design and modelling capacities based on strong skills in mathematics, economics, and statistics. Students are put into situations with active methods: case studies, project work, simulations, use of technology, group work. Over time, the ENSEA has expanded its programs to train statisticians at the highest level – the Senior Statistician-Economist (ISE) program. In 2005, the center was awarded the title “West African Economic and Monetary Union (WAEMU) Centre of Excellence” and the title of Africa Centre of Excellence in statistical training by the World Bank in 2015. Currently, it offers master’s degree in Agricultural Statistics; Master’s degree in Actuarial Science; Master’s degree in Data Science; and Doctoral Training. ENSEA General Directorate coordinates and leads the policy defined by the Board of Directors and the Management Board. It gives the vision and objectives to be achieved by providing the various services and necessary means and tools.

ENSEA has two other sister schools sharing the same syllabus, examinations and staff exchange programs. The first sister school is École Nationale de la Statistique et de l'Analyse Economique (ENSAE) which is located in Dakar, Senegal while Institut Sous-Régional de Statistique et d'Économie Appliquée (ISSEA) is located in Yaounde, Cameroon. Both sister centers participate in the C4D2 Training through ENSEA.

Instructors from the three centers are trained to offer a harmonized training on household surveys directly to students at their centers and through short courses to countries. The centers also provide technical support to the WAEMU Household Survey Harmonization Project.

**African Center for Statistics (ACS) of the United Nations Economic Commission for Africa (UNECA)**

The African Group on Statistical Training and Human Resource (AGROST) coordinates statistical training and human resource activities in Africa established by the Committee of Directors General of national statistical offices in Africa. The secretariat is at the African Centre for Statistics of the United Nations Economic Commission for Africa in Addis Ababa, Ethiopia. Members include all heads of regional statistical training centers, representatives of research institutions and international organizations supporting statistical capacity development in Africa. To avoid duplication of statistical capacity building activities and ensure harmonization, the C4D2 Training activities have been implemented in collaboration with AGROST including holding annual review meetings. Apart from being the secretariat of AGROST, the ACS provides technical guidance to national statistical systems in Africa thereby required to have up-to-date knowledge on data and statistics.

Officials from the Centre are trained to provide technical support to countries. They may also be involved in offering short courses to countries.

**Eastern Africa Statistical Training Center (EASTC)**

In 1961, the Second Conference of African Statisticians realized the shortage of statisticians and proposed to establish training centers to offer theoretical and practical statistical courses. The EASTC started its operations in 1965 as East-Africa sub-region training center offering certificate level courses to middle-grade officials from national statistical offices of Kenya, Uganda, and Tanzania. Since then, the Centre has broadened courses provided to include diploma, bachelor’s, and master’s degree level courses. Currently the college has two main programs namely Official Statistics and Agricultural Statistics. Currently, EASTC serves nineteen (19) English-Speaking member countries in Africa. The Centre is governed by a Council whose Chairman is appointed by the President of the Republic of Tanzania.

Under this Initiative, instructors from the center are trained to train students at their center, train officials from national statistical systems working on household surveys, provide research and other technical support as may be required.

**School of Statistics and Planning (SSP) of Makerere University**

As many African countries were receiving their independence, the need for statisticians became imminent. School of Statistics and Planning then The Institute of Statistics and Applied Economics was, established in July 1969 as an autonomous Institute, within the legal framework of Makerere University. It was to provide facilities for high level professional training for personnel in Statistics and Applied Economics to meet the urgent data needs of Uganda and other East African countries, as well as other English-speaking African countries.

The professional Statistics program takes advantages of the synergies existing between Mathematics, required for modelling, Economics for theories and Statistics for data collection, processing, analysis, and dissemination. The school has three departments approved by the University Council and these are Department of Statistical Methods; Department of Planning and Applied Statistics; and the Department of Population Studies.

The SSP joined the Partnership in 2018. Instructors from the SSP participate in the C4D2 Training to train students as part of ongoing courses and further train officials from Anglo-phone statistical systems in the region.

**Institut de Formation et de Recherche Démographique (IFORD)**

Established in 1971 and based in Yaounde, Cameroon, IFORD is an interstate organization offering training and research services to about 26-French speaking African and Indian countries. The United Nations and the Government of Cameroon established the training center following a recommendation from the Council of Ministers of the Economic Commission for Africa (ECA) to train specialists in population sciences, research on population issues, and to provide technical support to member countries and partners. With 50 years of experience in training and research, IFORD brings a slightly different touch to the Partnership as it focuses more on “Population and Development”. This intertwines well with the idea of sharing experience and building on strengths of other partners to strengthen statistical capacity in the region. IFORD joined the Partnership in 2018. Participants from IFORD are mainly instructors who in turn offer courses to students at the center and provide technical and research support to Franco-phone countries.

### 3. The C4D2 capacity development approach and key achievements

To bring the necessary capacity on household surveys among the training centers and subsequently to

countries, the initiative adopted an innovative approach to capacity development. The overall objective of the training Initiative is to strengthen regional statistical training programs in household surveys to eventually generate substantial improvements in the capacity of



Fig. 1. African countries hosting regional statistical training centers in the partnership. Source: authors.

statistical offices and other relevant institutions in partner countries to conduct, analyze and disseminate high-quality household surveys. The approach adopted by the initiative is based on a Training-of-Trainers (ToT) model, where teaching staff from regional training centers attend courses led by staff from the World Bank, its Italian partners, and other international experts in household surveys. The material from these trainings is then further developed and adapted for use in the courses taught at the regional training centers, and in-

tegration in their curricula. The C4D2 training initiative is made of several components all of which aim to bolster capacity development in the region. The main components include (1) international training weeks with instructors from the RSTCs, (2) short courses conducted by RSTC instructors at their respective institutions, (3) updating and harmonization of the curriculum at the RSTCs, (4) internship and exchange programs for young professionals, and (5) dissemination and open access to all training materials.

## Box 3: C4D2 international training week courses

## 1) Special Topics and Recent Developments in Sampling Theory and Practice

The course was conducted in November 2019 and aimed at capacitating instructors from the RSTCs on new sampling solutions to address statistical challenges and develop smart solutions to sample surveys thereby among other things, improve the reporting of SDGs for the full benefit of the region's citizens.

## 2) Measuring Consumption Through Household Surveys

This course aims at improving the quality and comparability (both over time and across countries) of household survey data for living standards measurement. To do so, the course focuses on two main topics: first, it lays out the conceptual framework underlying the measurement of living standards; second, it offers practical guidelines for survey design and data collection, in the specific context of household consumption and expenditure modules. This course was conducted in June 2019.

## 3) Measuring Income and Wealth through Household Surveys

The course focuses on mechanisms to collect quality data on income and wealth through household surveys. It provides concepts and definitions, data sources both surveys and administrative records, surveys on income citing examples from the European framework and Italian experience, income components, income and price differences, micro and macro data comparisons. This course was conducted in December 2018.

## 4) Survey Solutions and Geo-referencing

Conducted in June 2018, the course provides both theoretical and practical tools on use of computer assisted interviewing using Survey Solutions software. The course also provides tools for area measurement and the entire survey management including workflow, case management, comprehensive workflow practices, data exports, and pre-loading of data.

## 5) Designing Household Surveys to Measure Poverty

The course presents some of the findings from a methodological research work on "Methods of household consumption measurement through survey: Experimental results from Tanzania". It brings key aspects of survey design decisions of relevance to household surveys for poverty analysis, focusing on those using consumption-based measures of poverty. It provides updated tools for measuring food and non-food components of consumption expenditures, including durables, housing, health, and education expenditures. This was the first course under this Initiative and was conducted in December 2017.

### 3.1. International training weeks

The ToT mode adopted by the initiative is anchored in one-week courses offered to teaching staff from the RSTCs which include lectures, exercises, practical sessions, questions, and answers for a specific topic area in household survey methodology and implementation. In addition to training the RSTCs instructors in the subject matter of the course, the training is further used to equip them with the necessary mastery of the material in order for them to subsequently train others on the material. This is accomplished in the training by involving them to teach fellow participants on selected modules of the course. To build their confidence participants are coached by the course instructors. This forum is also used to share experiences from different centers to harmonize training on household surveys in Africa.

The course topics are identified by the secretariat in collaboration with the Steering Committee. In some cases, the training is used to share and train instructors on results from methodological research conducted by the World Bank and other institutions. Based on the topic, the training centers propose a list of participants who submit curriculum vitae which are then scrutinized by the secretariat before inviting them for in-person training in Italy at facilities provided by the Bank of Italy. Facilitators are drawn from the World Bank or other partner institutions including renowned international consultants in the selected topic. Five International Training Week sessions have been conducted

since 2017. Box 3 provides a brief description of the courses including links to the materials.

Although the one-week courses with instructors from the RSTCs form the anchor of the capacity building approach of the C4D2 training initiative, there are other critical components that follow.

### 3.2. Short courses and events

Another objective of the Initiative is to create a network of participants and trainers to facilitate knowledge exchange and survey harmonization across countries. To ensure that statisticians implementing household surveys in national statistical systems in Africa effectively access improved survey tools, methodology and expertise, short courses are organized at the regional training centers. Participants to the short courses are officials from national statistical systems involved in the implementation of household surveys. Following the ToT approach, the training in the courses is facilitated by instructors from the training centers who participated in the one-week international training weeks courses in Italy. Furthermore, facilitators utilize the training materials provided from their own training in Italy. In addition to disseminating knowledge on survey methods and best practices to country statisticians, the short courses also serve as a forum to exchange country experiences and practices which eventually lead to standardization of methodologies in household surveys.



Fig. 2. Countries that have participated in the short courses provided by the training centers under this partnership. Source: authors.

Instructors from the RSTCs showed great competency in delivering the short courses (held at the RSTCs) on designing household surveys to measure poverty and welfare. The courses particularly targeted officials from NSOs and government ministries such as planning and agriculture responsible for designing and implementing household surveys. Figure 2 highlights all countries that participated in the short courses at the RSTCs, representing a broad swathe of the continent. This illustrates the broad ranging impact of the training-of-trainers approach adopted by the training initiative.<sup>5</sup>

### 3.3. Updating curriculum and manuals on household surveys

To ensure harmonization of courses on household surveys offered by the training centers, the Initiative supports the updating of curricula on household surveys based on the C4D2 training. The Initiative also supports the updating of manuals being used to guide the implementation of household surveys in the region; translate and revise training material to ensure their accessibility

<sup>5</sup>Anglo-phone countries that participated in the short courses: –

Botswana; Eswatini, Kenya, Lesotho, Liberia, Malawi, Nigeria, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

and relevance to national staff from both anglophone and francophone countries.

A harmonized course outline on designing household surveys to measure poverty has been developed and incorporated in the curriculum of EASTC and ENSEA targeting students pursuing master's degree courses in official statistics or agriculture statistics.

To support instructors to properly teach students on the above course, a teaching package was developed which includes course syllabus, teaching slides, reference material, instructor manual, reading package, final exam and course evaluation. To ensure increased use by francophone countries, the package has been translated into French.

#### *3.4. Internships and exchange programs*

Practical knowledge of what has been offered at the C4D2 training is critical if participants are to teach statisticians from the national statistical systems with hands-on experience on implementing household surveys. The Initiative supports internships and exchange programs on specific tasks at the World Bank's C4D2 and at the training centers to widen skills and confidence of the instructors when teaching the related topics.

Interns have supported work on developing global survey tools in paper assisted personal interviewing and in computer assisted personal interviewing, activities that build upon the courses offered through the international training week.

#### *3.5. Dissemination and open access*

All the material from the C4D2 Training have been posted on the World Bank website and made freely available. This will allow for easy sharing of training materials beyond those who are able to participate in the training events and act as a reference point. The secretariat of the initiative has also participated in several regional workshops on key concepts and standards for household surveys; disseminate information relating to the project to various stakeholders through meetings and workshops, print and electronic media. The training centers have also uploaded the courses implemented under this Initiative on their respective websites.

These different elements of the C4D2 training initiative comprise a robust framework through which to improve statistical capacity at the regional level. The training-of-trainers approach, filtered through the regional statistical training centers and subsequently to statisticians and survey practitioners that make up na-

tional statistical systems, provides the maximum impact across the region. Following this approach, the improved capacity and knowledge is firmly embedded in the statistical training infrastructure of the region, better ensuring that the knowledge transfers and harmonization in survey methodology across the region will be sustained for years to come.

### **4. Benefits to the initiative's approach to capacity building**

The first four years of the initiative have already yielded substantial progress as well as important lessons for capacity building following the approach taken by the initiative. This approach, disseminating knowledge on survey methodology and survey best practices through instructors from the RSTCs, has many distinct advantages over alternative methods of capacity building.

By harnessing the existing institutional structure and role of the RSTCs in the region, the initiative creates a robust, sustainable, and wide-reaching framework for capacity development. Directly targeting instructors at the RSTCs for the first-level training from established experts in survey methodology provides a more than adequate initial level for knowledge sharing in the region. Instructors from the RSTCs are already proficient in the field and therefore are best suited to easily comprehend and internalize the cutting-edge household survey techniques and methods covered in the one-week training courses. Given that these instructors are expected to in turn conduct their own courses or trainings on the subject matter, they have a clear incentive and need to fully engage in the trainings to ensure they are confident in the material enough to teach others the same material. Even for the instructors who are the participants in these trainings, the focus is on knowledge transmission and capacity building in the region, rather than direct application of this knowledge for their own personal or institutional benefit.

Although training of the RSTC instructors represents the first critical step in the approach, the subsequent training given by these instructors to their students or professionals already working in NSOs or other government ministries involved in data collection is where the initiative's greatest impact occurs. The training to staff of NSOs and government ministries (through the Short Courses described above) results in a direct and immediate dissemination of knowledge and improvement in capacity in the region. Those professionals who receive

the training will return to their countries and organizations to put the knowledge they gained to direct use. The more robust longer-term impact comes perhaps through the longer-form courses that instructors give to their degree students at the RSTCs. Their students attending programs or courses at the RSTCs typically will seek careers within NSOs or other institutions involved in implementing household surveys in the region. These students represent the future of statistical and survey capacity in the region and therefore establishing their proficiency with these cutting-edge methods and best practices will reap benefits down the line when they begin their career. The internships and exchanges organized through the initiative for students and young professionals are another mechanism through which to bolster capacity of those who represent the future of statistical capacity in the region. In this way, the C4D2 training initiative approach ensures that the knowledge transmitted will lead to a sustained improvement of capacity in the region over time.

Another substantial benefit to the capacity building approach of the initiative is the broad coverage of the region achieved. Working through the RSTCs spread across the region is the first step to ensuring the capacity building reaches different corners of the region. The RSTCs themselves substantially scale up the coverage of the region since they have direct linkages (through trainings, workshops, and short courses provided to the staff from NSOs and government ministries) as well as indirect linkages (through the students at the RSTCs who pursue careers in NSOs and government ministries). With these additional linkages, a substantial level of coverage of the region where the knowledge is dissemination is achieved. This is evident in Fig. 2 above which shows how many countries in Africa benefited from the Short Courses offered at the RSTCs. The online dissemination of all the training materials from the C4D2 training courses further expands the reach achieved by the initiative beyond the RSTCs.

The wide reach of the initiative's capacity building efforts has an additional benefit: harmonization of survey methodology and best practices that are adopted in the region. Through development and deployment of a harmonized training program to multiple RSTCs who subsequently deliver a similar training to their students and other working professions, a more consistent set of practices and knowledge are disseminated throughout the region. This is further bolstered by the initiative's work with the RSTCs to update their wider curriculum on household survey methodology.

It is clear that there are substantial benefits to the capacity building approach adopted by the C4D2 train-

ing initiative and many of these benefits represent advantages over other capacity building approaches. One prevailing capacity building approach is work directly with NSOs and their staff to share knowledge and enhance their capacity. Which this is undoubtedly a beneficial approach to take, it does not achieve the scope of the capacity building achieved under the C4D2 training initiative approach. Further, these country-specific capacity building approaches may not achieve the same longevity of capacity building due to working within a single institution with staff whose tenure at the institution may not extend long due to seniority, age, etc. By working through the RSTCs, the initiative works to sustain capacity by influencing the coming generations of working professions in household surveys.

While the C4D2 training initiative approach does have considerable benefits over the country-specific approach, it does not in any way negate the usefulness of or need for those efforts. Capacity building at the country-level can be tailored to the specific needs and context of the country and thus also stands to have a substantial impact on capacity. These two capacity building approaches are complements, not substitutes. While the C4D2 approach helps to establish a firm base of knowledge and harmonized practices in the region, the country-specific capacity building efforts can harness this base and further enhance it with tailored support to the needs of the country and institution.

Thus, the C4D2 training initiative approach has clear benefits for capacity building that has both a wide-ranging and sustained impact to generate substantial capacity to implement high-quality household surveys for monitoring SDGs and national policy priorities. The capacity building approach is worthy of emulation in other regions as well as further expansion in Africa to other RSTCs or related statistical training institutions.

## **5. Emerging capacity building needs – COVID-19 and beyond**

Like in many other areas, COVID-19 also created disruption in the survey world affecting survey implementors, respondents and users more broadly. It has hampered national statistical systems to produce crucial data required for monitoring national and global programs. This has led to the emergence of new capacity building needs particularly in how surveys are planned, and how data are collected and analyzed. The other challenge, however, is that the pandemic has also

disrupted the way we traditionally conduct capacity building thereby requiring new techniques.

As a result of COVID-19, the traditional face-to-face surveys were no longer viable or advisable until the pandemic abates. However, to understand the impact of the pandemic on the people, the need for data was even more dire in the pandemic environment and NSOs had to look to other forms of data collection. However, a quick scan of the capacity of NSOs through the World Bank and UN Survey of NSOs during COVID-19 revealed a rise in new data demands, data inequalities between countries hampering global comparability, and the need for external support [5]. However, not all is lost as COVID-19 [5] has created an opportunity for providing guidance on phone surveys in low to lower-middle income countries.

Delivering capacity building efforts to national statistical systems has also been disrupted by the pandemic. Like face-to-face interviews, the in-person courses, workshops, internships have been used more broadly to deliver capacity building efforts but are no longer viable and there is a need to rethink the format of new training most likely embracing alternatives to in-person training.

In order to fill the need for additional capacity on conducting phone survey and adapting to the new training environment, C4D2 in partnership with Joint Program in Survey Methodology (JPSM)/Mannheim Business School (MBS) devised a remote training on phone surveys. The training targeted trainers from partner institutions in Africa and widening the geographical coverage to include Asia and the Pacific, and Latin America and the Caribbean. The training involved two main components. The first part was online e-learning portal which included video recorded lectures, reading material provided by the facilitators and learning assessment. Participants were allowed access to the portal a week before the training. The second part involved live virtual lectures where facilitators presented slides, provided group works and assignments, and Q&As.

Remote training will continue to be an integral part of the C4D2 training initiative post-pandemic for continued capacity building of training centers and national statistical systems particularly in new areas of data collection including phone surveys.

### *5.1. Longer term*

Although the pandemic will abate, alternative modes of both data collection and training are likely here to

stay. Experience from the remote training on phone surveys highlights the need and opportunity for pivoting to alternative methods of training, spurred by the pandemic. There is potential for continuation of this training format beyond the pandemic period developing capacity of both RSTCs and national statistical systems in Africa and beyond. Therefore, further development of tools for alternative training modes will be required. Remote and eLearning courses have proven viable alternatives and can be further embraced in the future. The C4D2 training initiative plans to expand on eLearning in future including converting existing materials into eLearning courses for further reach.

To continue understanding the capacity challenges facing national statistical systems, the survey on NSOs during COVID-19 is to be sustained [6]. The findings will continue to guide areas needing more capacity in the implementation of household surveys and how to offer technical assistance through the C4D2 training initiative and beyond.

## **6. Conclusion**

Within a space of four years, the C4D2 Training Initiative has positioned itself as an effective capacity development innovation that can be handled through partnership. This initiative has been implemented through five key steps. The first was to form a team of institutions with a shared goal to build a sustainable statistical capacity in household surveys in Africa. The second was to establish a secretariat to coordinate all activities. Third was to establish a steering committee to oversee and guide activities of the Initiative and fourth was to identify areas of capacity building under household surveys program and identify competent trainers in that area and fifth was to deliver the training. Through this initiative, training centers have a pool of capable instructors ready to deliver courses on household surveys to measure welfare to students up to master's degree level and to professional officers from national statistical systems. Regional statistical training centers are no longer working in isolation as a harmonized curriculum on household is being followed. Regional statistical training centers have shown a huge appetite to this initiative as they are now meeting the demands of national statistical systems.

An updated and harmonized curriculum on designing household surveys to measure welfare is key to measuring poverty and subsequently responding to the call to leave no one behind. This initiative is doing just that

by providing trainers and practitioners with the skills to produce quality data on welfare. Albeit capacity building activities being disrupted due to COVID-19, the initiative has quickly responded by devising remote training on phone surveys in order to continue building capacity of the training centers and further introduced a web-based survey of NSOs to understand the challenges that the NSOs are facing as a way of continued effort to respond to their needs.

Going forward, the initiative will endeavor to incorporate other institutions in Africa and other regions, subject to their interest. The Initiative will also embrace the use of virtual and web-based training to overcome the hurdles brought about by the pandemic. Let us not end here but press on building the capacity we need.

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