



**Bildung überwindet  
Energie-Armut**

-

**Education fights  
Energy-Poverty**

Hannes Velik

Jugend Eine Welt  
Don Bosco Entwicklungszusammenarbeit



# Jugend Eine Welt - Education First



## Education First!

"We need education in order to be professionally successful, to broaden our horizons, to be able to question the status quo and to choose what kind of life we want to lead. Education even allows us to influence our health. Indeed, **education is what enables us to lead a self-determined existence at all. It is fundamental for the complex organisation of modern societies and it serves higher goals such as freedom and justice...**" (Wolfgang Lutz & Reiner Klingholz)

Researchers from the International Institute for Applied Systems Analysis (IIASA) and the Vienna Institute of Demography (VID) of the Austrian Academy of Sciences proved the **evidence of consistently positive, statistically significant effects of education on a country's economic development.**

**Wolfgang Lutz**, Founding Director of the Wittgenstein Centre for Demography and Global Human Capital and Yidan Prize Winner, points out "that **investment in education is the most important** investment for enhancing the ability of people and countries to help themselves and it therefore should become an absolute priority in international development."

Sources:

Lutz, W. & Klingholz, R. (2017). Education First! From Martin Luther to Sustainable Development. Originally published by Campus Verlag as 'Wer Überlebt? Bildung entscheidet über die Zukunft der Menschheit'

<https://iiasa.ac.at/policy-briefs/aug-2008/economic-growth-in-developing-countries-education-proves-key>

# UNESCO - 4 Pillars of education



From **"learning to know"** to **"learning to study, inquire and co-construct together"** points educators towards viewing their students as learning communities.

The **"learning to do"** pillar that supports education would need to be widened from the workplace to **"learning to collectively mobilize"** with educational efforts on empowering learners to take action together surfaces the importance of deliberation, cross-cultural communication and coalition building.

From **"learning to live together"** towards **"learning to live in a common world"** elevates the importance of education that engages with our common humanity and with the natural world of which we are a part. This change enables us to reshape common living as intertwined and a fundamentally shared experience.

The **"learning to be"** pillar placed great emphasis on the development of one's personality and being able to act with independence, judgment and personal responsibility. Applying a commons framing to the pillar of education that emphasizes the development of the complete person, we would do well to think in terms of **"learning to attend and care"**. This would entail understanding ourselves as persons who are simultaneously capable and vulnerable. It would force us to reflect on how we affect and are affected by others and the world.

Know Do Live Be  
Together



# Jugend Eine Welt - Education overcomes poverty



## **Jugend Eine Welt – Don Bosco Entwicklungszusammenarbeit**

is an Austrian aid organisation that has been working to improve the future prospects of children and young people on the margins of society around the world since 1997.

Following the principle **“Education overcomes poverty”**, Jugend Eine Welt supports educational and social activities for children in need around the ONE world with **Don Bosco Institutions as key partners**.

**“Education is a matter of the heart”** – Don Giovanni Bosco, one of the social pioneers of the 19th century and catholic priest

Don Bosco saw potential in every young person. With support, education and guidance as “education of the heart”, even young people who others have already left out could successfully make their contribution to society.

Don Bosco creates spaces where young people feel welcomed and have a sense of belonging. In this way, **Don Bosco and Jugend Eine Welt help young people discover and develop their potential** and become well-rounded adults who could bring value to their communities and the world.

**Education as a matter of the heart is  
at the heart of all sustainable development!**



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# Jugend Eine Welt & Don Bosco - E!quality Education



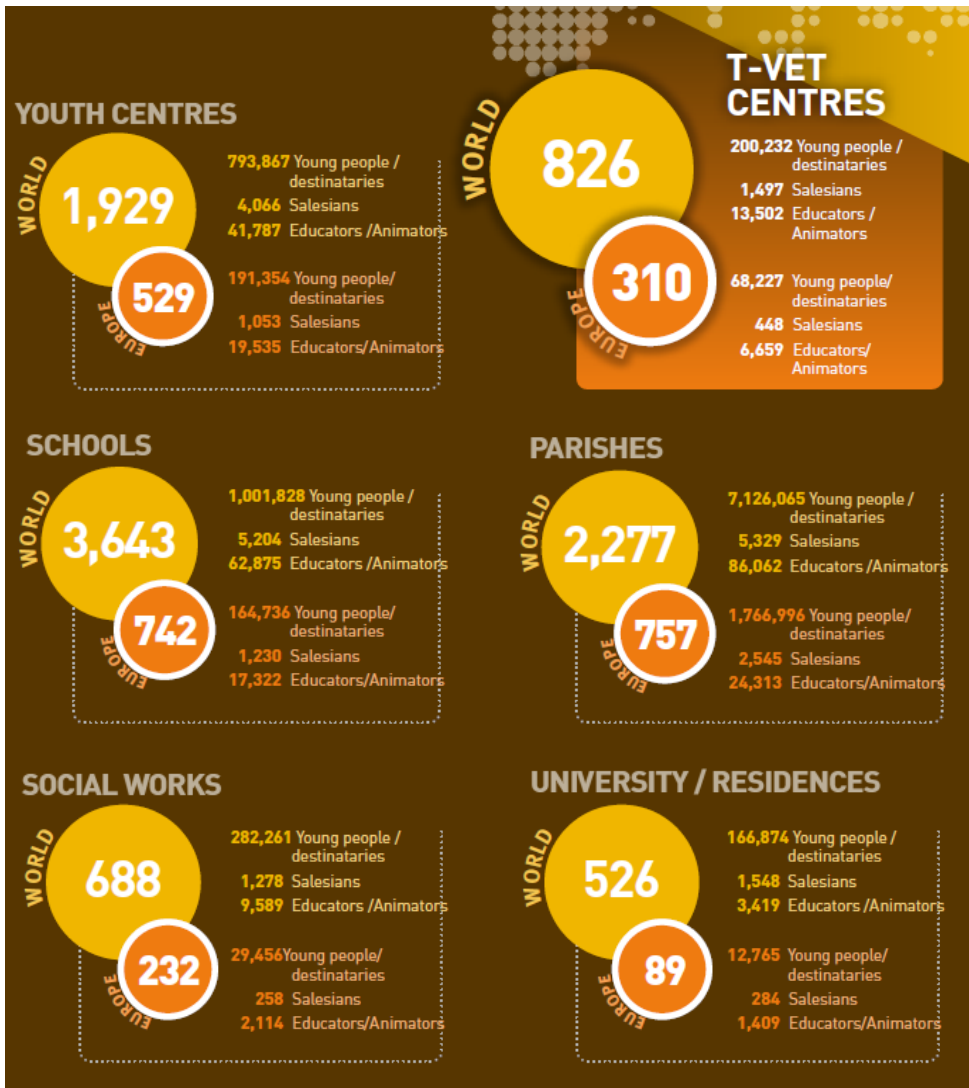
- High e!quality education is both **a right and a need** for young people. It forms the foundation of a society that seeks to enhance the lives and well-being of its members.
- E!quality education is the fundamental element of human development. It **assists young people in realizing their full potential**.
- **Jugend Eine Welt advocates and invests in equitable, resilient and sustainable educational and social initiatives.**

- Jugend Eine Welt emphasises the importance of providing young people with all kind of skills in an inclusive manner, in order to prepare them **for the world of work and participation in society**.
- Many services are dedicated to young “school dropouts” to **reduce inequalities** in the education and training of new generations, as well as in the access to the labour market.
- We want to prepare young people not only for the world of work but also to enable them to **shape the world as a common home for all in a sustainable way**.





# Salesians of Don Bosco - E!quality Education worldwide



**136 Countries**

**13.750 Salesians of Don Bosco**

**3.640 SDB-Schools**

- 940.000 Students
- 68.000 Teachers & Trainers

**826 SDB-T-VET Centres**

- 200.300 Students
- 15.000 Teachers & Trainers

**95 Universities in 22 countries**

- 60.000 Students

# Don Bosco Sisters - E!quality Education worldwide



## THE FMA INSTITUTE IN THE WORLD

The FMA Institute is a great educational, communication, and evangelizing Network with realities that are at the local, province, interprovincial, and world levels, in synodality with Salesian, civil, and Ecclesial Entities and Organizations that render visible the Salesian charismatic mission.  
**10.778 FMA, 67 Provinces and 5 Preprovinces, 9 Interprovincial Conferences, 97 Nations in the 5 Continents.**

### In America

On November 14, 1877, from the Port of Genoa, the first missionary expedition of young FMA departs for Montevideo (Uruguay). On 1 January 1879 the second group of missionaries reached Buenos Aires (Argentina). On February 3, 1881, the third group founded new Communities in Argentina and Uruguay.

### In Africa

On 8 December 1893 the first Daughters of Mary Help of Christians arrived in Algeria in Mers-el-Kebir. They founded the first Oratory welcoming girls and young people, promoting cutting and sewing activities, and dedicating themselves to Catechesis and Pastoral activities in the Parish (cf. The journey of the Institute in the course of a century, vol. 2<sup>a</sup>).

### In Asia

In 1891 the FMA arrived in Asia in Bethlehem (Middle East) and in 1922 the FMA arrived in India. They opened their first House in Tangiers on 24 November 1922 with the Orphanage, Workshop, Oratory, Dispensary, and later, the School, and visits to the villages. In March 1923 the FMA landed in China where they opened their first House in Shiu Chow. In 1929 they arrive in Japan. In 1931 they start their first House in Siam (now Thailand).

### In Europe

The first House in Italy is that of the foundation: the Institute opened in Monnese (Alessandria) on 5 August 1872. The Institute crossed the frontiers of Italy in 1877, opening a Community in Nice (France).

### In Oceania

In the Marian year 1954 the FMA opened their first House in Brooklyn Park (Australia).

2023

### AMERICA

The FMA number is 3.067 in 49 Communities, present in 23 Countries with 24 Provinces.

2023

### AFRICA

The FMA number is 608 in 109 Communities, present in 20 Countries with 7 Provinces and 2 Preprovinces.

2023

### EUROPE

The FMA number is 4.055 in 347 Communities, present in 23 Countries with 19 Provinces and 2 Vice-Provinces.

2023

### ASIA

The FMA number is 3.939 in 378 Communities, present in 22 Nations with 16 Provinces and 1 Preprovince.

2023

### OCEANIA

The FMA are 49 in 10 Communities, present in 4 Nations: Australia, Samoa, and Solomon Islands with 1 Province; in Papua New Guinea there are 10 FMA in 2 Communities belonging to the Philippine Province.

**97 Countries**  
**10.778 Don Bosco Sisters**  
**7.663 works**  
**2.115 schools**  
**364 T-VET Centres**  
**41 Universities**

**America:** 409 communities in 23 countries

**Africa:** 109 communities in 26 countries

**Europe:** 347 communities in 23 countries

**Asia:** 378 communities in 22 countries

**Oceania:** 10 communities in 4 countries

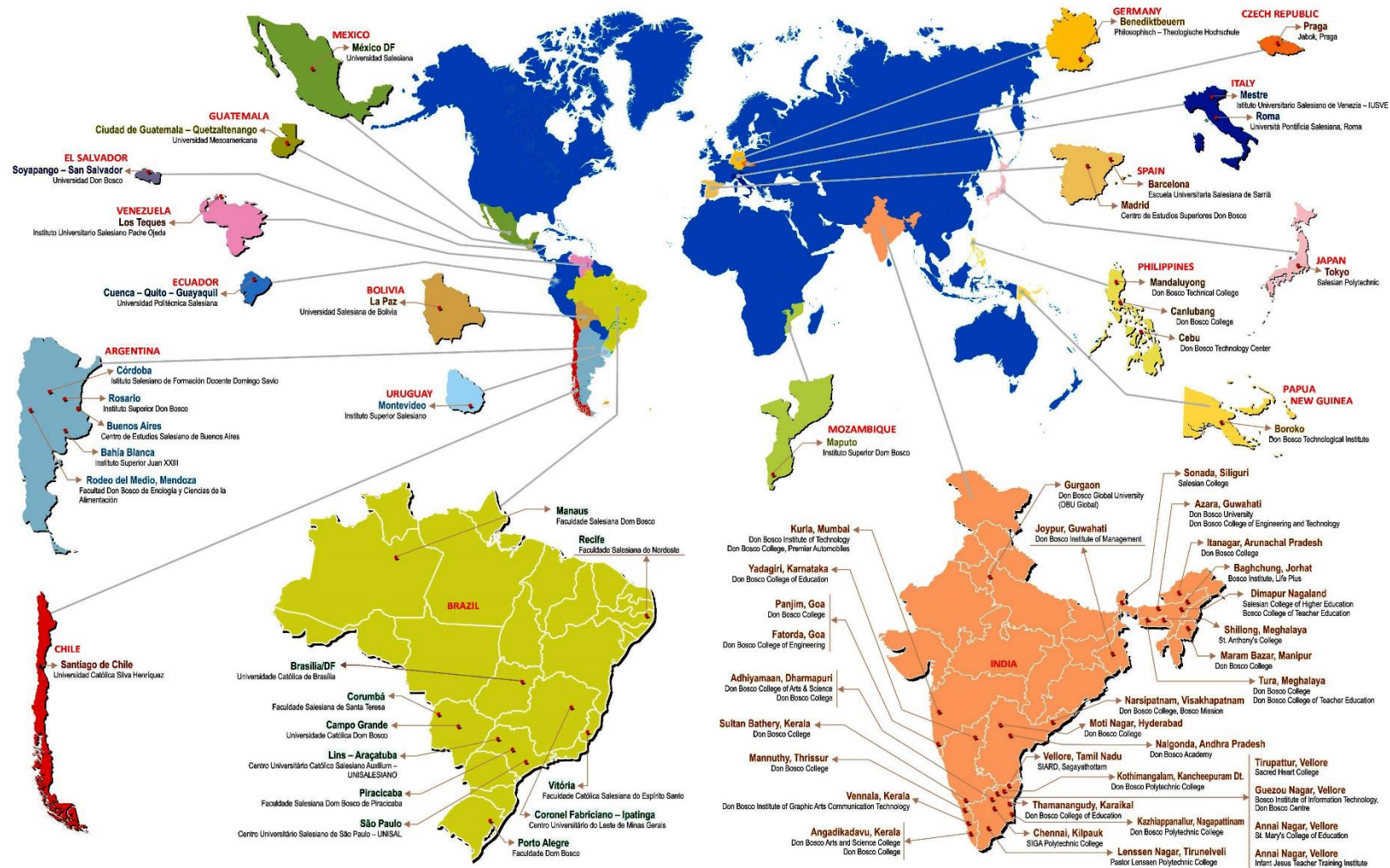


# Jugend Eine Welt & Don Bosco - E!quality Higher Education



## DON BOSCO GLOBAL - HIGHER EDUCATION NETWORK

ASSAM DON BOSCO UNIVERSITY, AIRPORT ROAD, AZARA, GUWAHATI - 781 018



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# Energy Poverty



## What is energy poverty?

Indices for measuring the complex nature of energy poverty: Energy Development Index (EDI), Multidimensional Energy Poverty Index (MEPI), Energy Poverty Index (EPI)

**Energy poverty** = lack of access to sustainable modern energy services and products

Energy poverty can be found in all conditions where there is a **lack of adequate, affordable, reliable, quality, safe and environmentally sound energy services to support development.**

Energy is the engine of civilization, but the access to adequate and affordable sources is not equally distributed on the planet. Its presence is intertwined with economic and social development: as a result, poorer countries are those usually equipped with the worst energy services, which contribute to malnourishment, unhealthy living conditions and limited access to education and employment.

Insufficient energy usually translates into the impossibility to develop agriculture and manufacturing, thus keeping the poorest countries trapped in a vicious circle:

they cannot afford the energy that can drive them out of poverty.

Source: <https://www.habitat.org/emea/about/what-we-do/residential-energy-efficiency-households/>

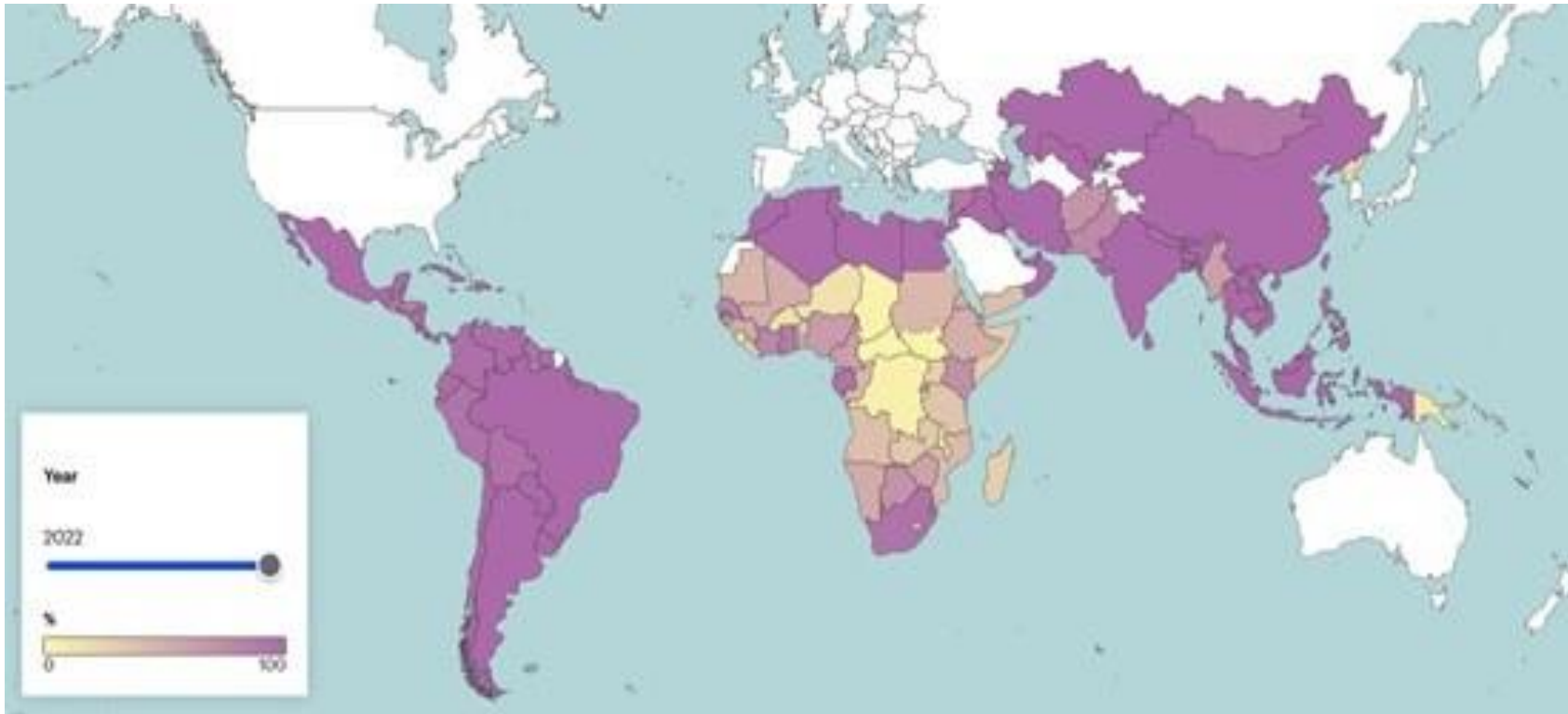


# Energy Access - Access to electricity



750 million people worldwide are lacking access to electricity.

2.3 billion people rely on harmful and polluting cooking fuels.



80% of people without access to electricity live in sub-Saharan Africa.

Source: <https://www.iea.org/reports/sdg7-data-and-projections/access-to-electricity>



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# Access to electricity - Power grid



Power grid: 97% of the global population lives within 10 km of a Medium Voltage line, but with large variations between regions and income levels.



645 million are projected to remain without access in 2030, of which 85% or about 545 million people are in sub-Saharan Africa.

Sources: <https://www.nature.com/articles/s41597-019-0347-4> and <https://gridfinder.rdrn.me/>



# Access to electricity - Global energy sector employment



- Employment in the global energy sector grew at a strong pace in 2023: the **number of energy jobs globally rose by 3.8%, surpassing 67 million**,
- [\*World Energy Employment report\*](#): The **largest increase was for jobs in the clean energy sector**, which rose by 1.5 million in 2023 and contributed as much as 10% of economy-wide job growth in the leading markets for clean energy technologies.
- The solar **PV industry** added over half a million new jobs, spurred by record new installations.
- Employment in **electric vehicle manufacturing and batteries** grew by 410 000 as sales reached nearly 20% of the global car market.
- And while some **wind** manufacturers experienced layoffs, total employment in the industry still climbed as a record number of new projects entered construction.
- **Shortages of skilled workers remain a major concern!**

Source: <https://www.iea.org/news/global-energy-sector-employment-increased-by-38-in-2023-outpacing-the-wider-economy>



# Jugend Eine Welt - Action against energy poverty

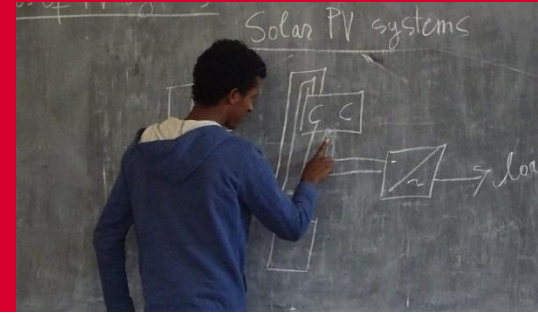


In the beginning there is...



...empathy!

# Jugend Eine Welt - Education is key to fight energy poverty



## Education is key to global sustainable development:

Wolfgang Lutz (Yidan Prize Winner) points out “that investment in education is the most important investment for enhancing the ability of people and countries to help themselves and it therefore should become an absolute priority in international development.”

## Key factors to fight energy poverty:

1. **E!quality education (literacy, technical skills, soft skills, caring, knowledge)**
2. **Financial development (financial inclusion, bankable projects etc.)**
3. **Technological innovations**

The complex but desirable role of education and financial flows is a prerequisite for facilitating the technological innovations that are crucial in the global energy transition phase for the world to achieve carbon neutrality.

Sources: <https://energy.sustainability-directory.com/question/what-innovations-can-combat-energy-poverty/>  
<https://www.sciencedirect.com/science/article/pii/S2772655X2300068X>  
<https://www.sciencedirect.com/science/article/abs/pii/S0959652623030998>

# Jugend Eine Welt - Education is key



**Jugend Eine Welt Framework Programmes** supported by the Austrian Development Agency (ADA), the operational unit of Austrian Development Cooperation (ADC):

- **Capacity-development in Rural Development**  
in Nepal and Mozambique (2004-2015)
- **13 Months of Solar Energy**  
in Ethiopia (2016-2018)
- **Solar Skills and Environmental Education**  
in Ethiopia and Uganda (2019-2022)
- **Gender Matters for Green TVET**  
in Uganda and Rwanda (2023 – 2026)



With funding from



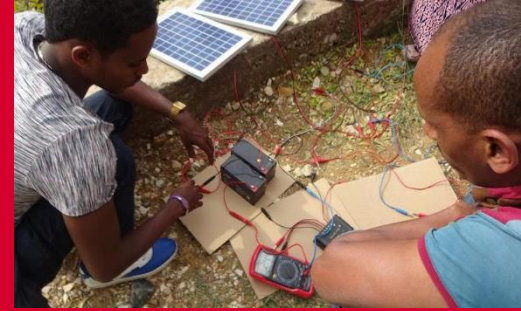
**Austrian  
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# Solar Skills and Environmental Education in Ethiopia and Uganda (2019-2022)



## 3 Don Bosco Partner TVETs in Uganda

- Outcome 1: Building capacities on ecological sustainability and increasing **environmental awareness** → 1150 students in **Green Clubs** in 2022
- Outcome 2: **vocational training** on PV-technology → 371 (69f) students have graduated from **long-term courses**, 313 (49f) from **short courses**
- Outcome 3: Sharing of best practices and **learning** on national and international level

## Evaluation:

- Renewable energy sector primarily for **income generation**/reliable energy source rather than environmental sustainability
- Students very **satisfied with training** and low drop-out rates
- **60% of male students (long-term course) found a job** in the solar sector within six months after their graduation
- **Especially short courses useful for women** to access the solar sector as a stepping stone





# Gender matters for Green TVET in Uganda and Rwanda (2023-2026)



## 3 Don Bosco Partner TVETs in Uganda 2 TVETs in Rwanda

- Outcome 1: Reducing access/participation barriers
- Outcome 2: Improving access to high-quality green TVET courses, with a particular focus on girls / young women
- Outcome 3: Improving employability of graduates, especially girls and young women
- Outcome 4: Sharing of best practices and learning around gender responsive green TVET programme

**Partners:** Salesians of Don Bosco AGL & Sendea Association



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# Don Bosco Solar & Renewable Energy - Center of Excellence in Ghana



The **Don Bosco Solar & Renewable Energy Centre of Excellence** in Ghana offers PV training at various levels from 2 to 6 months with the aim of building an **"All Africa Don Bosco Solar Team"** in **34 sub-Saharan countries**.

High performing TVET graduates and teachers are sent to the Centre of Excellence in Ghana and supported by a scholarship programme.



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# Jugend Eine Welt generates Transformative Education



**Transformative education generates transformative power  
through  
transformative (young) people!**



*"These young people are  
like precious stones  
lying on the street:  
all you have to do is  
pick them up and they'll  
start to shine".  
(Don Bosco)*

**Thank you!**