

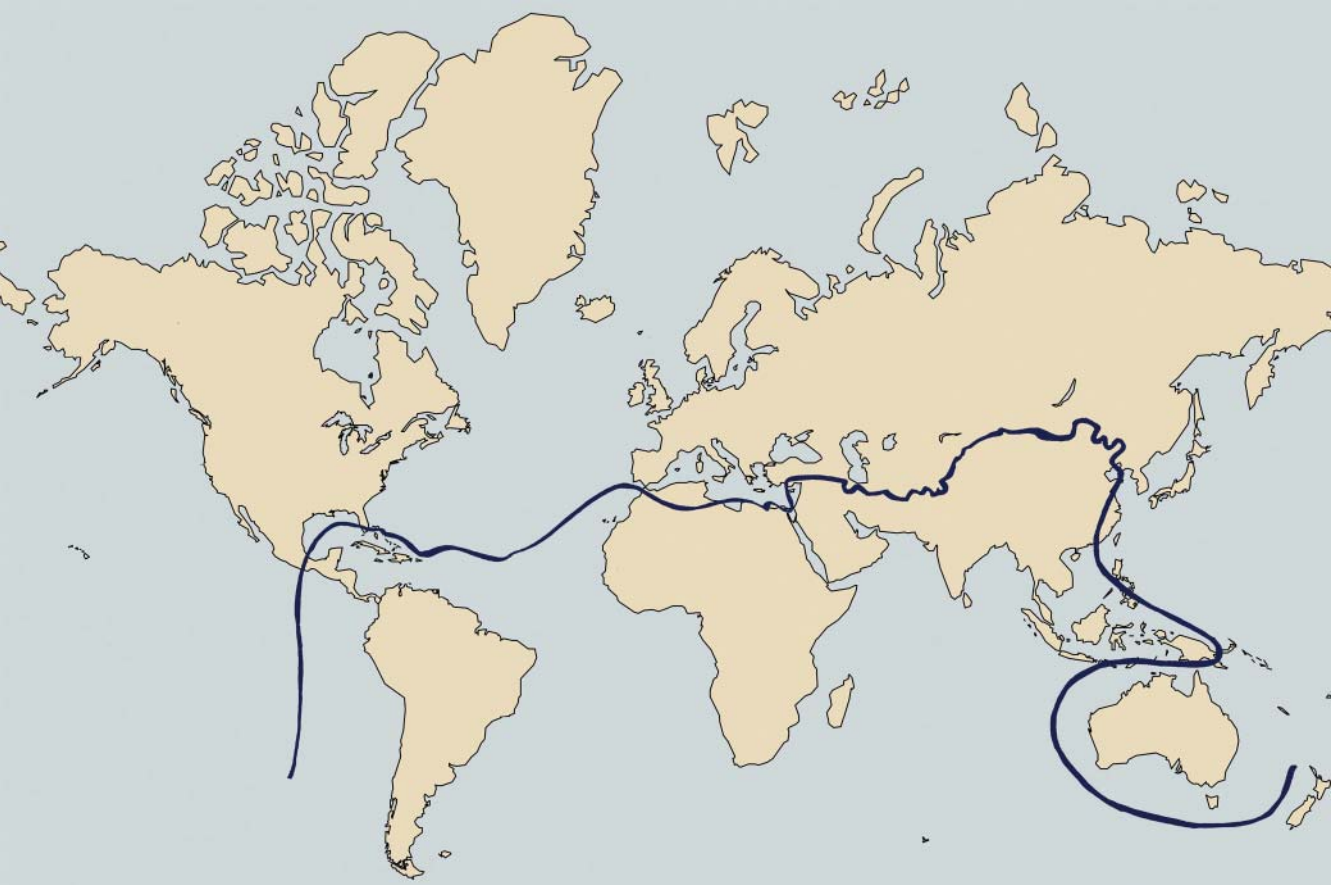


**HELVETAS**  
Swiss Intercooperation

**NEPAL**

**SOUTH-SOUTH  
COOPERATION UNIT**





## A QUICK BRIEF

HELVETAS Swiss Intercooperation is one of the most experienced and largest development organizations in Switzerland. It came into existence on 1 July 2011 with the merger of two organizations: Helvetas (founded 1955) and Intercooperation (founded 1982). As a politically and denominationally neutral association, HELVETAS Swiss Intercooperation is supported by 100,000 members and sponsors as well as 12 regional groups of volunteers. It is engaged in 33 countries of Africa, Asia, Latin America and Eastern Europe.

HELVETAS Swiss Intercooperation has been working in Nepal since 1956. Currently it runs more than 15 projects of different sizes in five working sectors: Education and Skills Development, Environment and Climate, Governance and Peace, Rural Economy and Water and Infrastructure.

Nepal has constructed more than 5,000 trail bridges with the financial support of the Swiss Agency for Development and Cooperation, the Department for International Development, the Asian Development Bank, the World Bank, CARE Nepal, Kadoorie Agricultural Aid Association British Gurkhas Nepal, Upper Sagarmatha Agriculture Development Project, and others.



This achievement was made possible through the constructive direction and contribution of the Government of Nepal through its various agencies such as Local Trail Bridge Programme, Rural Area Development Committee, Village and District Development Committees, Suspension Bridge Division, and Sector Wide Approach.

HELVETAS Swiss Intercooperation Nepal holds extensive experience and expertise of more than 40 years in developing promising yet cost-effective trail bridge technology in Nepal. Currently, it is providing technical assistance to the Government of Nepal for the implementation of a trail bridge programme. This expertise has now come of use not only in this Himalayan nation but also in many other countries such as Bhutan, Ethiopia, Guatemala, Switzerland, China, Honduras, Mozambique, Tanzania, Laos, Vietnam, Indonesia, Burundi, and Cameroon.

In order to expedite and expand access to this experience and expertise, HELVETAS Swiss Intercooperation Nepal has set up a South-South Cooperation Unit, known as SSCU in short. This unit of HELVETAS Swiss Intercooperation Nepal offers specific expertise to governments, private sector institutions, and civil society organizations. International Labour Organization, HELVETAS Swiss Intercooperation country offices and African Development Bank have employed the unit's expertise.

Front cover: A suspension bridge changes lives in Burundi. The north-south divide, opposite. A bridge in Gitega, Burundi (underneath is a drinking water pipeline used for crossing over), this page.



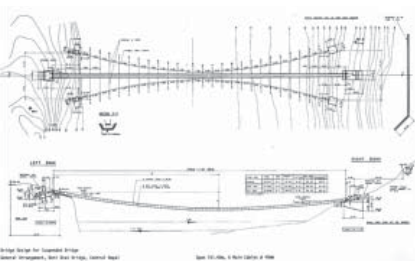
# OUR SERVICES

HELVETAS Swiss Intercooperation Nepal, through the South-South Cooperation Unit, aims to transfer knowledge and technology in areas that it excels in to the south nations. This transfer has been limited to trail bridges related knowledge and technology until now. Support provided around the world has varied from reconnaissance trips to the design of trail bridges, capacity building of partners, establishment of entire programmes, to technical assistance over the entire life-cycle of a project.

The unit has provided customized services in Asia, Africa, Europe, and South America. Modes of our support could be distance (example bridge design), in-country and distance (example survey plus design), or in-country (examples construction monitoring, quality monitoring, and capacity building).

Some of our services are feasibility studies of trail bridges; survey, design, implementation, and monitoring of trail bridge projects; research and development; design and implementation, independently or in association with educational institutes (university, colleges, technical schools and training centres) of capacity building training courses in the areas of HELVETAS Swiss Intercooperation Nepal's excellence; on the job training, coaching and mentoring of professionals working for national or international agencies; and sharing of best practices and learning through workshops, seminars and publications.

HELVETAS Swiss Intercooperation Nepal has developed excellence in other areas such as Water Use Master Plan, Vocational Education and Training, Rapid Market Appraisal for Skills Development, Farmer-managed Irrigation Systems, etc. In the future, support services to be managed by South-South Cooperation Unit could be expanded to these areas based on demand and needs of partner countries and organizations.



Need for a bridge in rural areas, top; public hearing to discuss construction, second from top; bridge detail survey second from bottom; general arrangement drawing, bottom.



**Case study:  
The Ruvubu Bridge**

There is a village in the east African nation of Burundi. The people here are poor and the village is devoid of modernity and the benefits of development taking place in other parts of the country. The main reason for this is because it is isolated by the flow of the Ruvubu River that separates the Karuzi and Gitega provinces. The people of the village can only access markets, churches, health services, roads using boat services that plied the river charging exorbitant prices.

The people grow maize, yam, banana, sugarcane, and pineapple. They raise domesticated animals. However, they had not profited from this hard work as they transported this produce on the boat that took them and their goods across the Ruvubu River. The cost of 300 Burundian Franc (equivalent to 0.18 USD) each time they went across was costly. Boatmen would confiscate belongings and misbehave and harass passengers if they were unable to pay. The boats were not available when needed.

SSCU experts were involved in surveying, designing, and implementing the bridge building project over Ruvubu River responding to the demands of the people and the Burundian government. Boats had to be made of left over drums to transport construction material back and forth. People faced the pressure of the boatmen who felt threatened by the new construction. As they would lose their traditional income and their power over the people.

Once built, the bridge changed lives. Villagers came to dance and sing on the bridge. For a while, they continued to be bullied into using the boats but things changed. They grew in confidence and some even started taunting those who had exploited them since times immemorial, "Hey boatman take your boat and use it as firewood. We are no longer victims of your monopoly and misconduct," they sang.

Tower erection, top; interaction with beneficiaries, second; walk way placement, second from bottom; suspension bridge over the Ruvubu River, bottom.





## SSCU OVER THE YEARS

### **Feasibility study of trail bridges in Cameroon**

SSCU experts conducted a feasibility study of three pedestrian bridges along the Kumba-Mamfe Road Project in 2015 at the request of Ministry of Public Works of the Government of Cameroon. Technical support may be provided during construction phase as well. The project is financed by African Development Bank, Cameroon.

### **Support to build a model bridge in Sikkim**

Principal Chief Engineer, Additional Chief Engineer (Rural Management and Development Department) and Deputy Speaker of the Government of Sikkim, India, came on an exposure visit to Nepal in December 2014. Following their observation of trail bridges in Nepal and interactions with user committees and



Rudimentary cane bridge over Mongo River, Cameroon, top; bridge site survey and soil identification process in Laos, second from bottom.



HELVETAS Swiss Intercooperation Nepal team, they requested the South-South Cooperation Unit to conduct a feasibility study of a trail bridge in Sakyong-Pentong, Dzongu, in North Sikkim. The Government of Sikkim is implementing a tourism development plan in the area.

### **Developing a trail bridge programme in Ethiopia**

HELVETAS Swiss Intercooperation Nepal's support to HELVETAS Swiss Intercooperation Ethiopia began in 2007. It helped HELVETAS Swiss Intercooperation Ethiopia develop its trail bridge programme and enhanced its bridge building capacity. The two country programmes collaborated to initiate a joint effort to conduct an assessment of technical know-how and capacity of the Ethiopian government and private sector authorities on trail bridge development. This involved survey and design of 36 trail bridges, technical assistance to implement and monitor construction of 23 bridges, backstopping support to develop bridge design manuals, project management information system development, a 35-day bridge design training, as well as an on-the-site training in Nepal. As a result of this collaboration over the years, HELVETAS Swiss Intercooperation Ethiopia is now implementing short span trail bridge technology independently. Support to introduce long span trail bridge technology is in the planning stage. For this purpose, HELVETAS Ethiopia has requested SSCU's technical support in constructing a suspension bridge over the River Nile.

### **Successful completion of Burundi Project**

Collaboration with Burundi was initiated in 2010. An exploratory visit by Nepali experts took place that year. Subsequently, in 2011, HELVETAS Swiss Intercooperation Nepal experts conducted a fea-

Trail bridge design training for government employed engineers in Laos, top; a new suspended bridge in Ethiopia serves as an example, second; bottom two photos, bridges improve market access.





Suspension bridge construction training by Nepalese technician to Burundian technicians, top; cable pulling in Nepal, bottom.

sibility study and designed some bridges at the request of the Burundian Government. In 2014, HELVETAS Swiss Intercooperation successfully completed the construction of seven bridges in Burundi: two steel truss, two suspended, and three suspension. The Burundi Project had been launched through a tripartite agreement between the Road Department of the Government of Burundi, African Development Bank, and HELVETAS Swiss Intercooperation. A team of seven experts from Nepal were deployed to implement the project. User committees were engaged in construction to enhance their know-how of bridge building and maintenance. Fabricated steel parts and wire ropes were not available in/around Burundi and thus were transported from Nepal and India. Design training for Burundian engineers is expected to take place in 2015 in Nepal. There appears to be an enormous need for trail bridges in Burundi. An exploratory trip has been planned for the winter of 2015.



## **Working with International Labor Organization Indonesia**

An agreement between HELVETAS Swiss Intercooperation Nepal and ILO Indonesia was established in 2010. Technical assistance was provided to build 27 bridges in Nias Island including preliminary assessment and survey, detailed design and bid preparation, procurement process, manufacture of bridge steel parts, work implementation, and final inspection. Nepali experts conducted 21 bridge surveys. They supported construction of eight bridges providing site verification, designs, cost estimation, procurement support, technical backstopping for the Indonesian team, quality control of services and goods, and final assessment of constructed bridges. In addition, a team of policy makers, government officials, and ILO officials from Indonesia made an educational visit to Nepal in November 2011. They visited various bridge sites and interacted with user committees, policy-makers, relevant officials of Government of Nepal and HELVETAS Swiss Intercooperation team in Nepal.

## **Support for the construction of tractorable bridges in Laos**

HELVETAS Swiss Intercooperation Laos is constructing three trail bridges: two tractorable and one pedestrian. This is a joint undertaking between Poverty Reduction Fund of the Government of Laos and HELVETAS Swiss Intercooperation Laos. HELVETAS Swiss Intercooperation Nepal made available technical support to quality test fabricated steel parts and monitored construction. Initially, a survey mission investigated probable sites for bridge construction, displayed different types of bridges in northern Laos, and transferred know-how on survey and investigation of sites. Then survey and designs of some pedestrian bridges took place and design training for the Lao engineers was conducted.



Bridge site selection, top; a truss bridge constructed in Indonesia, second; suspended bridge in Nizogi, Burundi, second from bottom; public audit after bridge completion in Nepal, bottom.

Building capacity on trail bridge design, top; site visit during design training, second; an article on the work of SSCU appears in a national newspaper, second from bottom; suspended bridge in high altitude, bottom.



**Other countries supported** by HELVETAS Swiss Intercooperation include Honduras through a 35-day trail bridge design training. In Guatemala quality of bridges was assessed and improvement recommended; local staff capacity was built; and existing manuals and guidelines reviewed. In Tanzania survey and design of five bridges and construction of three bridges took place. Survey and design of 13 bridges took place in Rwanda. Bridge design training was carried out in Bhutan and China. HELVETAS Swiss Intercooperation Nepal is collaborating with SAMARTH Nepal Market Development Programme and Kanchenjunga Conservation Area Management Council to construct seven trail bridges along the Great Himalayan Trail in Taplejung district of eastern Nepal. The Project is funded by DFID-UKAID.

**Nepalese suspension bridges spreading across African nations**

Excerpts from an article by Devendra Bhattarai in *Kantipur National Daily*, 8 April 2015.

New Delhi. Nepali engineer Bindu Khambu and overseer Padam Gurung have recently returned after conducting feasibility studies of trail bridges in Cameroon's Kumba-Mamfe Road Project. Before this work in the mid-African nation, two dozen Nepali engineers have travelled to Ethiopia, Burundi, Rwanda, Vietnam, and Indonesia among other countries providing construction support, technical back-up, and training.

“Our technical team has come together to spread bridge projects that reflect Nepali skills, expertise, and innovation to the outside world,” said HELVETAS Swiss Intercooperation Nepal’s South-South Cooperation Unit’s Manager Bhagat Bahadur Bista, to *Kantipur National Daily*.



# STRATEGIC OUTLOOK

South-South Cooperation Unit has focused on the trail bridge sector over the years. It plans to expand its services to other areas of HELVETAS Swiss Intercooperation Nepal's expertise such as Water Use Master Plan, Farmer-managed Irrigation Systems, River-bed Farming, Establishing and Operating Skills Development Fund, Rapid Market Appraisal for Skills Development, and Village Development Periodic Planning. If needed, it will make use of HELVETAS Swiss Intercooperation Nepal country programme expertise and experience. SSCU will implement innovative research and development efforts to broaden its services and develop itself as a competence centre for south-south knowledge transfer.

## **The added value of South-South Cooperation Unit**

*by Alem Shumiye, Trail Bridge Programme Manager, HELVETAS Swiss Intercooperation, Addis Ababa, Ethiopia*

- The multi-faceted support provided by HELVETAS Swiss Intercooperation Nepal in the framework of a South-South Cooperation has greatly contributed to the development of national Trail Bridge Capacity Building Programme in Ethiopia.
- It offers transfer of technology from the pioneers of trail bridge building.
- No reinvention of wheel but simply adaptation of technology in the Ethiopian context.
- The social and cultural ties between two HELVETAS Swiss Intercooperation countries are strengthened.
- It can further be replicated in other working areas.

Interaction with government and donors in Cameroon, top; Nepali bridge experts with the Ethiopian team, second; a suspended bridge improves access to education and markets, bottom two.





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