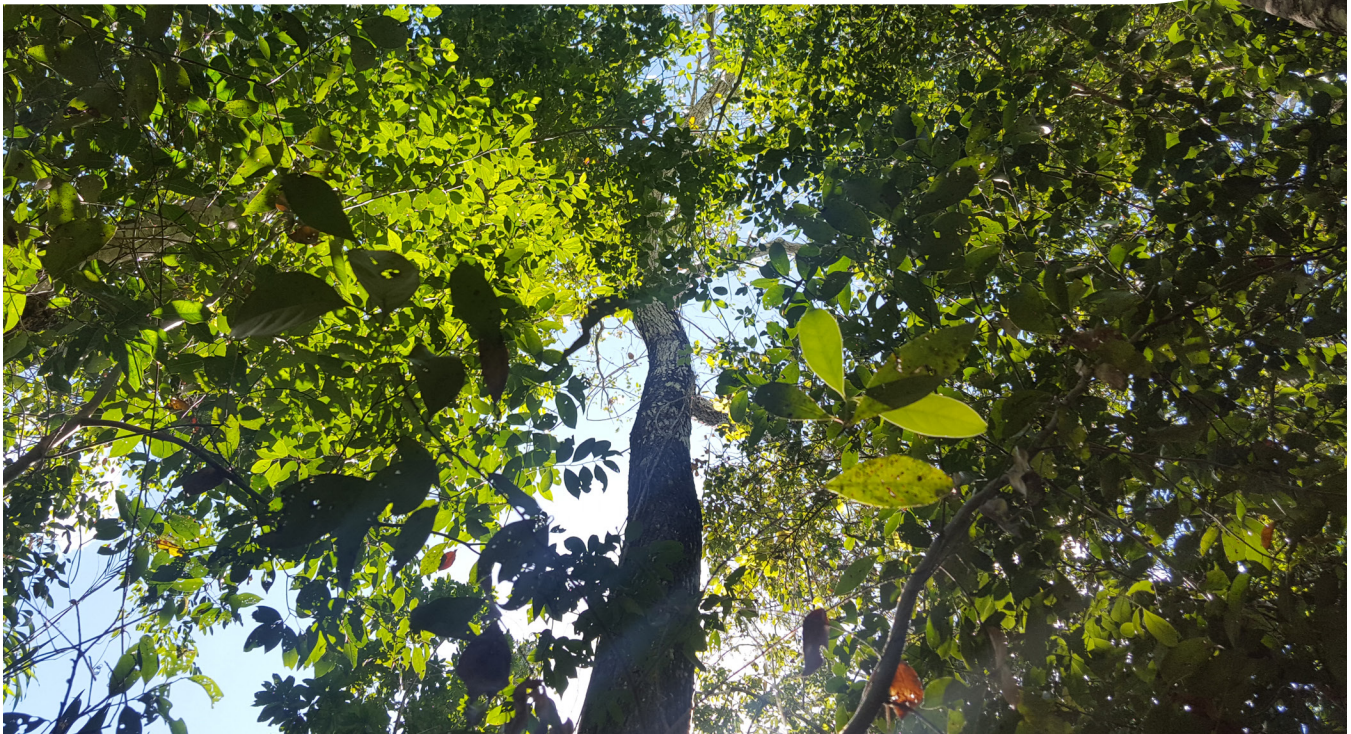
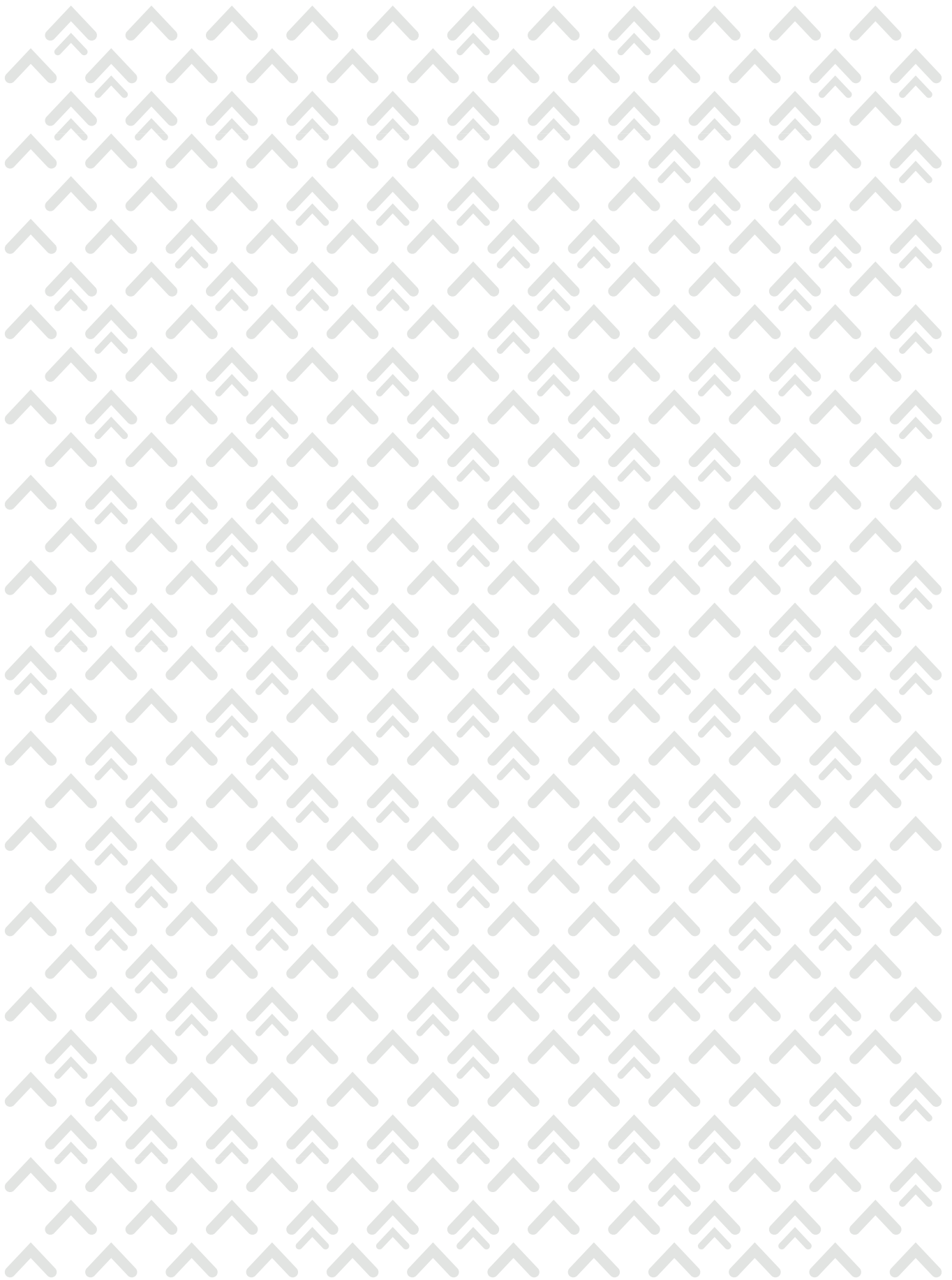


A Reason to Stay: Strategies to combat out-migration of youth in rural Mexico's sustainable forest communities

The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices, and consumer behavior.

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Executive Summary

Sustainable management is a critical tool for protecting global forests and improving local livelihoods. However, in many rural communities, such as those in Calakmul, Mexico, a dearth of employment opportunities often leads youth to seek work in other areas. Such out-migration leaves rural regions without the leadership, innovation, education, and ambition of their best and brightest young residents. Without this able generation, communities lack the hands to work the land, care for the young and old, and keep the local economy running. Furthermore, the region's natural resources suffer from environmental degradation. Fewer young, able bodies often result in shorter fallow periods, decreased crop diversity, and increased susceptibility to poor land management.

In this report, we outline how the Rainforest Alliance is preparing youth in Calakmul, Mexico, for a meaningful and financially viable future within their communities. By building capacity for leadership opportunities, increased civic engagement, and ed-

ucation on the local environment, we can help youth become more personally invested in their communities and in creating a future there.

This intervention involves:

- Building life and leadership skills
- Building a scientific foundation
- Practice in the field
- Experiential learning and meeting experts
- Making connections and gaining practical experience

Through a partnership with the Rainforest Alliance, the youth of Calakmul are deepening their connection to their community, ecosystem, and cultural heritage which in turn helps with improved self-worth and, ultimately, community cohesion. Our work helps these young people gain a greater desire to stay and create a better—more sustainable—future for their community.

Young people in Calakmul, Mexico work with global mahogany expert; learn about her lifelong journey with this iconic tree species; and conduct field experiments to identify saplings, measure adult trees, and estimate seed production.

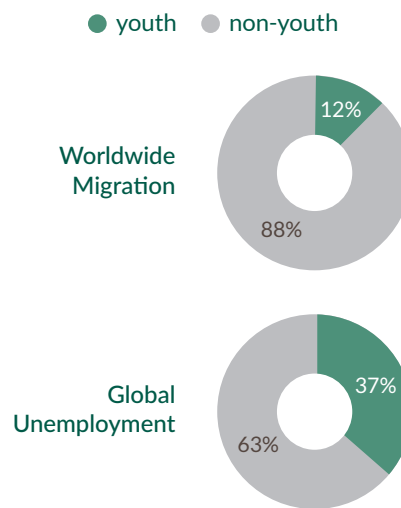


THE PROBLEM:

Each year millions of people worldwide migrate from rural areas to big cities, leaving their places of birth to seek a better life elsewhere. One-eighth (more than 28 million) of these migrants are youth between the ages of 15 and 24 years. The reasons for migration range from better education and employment opportunities, to escaping conflict or persecution, to displacement by the effects of climate change.¹ With youth populations, the decision to migrate is commonly tied to major life events: marriage, education, and employment.² While the global youth unemployment crisis peaked in 2009, youth are still vastly overrepresented in the globally unemployed population, at more than 36 percent in 2014.³ With such a large percentage of youth facing unemployment and underemployment, the search for better jobs leads millions of youth to migrate each year. Furthermore, rural communities often lack the proper forums to encourage youth participation in local development and governance, often motivating the youngest residents look for opportunities elsewhere instead of becoming active and interested participants in local life.

It is imperative to address unemployment and underemployment, which is a major motivator for youth out-migration, with solutions that allow migration to be a choice, not a necessity for survival.⁴ In rural communities in the Sierra Norte region of Oaxaca, Mexico, the daily wage for local paid work often barely covers basic living costs (food, clothing, and education), whereas unskilled labor positions in urban centers or the U.S. commonly pay that same amount for a single hour's work.⁵ This dynamic creates a strong pull to migrate in search of more lucrative employment. Once established in a position outside of their home community, migrants send back remittances to help support family members. With the loss of family laborers and the gain of financial support through remittances, many households have replaced subsistence farming with the local marketplace, which has reduced the size and diversity of local crops. Many migrants have the

Figure 1. Worldwide Migration & Global Unemployment Source: Global Migration Group¹



intention of returning to their birth places, bringing with them new skills and financial gains that will contribute to the continued development of their community. However, there are few local services available that assist the return and re-integration of these migrants—and their assets—into the community.⁶

The problem does not simply lie with employment, but with the lack of infrastructure in rural locales to help youth succeed locally. Young rural populations do not have adequate access to higher education, which could provide a feeling of greater self-worth, as well as allow them to become innovative contributors to their community's development. Furthermore, it is often difficult for youth to access credit—or even to obtain information on how to access credit—to develop and kick start their own enterprises. There are government programs available to provide funds through grants and loans that target male community leaders, discounting women and youth's desire and ability to take advantage of this type of credit. Youth—especially females—are frequently left out of community leadership, discussion, and decision-making processes.⁷ Excluding youth from these conversations, decisions, and opportunities leaves them with few options to get involved. Combined, these conditions significantly contribute to the ongoing out-migration from rural communities in search of better opportunities.

Migration is most often seen as a strategy for improving both the youth's future, as well as that of his or her family. Looking at the larger picture, these communities are seeing a growing set of problems from rampant out-migration: they are suffering from intellectual loss, or "brain drain." As their best and brightest young residents are migrating in search of better opportunities, communities are losing those well-positioned to affect positive change locally. They are being deprived of their young citizens' innovation, leadership, and ambition. This commonly affects the health and education fields, thus creating negative impacts on future generations.⁸ Furthermore, communities are losing access to the skills the younger generations gained in their primary and/or secondary education: reading, writing, use of technology, and communications. These skills are extremely useful in assisting the community's economic progress in the 21st century economy.

Aside from the intellectual loss, rural communities are also losing human capital; hands to help work the land, care for the young and old, and the day-to-day activities that keep the local economy running. The loss of young residents also negatively impacts the productivity of the local landscape and economy, meaning an older and aging workforce is left behind. An older

1 Elie, Jerome, and Alison Raphael. "Migration and Youth." Edited by Jerónimo Cortina and Patrick Taran, Migration and Youth, Global Migration Group, 2014, www.globalmigrationgroup.org/migrationandyouth. Chapter 1, pg 2.

2 World Youth Report, United Nations, 2013. www.unworldyouthreport.org/images/docs/fullreport.pdf. Pg 22.

3 "Global Employment Trends for Youth 2015." International Labor Organization, 2015. Pg 10.

4 UN Focal Point on Youth. "UN World Youth Report." Youth Unemployment, Underemployment and Vulnerable Employment, United Nations, 29 Dec. 2011, www.unworldyouthreport.org/index.php?option=com_k2&view=item&layout=item&id=60&Itemid=124.

5 Robson, James P, and Prateep K Nayak. "Rural out-Migration and Resource-Dependent Communities in Mexico and India." Population and Environment, 21 Aug. 2010, pp. 263–284., doi:10.1007/s11111-010-0121-1.

6 Elie, Jerome, and Alison Raphael. Chapter 8, pg 5.

7 Elie, Jerome, and Alison Raphael. Chapter 8, pg 3-4.

8 World Youth Report, United Nations, 2013. <http://www.unworldyouthreport.org/images/docs/fullreport.pdf>. Pg 26.

labor force often means a decrease in productivity and an increase in the average retirement age of residents.⁹ The aging of the labor forces can have some serious long-lasting environmental consequences, especially in agricultural communities, such as shorter fallow periods which can lead to decreased soil fertility and crop yields.¹⁰

Many small communities, like the *ejidos* the Rainforest Alliance is working with in Campeche, Mexico, have deep-rooted and longstanding traditions that can impede the development of youth participation in governance and leadership activities. An *ejido* is a land tenure system where land is cooperatively managed by a community, while individual families can hold and manage their own parcel within. *Ejidors* in Calakmul, Mexico, follow customary procedures that grant land and voting rights within the community to the founding male heads of households. However, if your family was not a founding member of that particular *ejido*, you are unable to have a voice in matters affecting the communal land; nor do you have your own parcel. In some cases, if the father passes away, women or children do gain the right to take his seat on the leadership team. In only very rare cases, the *ejido* has set aside lands for interested and motivated youth. With such a traditional system in place, it is hard for youth and female residents to become active and informed community participants.

THE SOLUTION:

Migration has facilitated the exchange of knowledge, technology, ideas, and even diversified the gene pool. The benefits of the continual movement of people from place to place are endless. However, it is imperative to consider the effect on the communities left behind, as well as how we can improve the future for youth living in these communities. Rural communities play a vital role in the global economy, and without their young populations their future is in peril.

Furthermore, these communities steward many of our natural resources. Forests are home to 80 percent of the world's terrestrial biodiversity while providing livelihoods for 1.6 billion people. Shifting control of forest ecosystems into the hands of the communities most intimately dependent on those forests has a significant positive impact on the preservation and conservation. In 2015, 34 percent of Mexico was forest area, down only 1.9 percent from 1990.¹¹ Unlike the rest of Latin America, in Mexico a majority of forestland, 80 percent,

is legally owned and supported by communities through land tenure systems such as *ejidos* and *comunidades agrarias*.¹² As the stewards of the forests, rural communities ensure the successful conservation and sustainable management of this vital natural resource. Without a robust younger generation to uphold the tradition of forest conservation, *ejidos* may sell off land to private owners disinclined to use the land sustainably; a decrease in population also makes the forest more vulnerable to fire and illegal logging activities. By ensuring programs are in place to allow youth to have successful and meaningful futures in these communities, we can make migration a choice, not a necessity, providing a more stable future for both the young population and the forest.



During a field visit to the Calakmul Biological Reserve, a student works on identifying local vegetation.

In addition to improving future stewardship of natural resources, slowing youth out-migration offers potential economic benefits to communities. Those who migrate out tend to be motivated, educated, and innovative—precisely the ones who could foster development if they stayed. Civic engagement is good for young people, too: it has been identified by the World Bank as extremely important in aiding a healthy transition into adulthood, as well as a major contributor to positive social change.¹³ In-

stilling a sense of responsibility and civic duty in youth creates more productive and active adult citizens. Civic engagement lends itself to creating opportunities to enact change.¹⁴ Learning more about the local governance and politics leads youth to later head up local community development projects and conceptualize plans for social and economic progress.

The Rainforest Alliance conducted a baseline assessment in three *ejidos* in Calakmul, Campeche, Mexico, and found that adult leaders felt that there were abundant opportunities for youth involvement in local governance, but that youth lacked interest and motivation to participate. Meanwhile, youth expressed sincere interest, but perceived a lack of opportunities and support from elders. By helping open a dialogue about between young and old, we hope to bridge this gap and find ways for both populations to bring their distinct skills together to improve their community. The older generation brings an in-depth knowledge and understanding of the local environment, forestry trends, and traditional practices while the younger generation has greater experience with technology, climate-based science, and marketing strategies. With more specialized skills, youth can help propel their community for-

9 Robson, James P, and Prateep K Nayak.

10 Addressing rural youth migration at its root causes: A conceptual framework. Food and Agriculture Organization of the United Nations, March 2016. Pg 23. <http://www.fao.org/3/a-i5718e.pdf>

11 http://data.worldbank.org/indicator/AG.LND.FRST.ZS?locations=MX&name_desc=false

12 Klooster, Dan. "Campesinos and Mexican Forest Policy during the Twentieth Century." *Latin American Research Review*, vol. 38, no. 2, 2003, pp. 94 Research Library, <https://ezproxy.library.nyu.edu/login?url=http://search.proquest.com/docview/218156429?accountid=33843>

13 World Youth Report: Civic Engagement, United Nations, 2016. http://www.unworldyouthreport.org/images/docs/un_world_youth_report_youth_civic_engagement.pdf. Pg 15.

14 Ibid, pg 18.

ward to a more successful future. Youth who understand the local environment and work opportunities are often inspired to find local employment or start up new ventures to improve community life.¹⁵ Such educational experiences and extracurricular community activities equip youth with the knowledge and skills they need to expand local opportunities, and to become indispensable members of their community. Investing in education can provide youth with more awareness of the opportunities, both traditional and non-traditional, available to them locally, thereby helping to ensure that they do not feel that out-migration is the only available route to success.¹⁶

Working with young people in Calakmul

Nestled within the Selva Maya, a Neotropical rainforest that stretches from Belize and Guatemala into the Yucatán peninsula of Mexico, the ancient Maya city of Calakmul rises above the forest. Once a large, powerful ancient Maya city, Calakmul is now a UNESCO World Heritage site whose well-preserved ruins provide a glimpse into the culture that thrived there 1,500 years ago.¹⁷

On the outskirts of this ancient city, within the buffer zone of the Calakmul Biological Reserve, small communities that are grouped into 90 *ejidos* live in harmony with the forest. Here villagers simultaneously utilize the forest for their livelihoods while also conserving this important ecosystem for future generations. Communities practice sustainable forest management and subsistence agriculture, and sell honey and non-timber forest products. They are also beginning to venture into new economic activities, like eco-tourism, camping excursions, biological research, and the programs for the payment of ecosystem services. However, in order to pursue an education beyond primary school, a youth must travel long distances (and be able afford it) and future employment opportunities are lacking. Opportunities to study are even fewer for young women. Traditional community structures are in place making it difficult for youth to participate in local government and decision-making within the *ejido*. The future of these forests rests in the hands of the next generation, and because of this, the Rainforest Alliance is working to design an educational strategy that will increase ecological knowledge and motivate young inhabitants to become active and interested participants in local life—both for their future and the future of the forest.

We recognize the importance in involving the next generation in community forestry enterprises, not only to help the community flourish, but also to provide youth with a meaningful and financially viable future without migrating, all while increasing and perpetuating sustainable forestry practices. We are doing this in several ways: by increasing access to education, building youth capacity for local entrepreneurship in forestry, and creating a dialogue with local authorities around the role of youth. Young people residing in *ejidos* do not currently have voting rights, and often feel disconnected from the decisions being made for the future of their community's land and people.

The Rainforest Alliance is working to build youth capacity for civic engagement so that even without voting rights they may still impact the future of the community and its forest enterprises. By creating educational tools that would allow youth to not only explore their biodiverse ecosystem, but also understand how they can affect positive change, we are building youth capacity to critically think and problem solve local issues. Through more than 200 hours of training, field visits and experiential learning, students gain a more in depth understanding of their local environment, practice new skills, and creatively think about ways to improve upon current practices. We also focus on the local heritage and history of their community. Understanding the history and journey of their *ejido* is vital in understanding how to actively participate.



43 percent of economically active youth are unemployed or working and living in poverty

The group we are working with in Calakmul is made up of 16 young people, who range in age from 15 to 26, with most falling between the ages of 16 and 18; a little more than half are female. Our goal is to create a space in which these young people can learn, share ideas, explore their community and the possibilities open to them in the future. Workshop activities build on the participants'

background knowledge, introduce new content and scientific knowledge, help develop skills for working together as a learning community, and get participants in the field to deepen their knowledge and interest in the forest.

Building life and leadership skills

As an integral part of our training, we carry out activities that explore personal growth, life skills, and work on group dynamics. We foster an atmosphere of collaboration and learning and give youth participants the opportunity to explore their interests and strengthen and develop different skills, such as presentation and public speaking, leading and organizing activities, writing, conducting calculations, and teaching.

Building a scientific foundation

15 Elie, Jerome, and Alison Raphael. Chapter 8, pg 6.

16 Addressing rural youth migration at its root causes: A conceptual framework. Food and Agriculture Organization of the United Nations, March 2016. Pg 28. <http://www.fao.org/3/a-i5718e.pdf>

17 <http://whc.unesco.org/en/list/1061>

Each of our activities and workshops is designed to connect young people to their local environment, and to strengthen their foundation in math and science so they may better understand the forest around them. Through studies of photosynthesis, games that explore ecological succession, analysis and graphing of local rainfall data, classification of tree species, and other interactive activities, we help youth participants understand the uniqueness of the biodiverse region in which they live.

Practice in the field

Each of our sessions includes time in the field to experience and learn first-hand more about the forest. Activities include creating a profile of the vegetation in the area through observation and collection of leaf samples of trees, shrubs, epiphytes, and vines to start to explore the many layers of plant life and their relation to one another. We also spent time visiting and observing a milpa, a traditional crop cultivation system that improves surrounding biodiversity. The youth are learning to understand the role of traditional agriculture and the ecology of plant succession in the agriculture/forest interface.

Experiential learning and meeting experts

An important part of this work has been helping introduce young people to opportunities by helping them understand the forestry value chain, the jobs and opportunities that currently exist as well as areas where new skills and innovation may be needed. This includes site visits where students can see firsthand how community businesses operate and understand the skills they would need to develop in order to work in these spaces.

In addition, we introduce youth participants to experts in the region to spark their interest and increase their knowledge of potential career opportunities in the region. For example, during one recent workshop, students had the opportunity to spend time with a leading global expert in mahogany research. The expert shared her personal scientific journey with the group and how she came to make a career of studying the mahogany tree. She also noted that very little information is known about the many tree species in the region, and more local scientific studies are needed to fill in critical gaps in information. She encouraged our young participants to embark on some of these studies. Together we designed a number of practical activities our group could complete to get more deeply acquainted with the mahogany tree. Students spent the day identifying and counting mahogany saplings in a research plot; looking for parts of the mahogany fruit to determine how many seeds and fruit one tree would produce; and taking tree measurements to determine the size of the mahogany canopy. They learned about the process of conducting scientific research and together we discussed the application of such research in their community. Learning how different tree species grow, mature, and disperse seeds helps forestry operations

determine when and where to plant new trees, how to collect and store seeds, among other uses. This is just one example of how experts have shared knowledge and their personal experiences to inspire our youth participants.

Making connections and gaining practical experience

After participating in the aforementioned activities, youth participants are ready to gain practical experience and test out their interests. As part of this work, we are collaborating with a local forestry technical services firm that works to connect young people with internships and apprenticeships. This will provide students with a concrete opportunity and give the community leaders the chance to understand the skills and energy these young people bring to the table. Our hope is that students will be able to visualize the direct impact they have on their land, and become more invested in the sustainable management of it for future generations.

PARTNERS

Collaboration has been a critical part of our work with youth in Calakmul, from the experts that have shared their time and knowledge during our workshops to the leadership of the *ejido* and other partner institutions. The implementation of this project comes at a time of enthusiasm in the region with the opening of a new technical forestry high school (*Centro de Bachillerato Tecnológico Forestal* or CBTF) in nearby Zoh Laguna as well as a university in Xpujil, and the offering of a forestry certificate program by the Calakmul Biosphere Reserve. These have all been positive factors affecting our work, as they have contributed to an improvement of educational prospects and have drawn both students and teachers to Xpujil and Zoh Laguna. The director and staff of the CBTF have been extremely positive and have welcomed our work with young people. We have been in close communication regarding coordination of the workshops, communication with students, and consulting with their teachers to ensure the content of the workshops complements their learning goals.

The Rainforest Alliance has begun a collaboration with the Society for Technical Services, Forests of Calakmul (*Sociedad de Servicios Técnicos, Selvas de Calakmul*), a local consulting firm that provides support and technical assistance to many of the *ejidos* in the region. The director of the firm has shared his knowledge and experience with our youth participants. Together, we are working to identify ways concrete activities and needs of the community and find ways to bring in youth to fill those roles.

We have worked to engage *ejido* authorities and from the time of design to the implementation of the project, they have expressed willingness to help. Recently, we have explored concrete projects and opportunities for our youth participants to get involved. Leaders in the community of Nuevo Becal are



Youth participants analyze the process of sustainable forest management and the careers and opportunities available in each step of the forestry value-chain.

looking for ways to involve youth in a pilot sale of mahogany seeds and other activities as the *ejido* implements its management plan for the new season.

CONCLUSION AND RECOMMENDATIONS

Working to increase the young community members' ecological knowledge and awareness of forestry career opportunities has sparked interest in the important work occurring in the *ejido*. Youth participants are gaining a better understanding of their *ejido*, and the current challenges and needs facing it, while increasing their participation and engagement in the management and future of their community. At the foundation of our work is the necessity to increase youth understanding of their local environment, the challenges facing it, and the core education skills needed to increase youth's current role in their community.

"I am interested in knowing the history of my *ejido* and understanding its needs and happenings, so I can help with projects that can meet the needs of my community," shared 16-year-old Erika Jiménez Montero. The success of our work also rests on an increased acceptance of youth participation by the current community members. By involving community leaders and decision-makers in our work with youth, the Rainforest Alliance is ensuring that they are excited and prepared for greater youth involvement at the municipal level. *Ejido* leaders understand the vital role youth play in their future, and are eager to engage youth populations more intimately into civic life. By creating an avenue for collaboration and investment of youth into local life, *ejidos* are harnessing the innovation and motivation of the next generation of leaders and community members. These young people will have the opportunity to conserve the forest habitat for the future, while enabling their community to thrive from the economic opportunities it provides. Currently, local and regional institutions generally direct their financial

and technical support to predominantly male, older *ejidatarios*. Other sectors of society, and particularly the youth, are widely underrepresented and underserved by government programs. Reexamining these opportunities and including options for youth, women and other members of the community would allow other individuals to apply for seed funding that could help innovate new community forest enterprises.

Community leaders are beginning to see the skills that young people can contribute. Opportunities for young people to receive small scholarships or fulfill mandated social service hours with the *ejido* could help begin to bridge the gap between leadership and youth. This would help the community with pressing needs, while giving youth an opportunity to learn more and utilize their unique skills and talents.

"I would like to know the projects and resources [of my *ejido*] and understand what I can do for it," 17-year-old Carmelina Martínez Hernández said. By increasing the knowledge of their communities, ecosystem, and cultural heritage, students are deepening their connection with their home. The opportunity to develop and implement on-the-ground projects to improve the functionality, sustainability, or cohesiveness of their community brings a sense of self-worth and importance to young community members, helping them visualize a future within this environment. With a greater sense of personal commitment and investment in their communities, youth are more likely to stay and utilize their knowledge and passion to create a better, more sustainable future there—and less likely to out-migrate.

"We are the ones who will manage, take care of, and preserve our forests in the future," 18-year-old participant Juana del Carmen Juárez Pérez said.

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