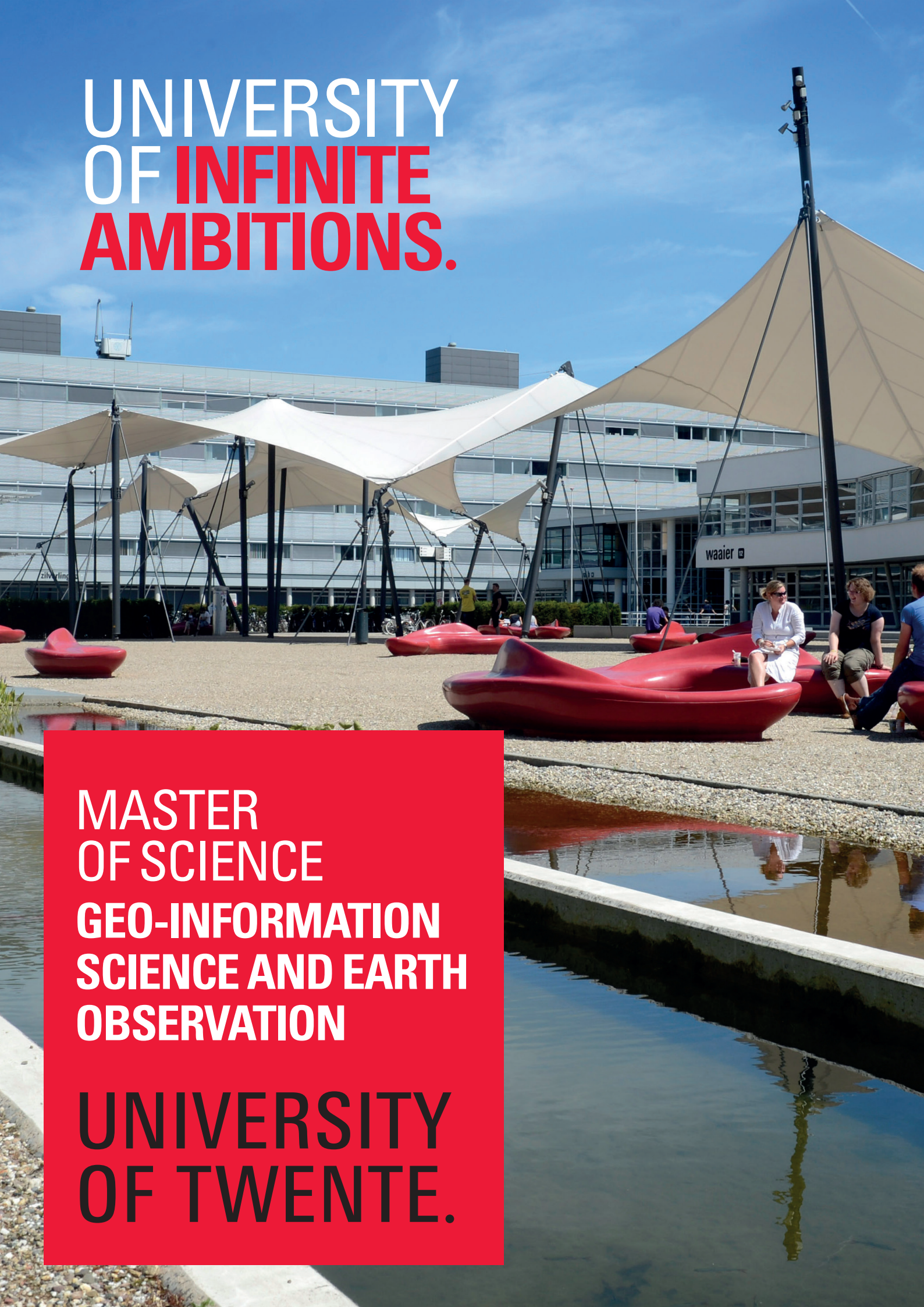


**UNIVERSITY
OF INFINITE
AMBITIONS.**

**MASTER
OF SCIENCE
GEO-INFORMATION
SCIENCE AND EARTH
OBSERVATION**

**UNIVERSITY
OF TWENTE.**





MASTER'S PROGRAMME GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

Be at the forefront of a rapidly growing industry

Imagine deploying drones to assess disaster damage and gather data that can be instantly used to take action. Helping self-driving cars go where they're supposed to go. Or taking augmented reality to a level where it could actually help solve problems in the real world. These are just a few of many applications made possible by geo-information science and earth observation (GEO).

A HEALTHY JOB MARKET

From traditional map-making to creating modern data-driven solutions to real-world problems, this field offers an incredible variety of possible applications. That certainly helps to explain why a US Department of Labor report identified this industry as one of the three fastest growing of the 21st century. Research institute MarketsandMarkets predicts it will grow from \$ 31 Billion in 2016 to \$ 74 Billion by 2021. Logically the job market, in the private and (semi-)public sector as well as academia, is expected to grow accordingly.

BE WHAT YOU WANT TO BE

Would you like to be at the forefront of this rapidly growing industry? Are you looking for a first-rate Master's programme that will unlock your future in more ways than one? Does the prospect of living and studying abroad in a decidedly international environment appeal to you? Then ITC at the University of Twente (The Netherlands) could be the ticket. An internationally acclaimed faculty, ITC features 70 years' worth of experience and a network of over 20,000 alumni for you to benefit from. Our Master's programme in Geo-information Science and Earth Observation (M-GEO) will first provide a broad overview of the most relevant topics in the field and then offer plenty of room for specialization. In the end you can almost literally be what you want to be.



QUICK FACTS

Language	English
Starting date	September
Duration	2 years
Degree	Master of Science
Diploma	Diploma in Geo-information Science and Earth Observation
Credits	120 EC
Tuition fee	EUR 21,375
Website	utwente.nl/go/geo

WHAT WILL YOU LEARN?

Geo-information science and earth observation (GEO) is all about collecting, processing, analyzing, visualizing and organizing data representing the location, size and shape of objects on our planet. This data is generally referred to as spatial information. Geo-information science allows for this generally complex data to be presented and organized in highly accessible forms (such as apps for smart phones and other mobile devices, spatial data infrastructures, maps), making the underlying story that much easier to tell and sell.

PUTTING SPATIAL INFORMATION TO GOOD USE

In today's world spatial information is everywhere. Providing ever more detailed impressions of reality, it is put to good use by developers of popular applications such as Google Maps and car navigation systems. Moreover, spatial information is the key to solving complex issues that may involve, e.g.:

- improving agricultural practices to advance the livelihoods of smallholder farmers in poor countries
- making land rights mapping faster, cheaper, easier, and more responsible
- helping the world by improving water safety and security
- establishing an effective urban search-and-rescue operations framework
- promoting development, exploration and utilization of geothermal energy sources
- providing a basic safety net to protect smallholder farmers from weather related perils
- promoting efficiency and equity in agro-good trade
- helping to achieve sustainable social housing and inclusive urban communities

The ITC Master's programme in Geo-information Science and Earth Observation (M-GEO) will provide you with the knowledge and tools required for working with spatial information in any of the fields outlined above – and more.

REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS

Our curriculum integrates two fields vital to geo-information science and earth observation: remote sensing (RS) and geographic information systems (GIS). Remote sensing involves the collection and analysis of scientific data at, above or below the earth's surface without coming into physical contact with them. Geographic information systems are then used to analyze, visualize and organize the data collected by remote sensing.

IMPLEMENTING NEW TECHNIQUES

Name: **Abigail June Agus (Philippines)**

Position: **Supervising Geologist at Mines and Geosciences Bureau XI**

Studied: **Applied Earth Sciences 2009-2011**

“My stay at ITC has been one of the most beautiful, memorable and enriching experiences in my life both academically and personally. For those who are in ITC or planning to go to ITC, enjoy your time and learning to the fullest. I know it will be one of your most unforgettable experiences too!”



CHOOSE YOUR SPECIALIZATION

As a Master's student of Geo-information Science and Earth Observation at ITC you will focus on a specific field of interest, with multiple specializations to choose from, including a tailor-made specialization. Each specialization contains a number of core courses that reflect its central concerns, and a Master's thesis project that reflects the specialization's inherent nature. You will also have the opportunity to participate in a wider selection of (elective) courses; there may very well be overlaps between specializations.

- **Applied Remote Sensing for Earth Sciences**
Learn to identify areas with mineral resources or use active geothermal systems for sustainable energy.
- **Geoinformatics**
Learn to develop technologies required for analyzing, distributing and visualizing geo-spatial data.
- **Land Administration**
Learn to use cadastral intelligence for designing and applying responsible land administration solutions.
- **Natural Hazards and Disaster Reduction**
Learn to predict – hence, address – natural hazards and disaster risk using geo-spatial data.
- **Natural Resources Management**
Learn to utilize geo-spatial data to help achieve a more sustainable use of natural resources.
- **Urban Planning and Management**
Learn to understand dynamic urban processes and create interventions to help make cities competitive, compact, sustainable, inclusive and resilient.
- **Water Resources and Environmental Management**
Learn to use earth observation and geo-information techniques to create safe and sustainable water management solutions.

Tailor-made specialization

In addition to the above you also have the option of designing your very own tailor-made specialization.

MANAGING LAND IN A SUSTAINABLE WAY

Name: **Shanti Basnet (Nepal)**

Position: **Chief Survey Officer, Ministry of Land Reform and Management**

Studied: **Land Administration 2010-2012**

Shanti Basnet obtained a Master's degree in Geo-information Science and Earth Observation for Land Administration at ITC. She now helps Nepal's government manage land in a sustainable way. "ITC helped me become more self-reliant as a professional".



IS OUR PROGRAMME RIGHT FOR YOU?

The exciting challenges awaiting you as a Master's graduate in Geo-Information Science and Earth Observation are many. If the prospect of utilizing geographic information systems and remote sensing to help our planet and its people gets you excited, the ITC programme could be just right for you.

Being a Master's student at ITC implies being internationally oriented and taking an interest in solving problems that affect society. Be prepared for a stimulating programme that is primarily characterized by application-oriented research.

Whether you're a Bachelor of Science looking to increase your market potential by getting a highly acclaimed Master's degree, or an experienced professional interested in acquiring more profound knowledge of your field of work – our programme will deliver.

WHY STUDY AT ITC?

Taking the Master's programme in Geo-information Science and Earth Observation (M-GEO) at ITC is attractive in more ways than one. As a student you will enjoy benefits including:

- **A truly international and multicultural experience**

As a Master's student at ITC you will be living and studying in the Netherlands. You will be meeting and mingling with students from all over the world (incredibly, we have alumni from about 170 countries!), of all ages and from different cultural and professional backgrounds. You can participate in projects around the globe, in all kinds of scenarios and environments, and in the process build a vast and lasting international network of kindred spirits. Our alumni network alone numbers over 20,000.

- **A personal touch**

At ITC you will be receiving high-class education with lots of personal attention from experienced and knowledgeable staff. Having worked with international students in this context for many years, we know how to address your needs.

- **A practice-based approach**

ITC represents high quality education and application-oriented research. We take a decidedly practical approach to the curriculum, with much attention being paid to developing academic and entrepreneurial skills as well. Your thesis writing phase in particular will give you the opportunity to work with experienced academic researchers in real-world application fields.

- **Relevance for development**

Our MSc programme is designed to support countries as well as organizations in their efforts towards (further) development. As a graduate you will have the knowledge and skills to make a difference for your present or future employer in the (semi-)public or private sector. You will also be given the opportunity to get equipped for starting your own business.

- **Access to a wealth of integrated knowledge**

M-GEO comprises multiple specializations that are very different in content as well as scope. As a student you will be given access to a myriad of knowledge and networks. However different the specializations, interaction and exchanges between them are many. Prepare to be inspired!

- **A high degree of flexibility**

When compared to similar Master's programmes worldwide M-GEO at ITC offers a high degree of flexibility. The second year in particular will allow you to take charge and shape your future.

URBAN DEVELOPER WITH A HEART FOR PEOPLE

Name: **Bolatito Dayo-Bababtunde (Nigeria)**

Position: **Development Control Officer at the Abuja Department of Development Control**

Studied: **Urban Planning and Management 2013-2015**

Bolatito Dayo-Bababtunde manages land use and urban development in Nigeria's capital city. Studying at ITC was a major step in managing her own development as a female professional. "I hope that someday in my country we will be able to use old, abandoned buildings and factories to create solutions that will benefit the community".



HIGHLY RANKED

Geo-Information Science and Earth Observation (ITC) is a Faculty of The University of Twente in Enschede, the Netherlands. The University of Twente is included in several reputable rankings and is generally counted among the top 1% of universities worldwide. What's more, the ITC Master's programme was judged to be a "top rated programme" by leading Dutch publication Keuzegids Masters three times in a row, in 2015, 2016, and 2017.

The international flavour of the ITC Master's programme in Geo-information Science and Earth Observation is highly appreciated by students and external officials alike. To prove the latter, our programme was awarded the ECA Certificate for Quality in Programme Internationalisation by the independent Accreditation Organisation of the Netherlands and Flanders (NVAO), with internationalisation being labelled a "distinctive quality feature".

Shanghai Ranking's Global Ranking of Academic Subjects (GRAS) 2017: this global sub-ranking of subjects is a branch of the international Shanghai Ranking (ARWU) published annually. The GRAS assesses the score of more than 4,000 universities in 52 different categories. University of Twente - ITC is among the best in the world in Remote Sensing (6th) and Geography (51-57).

CAREER OPPORTUNITIES

Your Master's degree will unlock a wealth of career opportunities. Depending on the profile you develop – and your personal interests, obviously – you'll have many options to choose from. To illustrate, in this leaflet you will find some examples of what ITC alumni ended up doing professionally.

INFLUENCER WITH A BROAD HORIZON

Name: **K.C. Bhawana (Nepal)**

Position: **Forestry and Climate Change Expert at the Multi Stakeholder Forestry Programme**

Studied: **Natural Resources Management 2013-2015**

When it comes to the management of Nepal's natural resources, Forestry and Climate Change Expert K.C. Bhawana is an influencer with a wide reach. Her studies at ITC intensified her impact. "Studying at ITC strengthened my role in natural resources management in Nepal".



GENERAL ADMISSION REQUIREMENTS

These are the general requirements for admission to our Master of Science programme:

1. A relevant Bachelor's degree (or equivalent qualification) from a university or other accredited academic institution in a discipline related to our programme, preferably combined with working experience in a relevant field;
2. Sufficient command of English;
 - a) Academic IELTS, overall band score of at least 6.0;
 - b) TOEFL, internet based (TOEFL-iBT) of at least 79-80;
 - c) TOEFL, paper based (TOEFL-PBT) of at least 550;
 - d) Cambridge CPE/CAE.

If you are a national of one of the countries listed at the following webpage, you will be exempted from an English language test.

itc.nl/admission-requirements-MSc-degree

SCHOLARSHIPS

Are you eager to study at Faculty ITC of the University of Twente but still ask yourself questions like: How am I going to pay for living and studying? Am I eligible for a scholarship?

Well, good news! Courses offered by ITC are eligible for a variety of scholarships! Below we have listed the three largest scholarship programmes for our Master's programme Geo-Information Science and Earth Observation.

START EARLY!

Most scholarship providers require you to submit a provisional admission letter from ITC. You may receive this admission letter when you apply via our online application system and are found eligible. Applying for a scholarship can be a quite an endeavor so start early.

We hope this information will be supportive in realizing your ambition to study at ITC. We wish you good luck with your application and we are here if you need help during the application process! More scholarship programmes can be found on our website.

itc.nl/fellowships

NFP

The Netherlands Fellowship Programmes (NFP) promote capacity building within organisations in 51 countries by providing fellowships for training and education for professionals. The NFP is initiated and fully funded by the Dutch Ministry of Foreign Affairs from the budget for development cooperation.

itc.nl/NFP-MENA-scholarship-programme

JJ/WBGSP

The Joint Japan/World Bank Graduate Scholarship Program (JJ/WBGSP) is open to mid-career professionals from developing countries with a history of supporting their countries' development efforts.

itc.nl/JJ-WBGSP-scholarship-programme

ITC SCHOLARSHIP PROGRAMME

ITC offers a number of partial scholarships for intake in its Master's programme. In a competitive procedure, scholarships will be allocated to students with excellent previous study results.

itc.nl/ITC-scholarship-programme

USING DATA TO RESCUE KIDS FROM HIV/AIDS

Name: **Mosa Moseme (Lesotho)**

Position: **Strategic Information and Evaluation Advisor at Elizabeth Glazer Paediatric AIDS Foundation**

Studied: **Geoinformatics 2010-2012**

Mosa Moseme's decision to follow her dream of further education changed her life – and many other people's lives, too. She uses her knowledge and skills to battle HIV/AIDS and to help others reach higher. "Because of my studies at ITC, I feel I have become very helpful to my peers and our community at large".



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FROM PROFESSOR TO STUDENT TO CHANGE LEADER

Name: **Prof. Dr. Derrick M. Denis (India)**

Position: **Dean at Vaugh School of Agricultural Engineering and Technology**

Studied: **Water Resources and Environmental Management 2011-2013**

When Derrick M. Denis of Allahabad, India, first sat down in an ITC lecture hall in the Dutch city of Enschede, he had some adjustments to make. Later, he became an agent for change himself. "ITC's global outlook taught me that together we can combat poverty, hunger, drought and disasters with the hope of one day overcoming them".

