Co-location of FTA Bilaterals projects (Phase I) and the Sentinel Landscape Network – a preliminary analysis

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5 Background

The SLN is a component of the Consortium Research Program on Forests, Trees and Agroforestry (FTA): Livelihoods, Landscapes and Governance, and as such, the matrices developed are targeted towards understanding the linkages between management and use of forests, agroforestry and tree genetic resources as well as human well-being. The initiative is a direct response to the key recommendation of a social science review of the Consultative Group for International Agricultural Research (CGIAR) in 2009, (Barrett, 2009[1]), to leverage and strengthen the CGIAR's competitive advantage by conducting long-term, comparative research. Through national dialogues and providing evidence-based policy advice the Sentinel Landscapes Network (SLN) are not only long-term monitoring sites to understand coupled socio-ecological systems, but are also innovation platforms to allow for greater cohesion, interdependence and alignment of stakeholders within and across the landscapes.

The objectives of the sentinel landscape network were specified in the FTA proposal[2] as follows:

1. cross regional comparison
2. Integrating Biophysical, & Social data
3. long-term presence (approximately 10 years)
4. co-locating research activities (share resources)
    a. between components
    b. with partners
    c. with other Common Research Program (CRP)s

In 2012 a set of criteria for a sentinel landscape was agreed amongst FTA scientist, with four must have criteria:

1) existing data for baseline and historical; e.g. long-term human welfare, demographic and human health data, as well as time series biophysical data
2) scientists from "X" FTA flagships interested to co-locate research in this landscape
3) variation along a contiguous forest transition curve, which means the landscape should consist of a connected forest/woodland ecosystem, that has been or is about to be subjected to various anthropogenic influences, resulting in a high spatial variation of tree cover or
4) existence of a network of reliable partners on the ground that we can add value too.

[1] BARRETT, C. B., AGRAWAL, A., COOMES, O. T. & PLATTEAU, J.-P. 2009. Stripe review of social sciences in the CGIAR.

[2] http://www.cifor.org/fileadmin/fileupload/crp6/CRP6_7feb_lowres.pdf

6 The Sentinel Landscapes Network

The selection of the initial seven sentinel landscapes was thus based on FTA scientists commitment to co-located bilateral projects. During the First Phase of FTA (2012 to 2014) a network of seven sentinel landscapes were successfully established. Co-location of bilateral projects, with sharing of resources and staff, was achieved in two landscapes, Mekong and Burkina Faso, as the SL coordinators were also strongly involved in the bilateral projects. Without a clear mechanism of communication between PI's of bilateral projects and the SL team, numerous bilateral projects did indeed overlap geographically (co-located) with the SLs, very limited joint planning, sharing of methods or budgets was achieved.

While initial criteria for candidate landscapes were specified, the actual selection of the initial set of landscapes to be included in the network was strongly biased towards historical research engagements and personal interests of stakeholder groups. Thus the initial set of landscapes was not selected at random and was not chosen to have global representatives of a specific ecological domain.

Within each landscape, four sentinel sites were selected. The site selection was based on a stratification along conversion gradients using forest cover derived from MODIS imagery for the period 2001 to 2011. Each sentinel site is a 10 x 10 km^2 sampling frame. Given the large area of the individual sentinel landscapes and the small geographic area of the sentinel sites in each landscapes, the sites are not representative of the landscapes. As the sampling frame follows a most the "most different system design" the sites are very different with respect to the cultural, institutional and agro-economic context, the only commonality is there location in a forested landscape.

The initial seven priority landscapes selected were: Nicaragua-Honduras (covering Nicaragua and Honduras), Western Ghats (covering India), the Mekong (covering China and Laos), West Africa (covering Ghana and Burkina Faso), Western Amazon (covering Peru and Bolivia), Borneo-Sumatra (Indonesia), CAFHUT (Cameroon).

The Nile-Congo Sl was added in 2014, to be financed fully from bilateral funds mapped into Flagship 2. Due to funding restrictions in 2015 only one additional sentinel site was completed.

The SL dat set thus consists of 28 sentinel sites, covering 13 countries and eight sentinel landscapes from originally forested landscapes, with various degrees of land-use change and deforestation. The eight SLs and respective countries are and Nile-Congo (Kenya) (see Figure 1). A total of 280 villages (forest governance component), 8500 households (socio-economic component) 4480 field data points (bio-physical component) were collected.

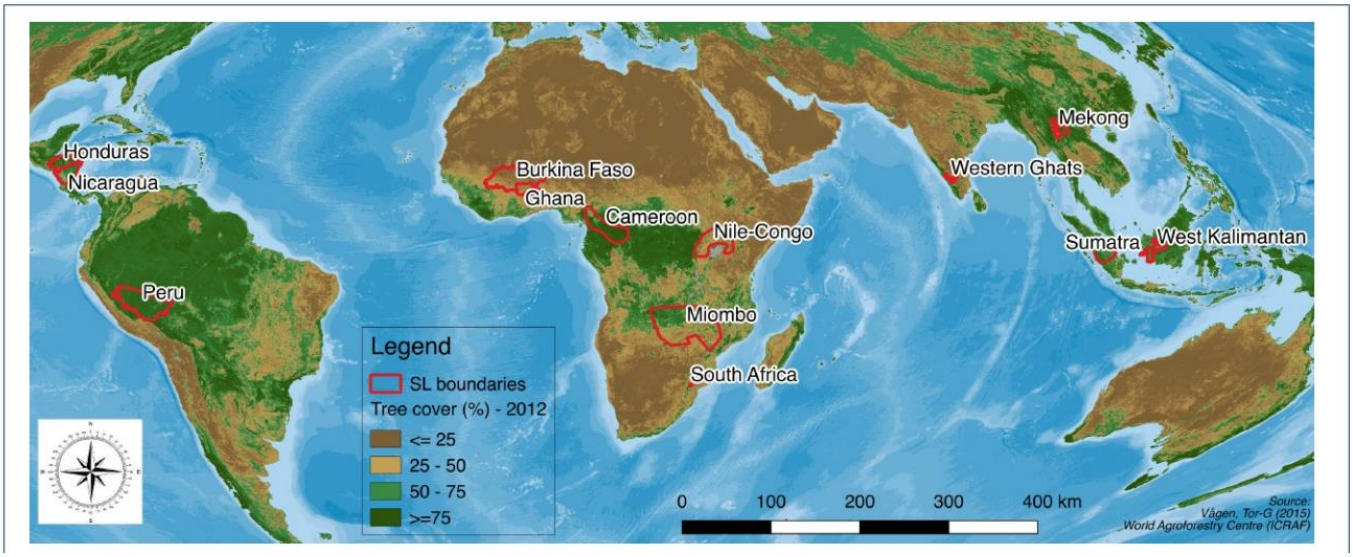

Figure 1: The Sentinel Landscapes network of sites

The present report attempts to do a retrospective mapping of bilateral FTA projects and the SLs to provide information of the co-location between the two. It is understood that the existing SL network is relevant for the overall FTA portfolio, if a significant proportion of the program activities take actually place within the SL network.

7 The FTA database

The project database aims to provide the Management Support Unit (MSU) unit and Monitoring, Evaluation, and Impact Assessment (MEIA) team an efficient means to explore the FTA project portfolio of the eight institutions involved. Several features of the database are directly related to planning, monitoring and learning of project outcomes and impacts. In addition, capturing this knowledge in a centralized database provides a mechanism to gain knowledge of projects long after key staff members have moved onto other organizations. The database stores data such as:

- project budgetary information, including a breakdown of cross cutting activities.
- geographic and site locations a project is based in.
- project keywords.
- partners the project is working with along with classifying what type of partner they are (Research partners, Knowledge Sharing partners and Policy and Practice partners).
- the specific outcomes and impacts the project is aiming to achieve, as well as a means to record progress in achieving them.
- data collection methods and data management plans.

- project outputs the project is producing.
- capacity development information, including events, students and partner interaction.

The database gives both a detailed summary of a single FTA project as well as providing a summary view. The FTA project database is not limited to bilateral projects either as Window 1 and Window 2 funded activities are captured as projects too, providing a holistic view of the CRP's activities. The web based application has advanced searching capabilities combined with visual representations of the data in order to allow the project database to identify patterns and trends.

Other highlights of the system include:

- the project database is fully integrated into the CRP FTA Operational Plan, which reduces manual data entry and facilitates easier reporting to the CGIAR and other interested parties.
- provides a web-based mechanism for scientists and FTA flagship leaders to record knowledge uptake via the influence log. Additionally, scientists can record achievements via recording outcome stories.
- integration with CIFOR's project management system to reduce manual data entry, with the capacity to extend this functionality to other FTA institutions project management systems.
- in order to facilitate better collaboration between scientists, the project database automatically identifies other projects that share :
    - the same keywords,
    - the same partners,
    - the same donors,
    - the same working locations.

8 Methodology

The main objective of this report is to conduct a 'coarse' retrospective mapping of bilateral FTA projects and the SLs to establish whether the existing SL network is relevant for the overall FTA portfolio. The data utilized for this analysis was extracted from the FTA project database[3]. Details of the database are provided in section 7, above.

[3] https://sharepoint.foreststreesagroforestry.org

This project was a two-level approach:

1. by first mapping FTA bilateral projects based on country presence against countries that have a sentinel landscape and;
2. extracting project data on duration, countries implemented and other various outcomes (budget, outputs (data collected, reports and journal articles published) in each SL country level.

Caveat on descriptive analysis

The FTA project database is captured the project level and this information is subsequently mapped to each SL. There are two main implications, which have to be taken into consideration in as far as interpreting the results. First, for projects implemented in multiple countries, the data can only be extracted as aggregates for the whole project. Hence it is not feasible to disaggregate and extract the data only relevant to an SL country. Furthermore, for a project that is implemented in SL country, there is incomplete information (site names and/or GPS coordinates) to ascertain whether there is an overlap between the FTA bilateral projects and the SLN sites. Hence, our analysis is limited in that we cannot establish, unequivocally, a clear geographical overlap between the FTA bilateral project sites with the SLN sites.

9.1 Country mapping of bilateral projects

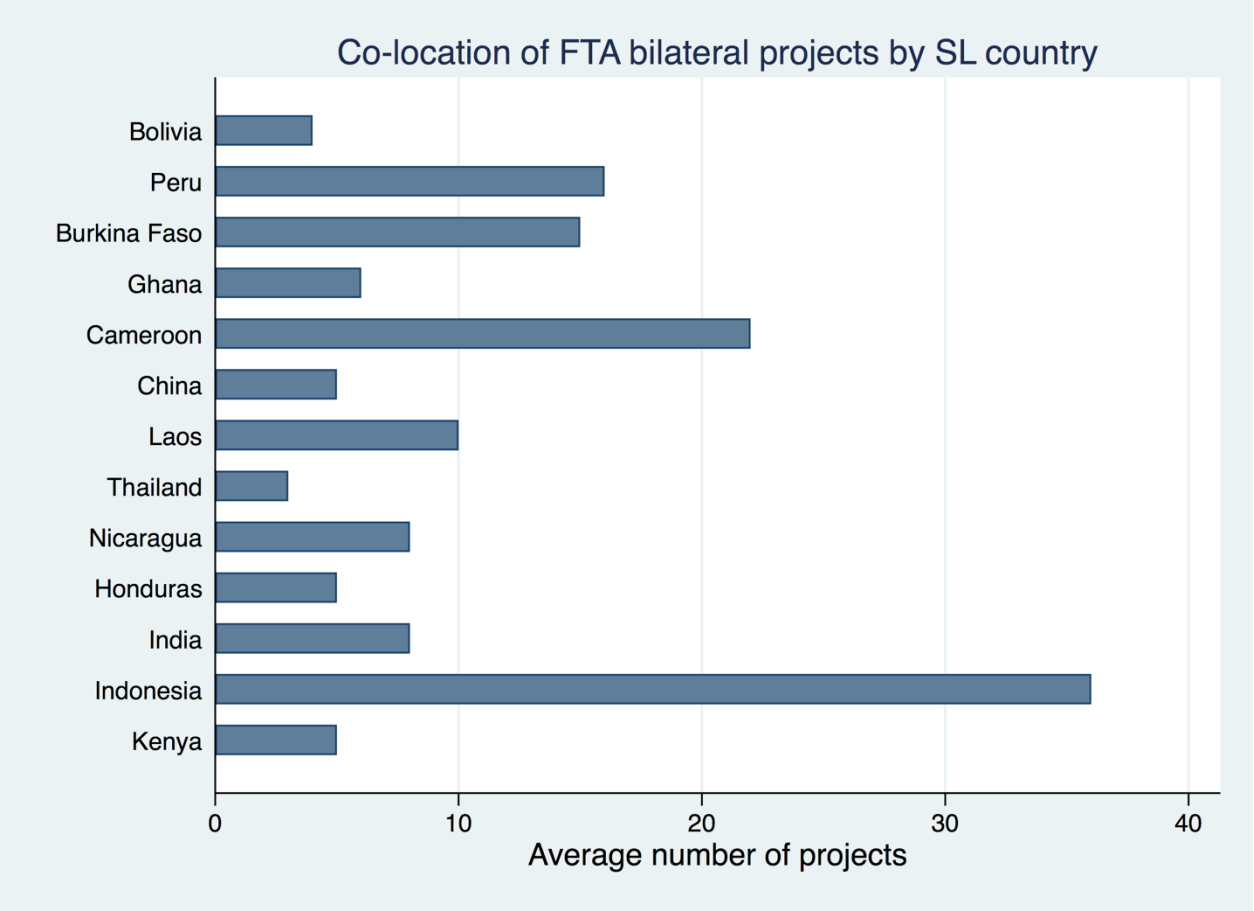

Figure 2: Total number of FTA projects within each SL country

Figure 2 shows the total number of FTA bilateral projects that were active since 2012 in each of the SL country. The countries that have the highest number of active projects during this period are Indonesia, Cameroon, Peru and Burkina Faso. The countries with the least active projects are Thailand and Bolivia.

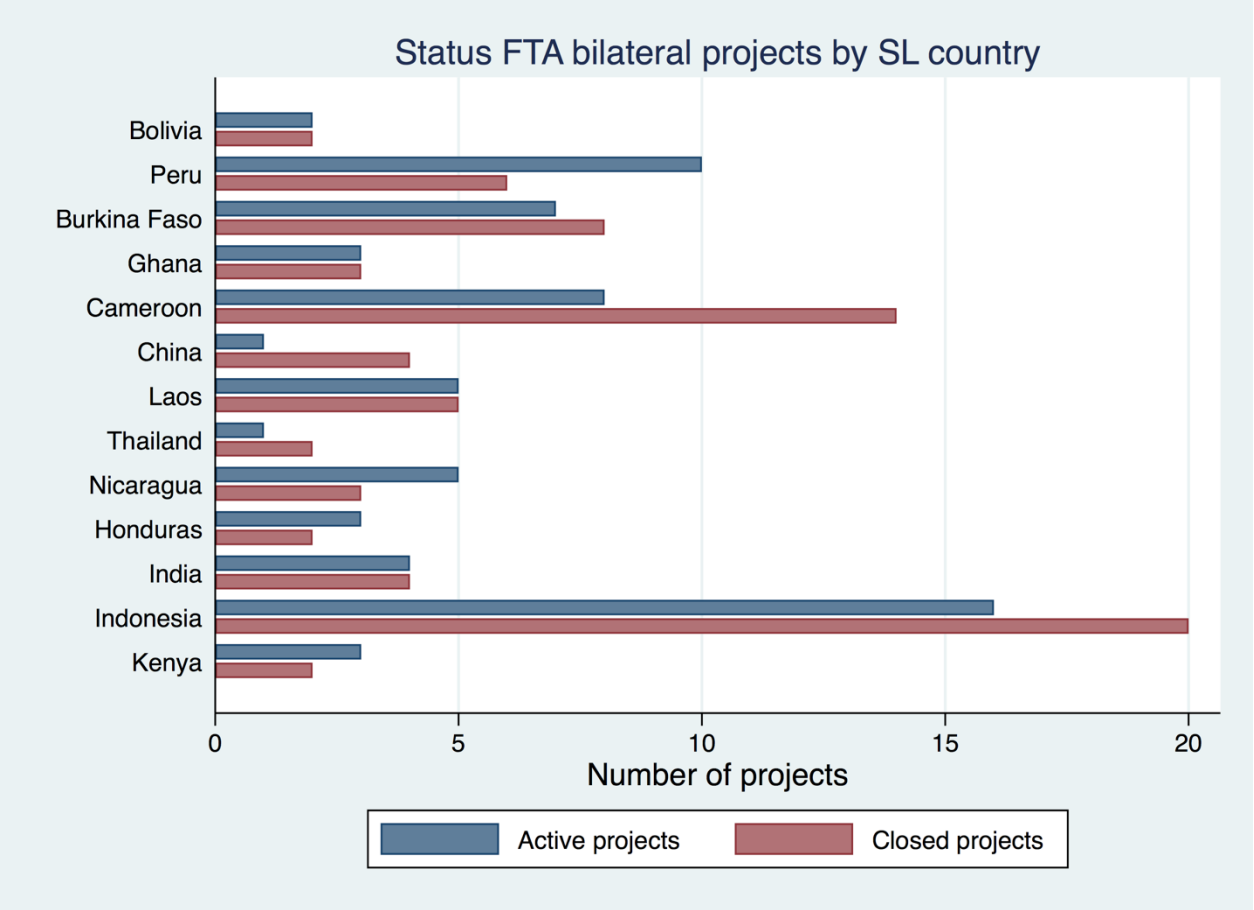

Figure 3: Status of FTA bilateral projects by SL country

Figure 3 shows whether the FTA bilateral projects are still active or closed in each SL country. The countries that currently have the highest number of active projects since 2012 are Indonesia, Peru and Cameroon.

Note: The number of Active + Closed projects sums up to the total number of projects presented in the previous slide.

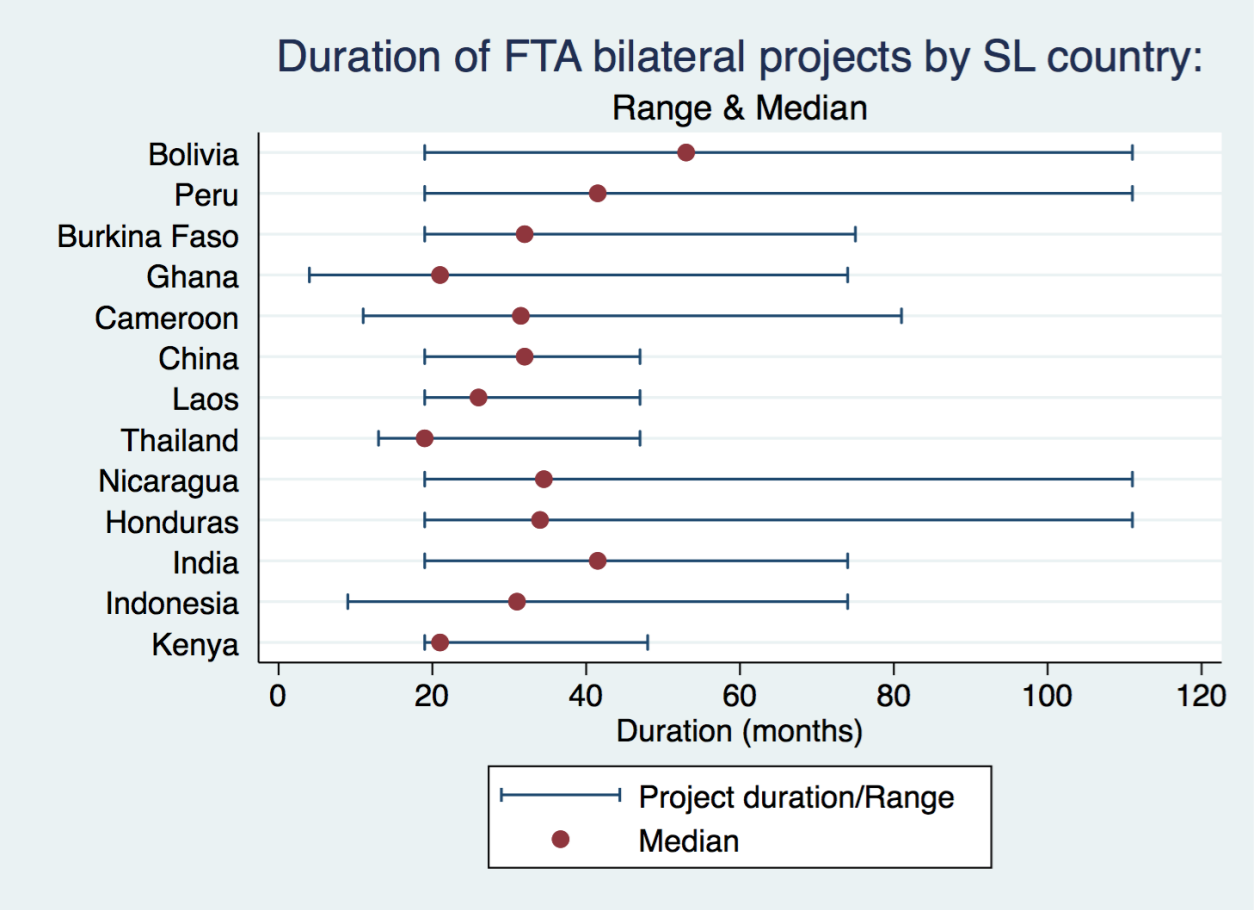

Figure 4: Duration of FTA bilateral projects mapped to SL country

Figure 4 shows the duration or span of FTA bilateral projects in each SL country. Most projects are active for at least 20 months and the median range of between 20 and 50 months.

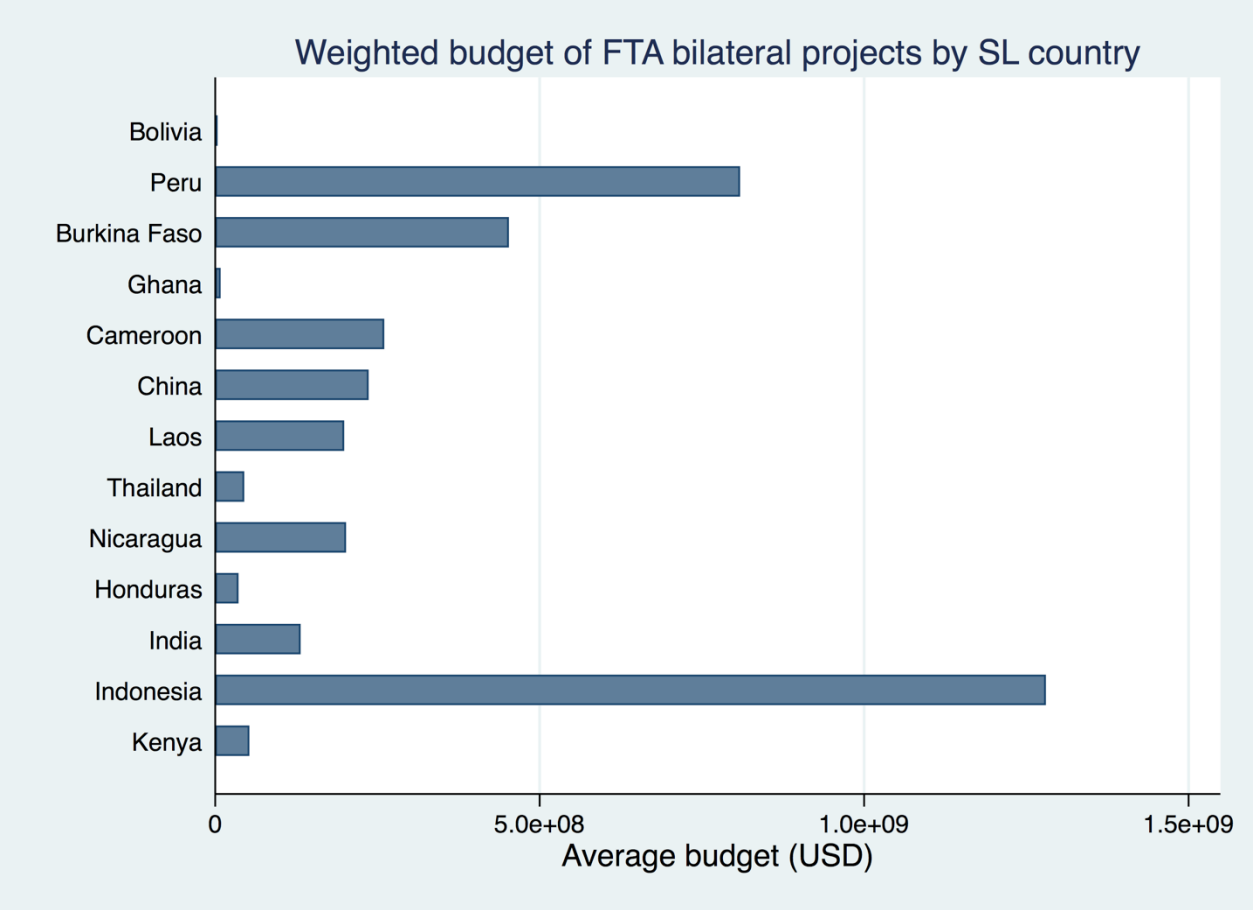

Figure 5: Weighted budget of FTA bilateral projects by SL country

Figure 5 shows the weighted budget of all FTA bilateral projects in each SL country since 2012. The budget is weighted by each country's contribution expressed a percentage of effort per country for a project (this is a best guess from FTA scientists of each project and does not reflect the actual allocation received in each country).

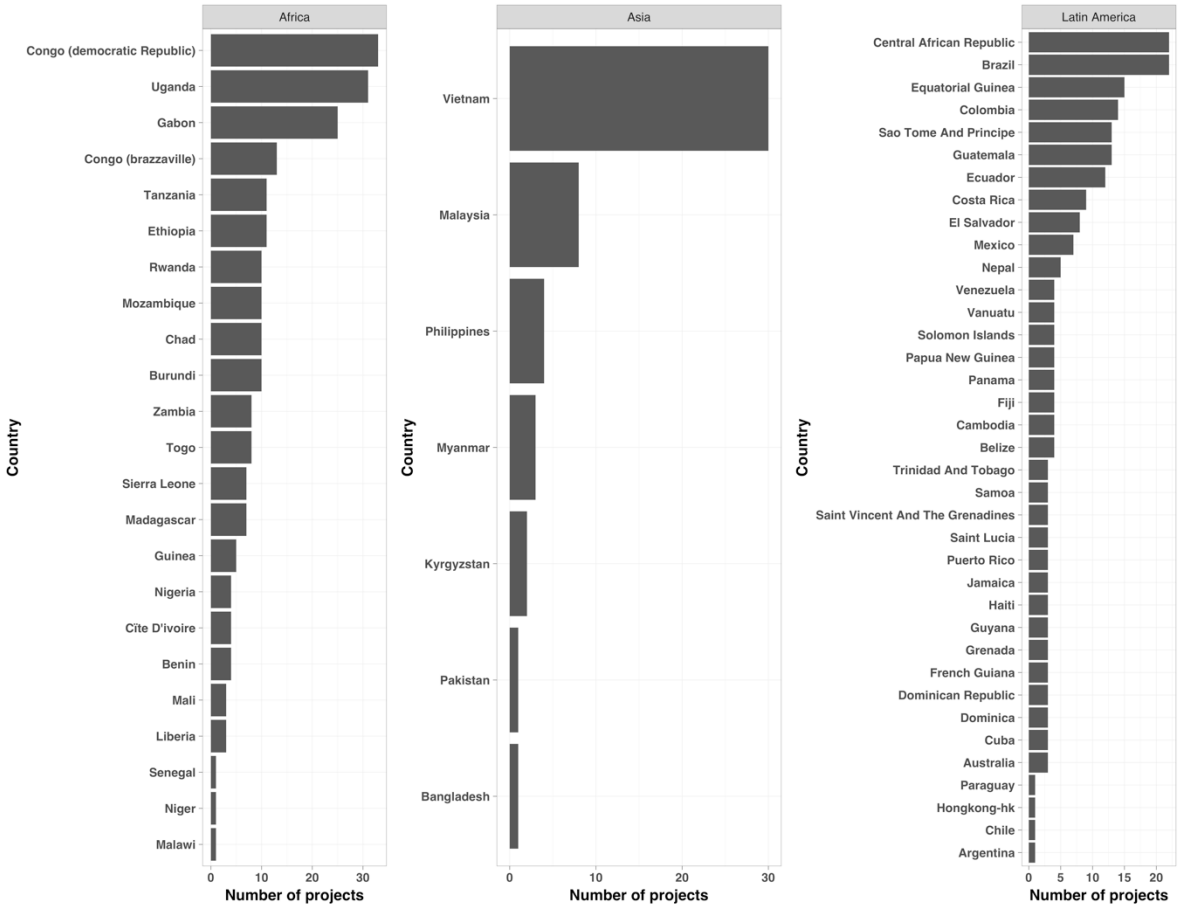

Figure 6: Distribution of FTA bilateral projects in non-SL country

Figure 6 shows the distribution of FTA bilateral projects in non SL countries in Africa, Asia and Latin America since 2012.

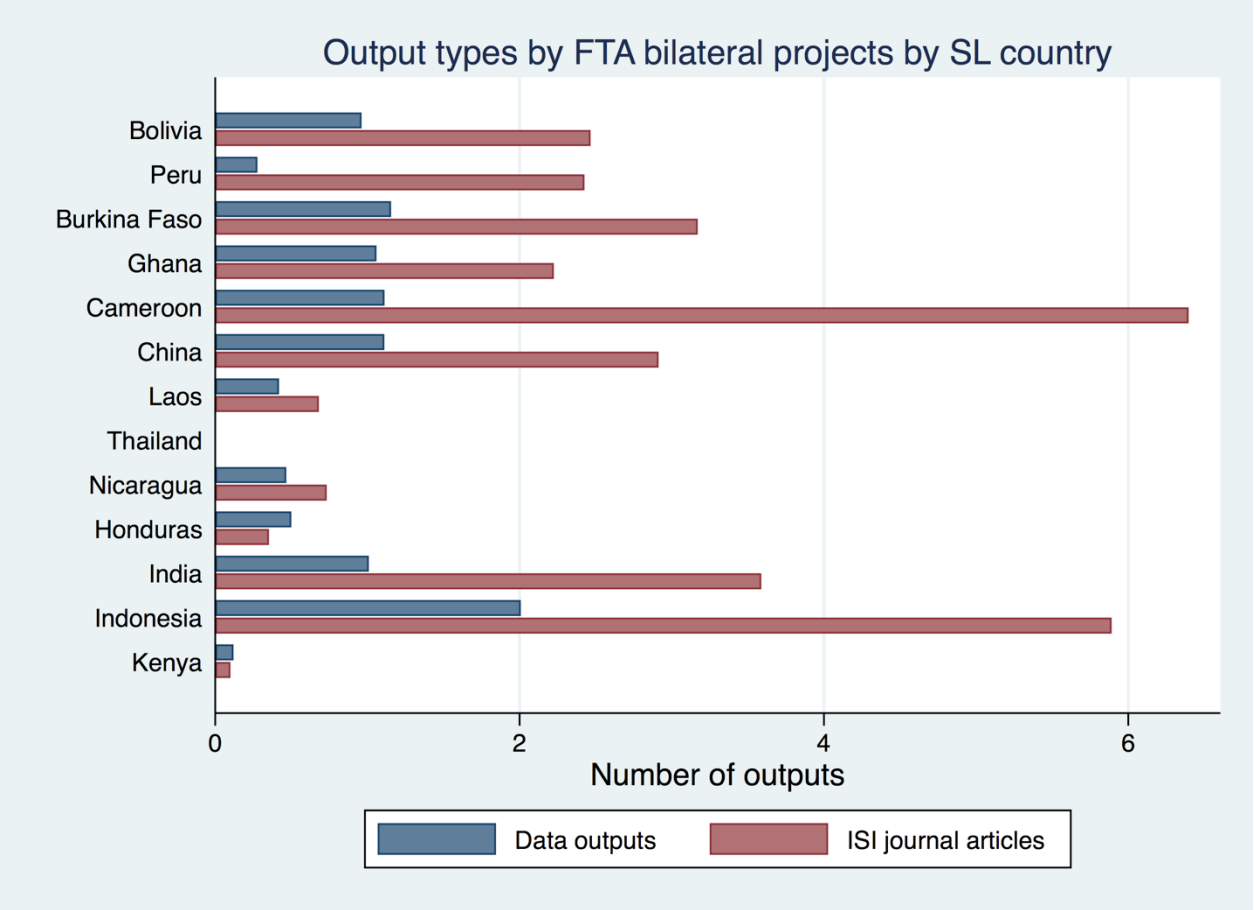

Figure 7: Total number of outputs by FTA bilateral projects by SL country

Figure 7 shows the total number of outputs categorized into data and journal articles in each SL country for projects that were or are active since 2012. The outputs are weighted by each country's contribution expressed a percentage of effort per country for a project (this is a best guess from FTA scientists of each project).

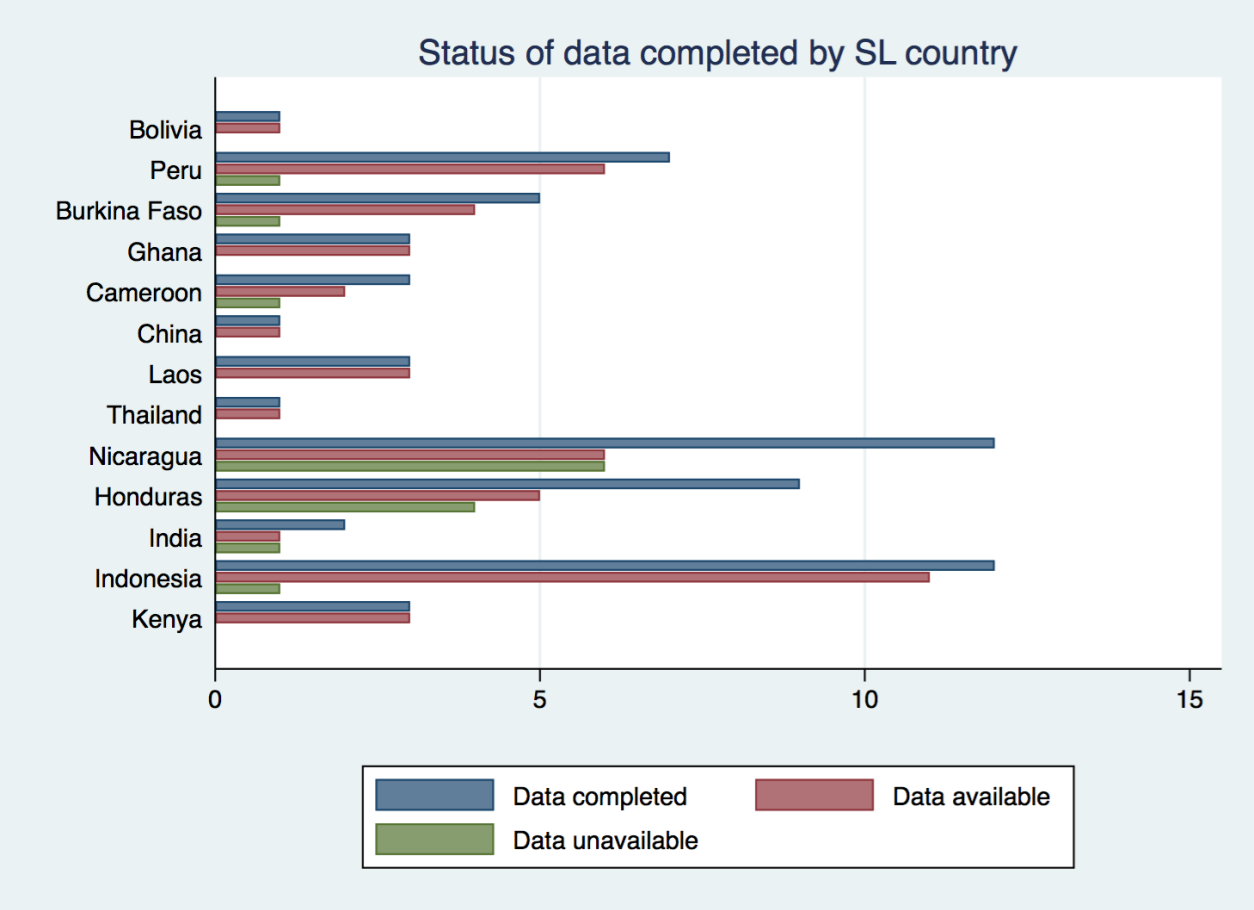

Figure 8: Data type by SL country

Figure 8 shows the status of data collected in each of the SL countries.

- **data complete**: is the number of dataset that have been collected during the project lifecycle.
- **data available:** is the number of datasets that have a downlodable link (e.g. dataverse) leading to a site where one can request or download the data file).
- **data unavailable:** is the number of complete datasets (based on data status) that have not been made available or there are no active or downloadable links where third-party users can request access.

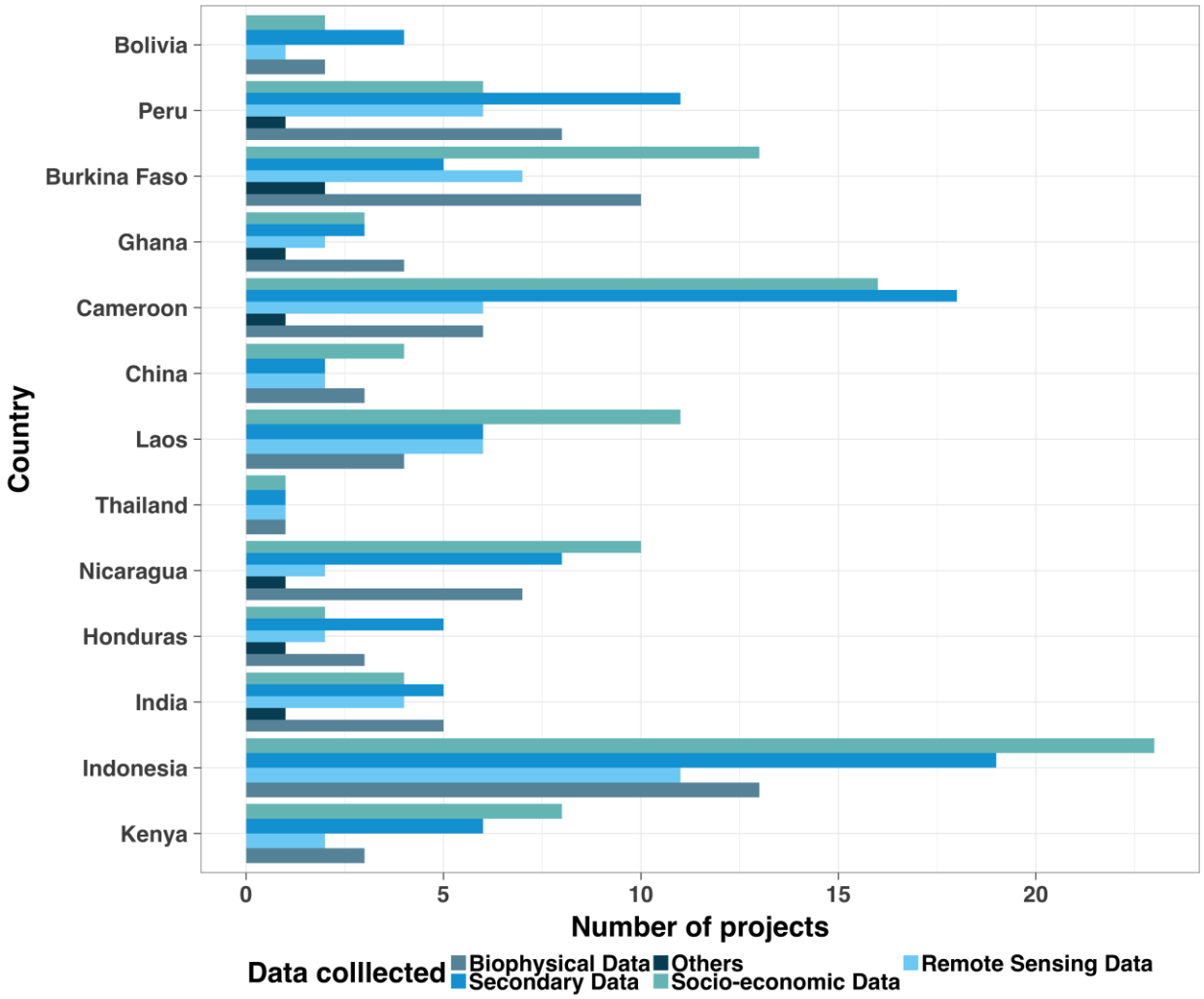

Figure 9: Type of data collected within FTA bilateral projects by SL country

Figure 9 shows the type of project outputs in each SL country that were/are active since 2012.The outputs are weighted by each country's contribution expressed a percentage of effort per country for a project (this is a best guess from FTA scientists of each project.

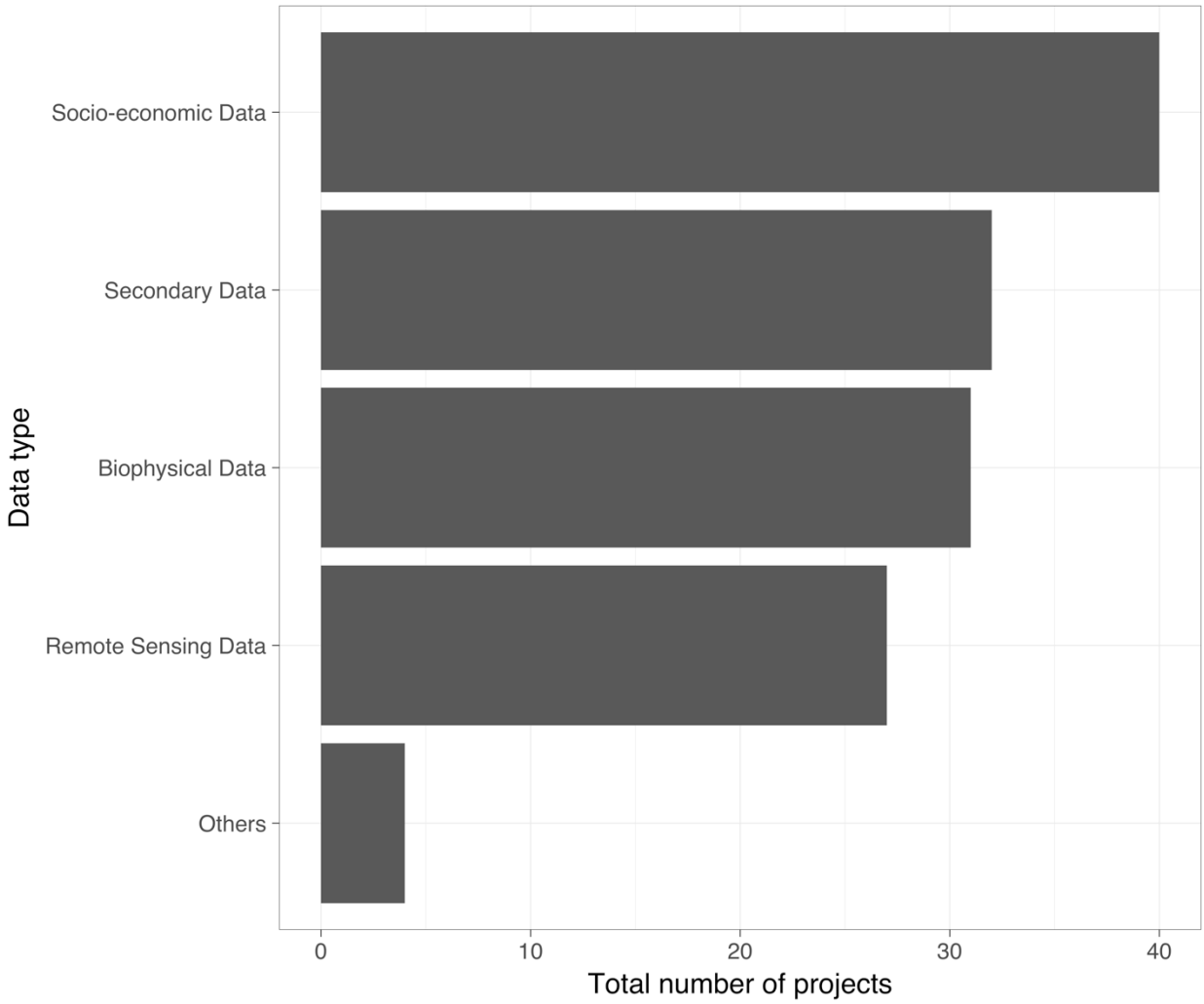

Figure 10: Type of data collected within FTA bilateral projects by SL country

Figure 10 shows the number of different type of data collected, broadly categorized as primary, secondary and other types. In terms of primary data, the most commonly collected data is socio-economic followed by biophysical and lastly remote-sensing in each SL country.

9.2 FTA partner activities in SL and Non-SL countries

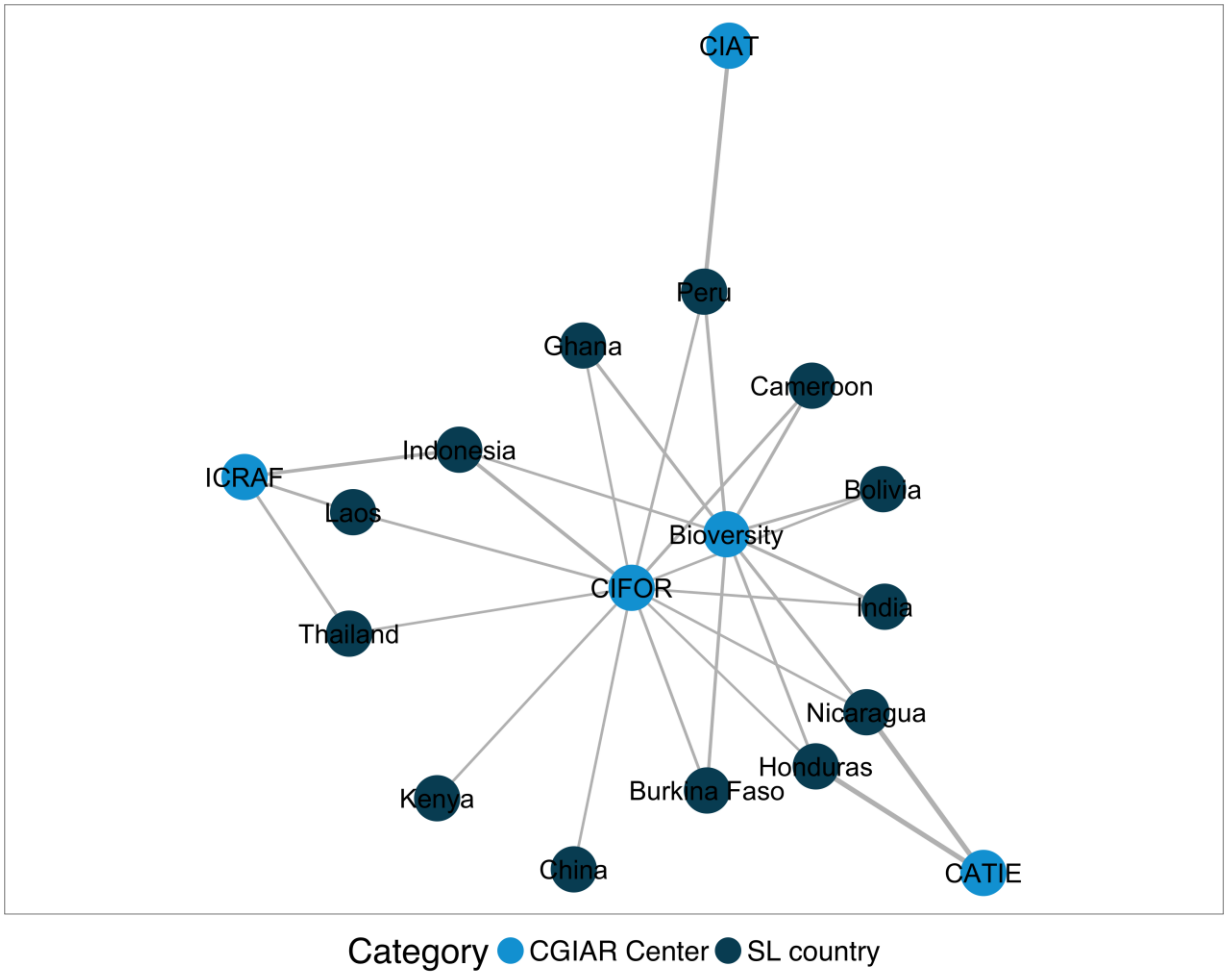

Figure 11: Network analysis of FTA centers by country center by SL country

Figure 11 shows the network of SL countries in which FTA partners lead bilateral projects. CIFOR and Bioversity are the most present centers in SL countries, followed by ICRAF, CATIE and CIAT, respectively.

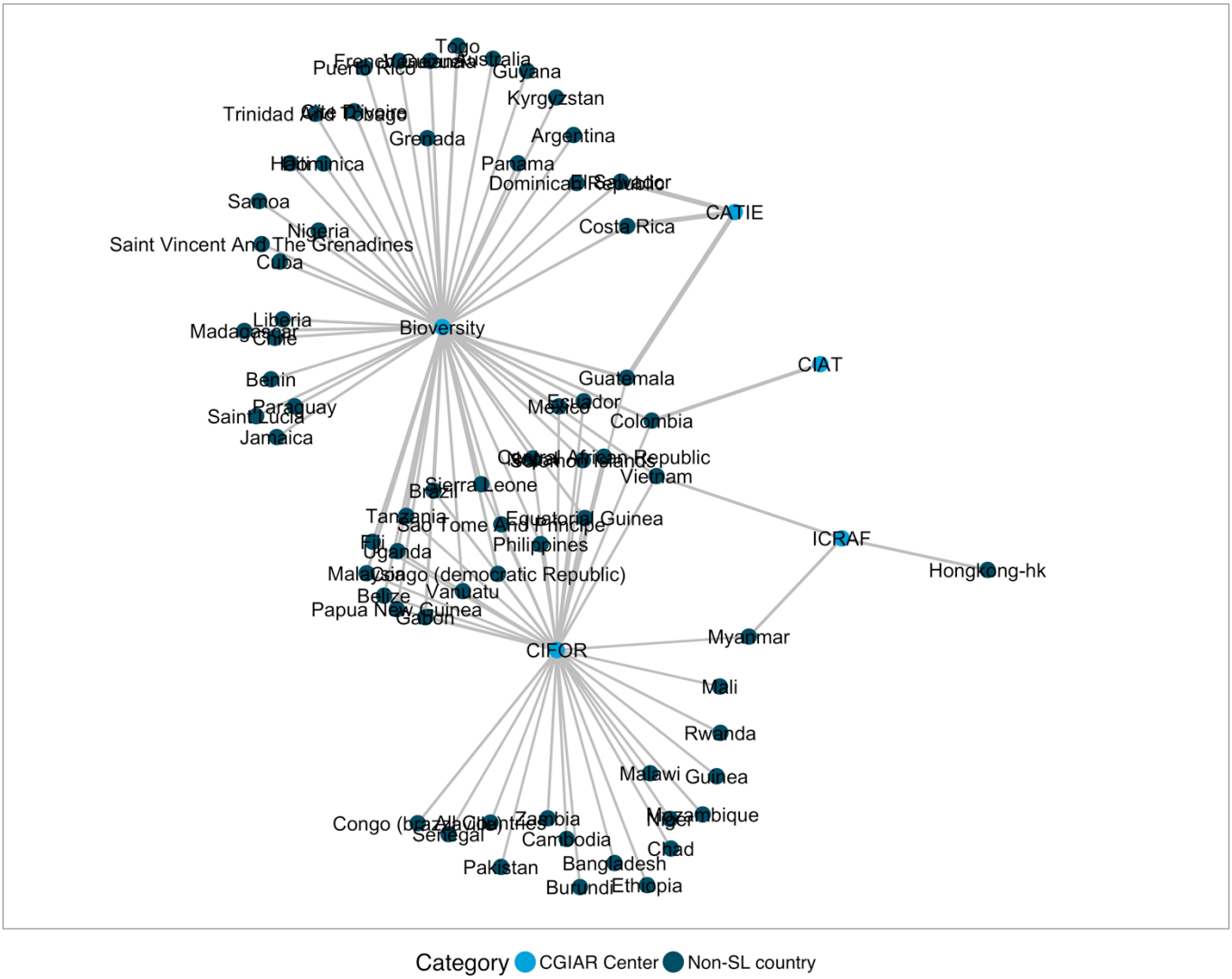

Figure 12: Network analysis of FTA centers and respective non-SL countries with active projects

Figure 12 shows the network of non-SL countries in which FTA partners lead bilateral projects. Again, there is a similar trend, in which CIFOR and Bioversity are the most present centers in non-SL countries, followed by ICRAF, CATIE and CIAT, respectively.