



# Mexico 2004

## RE Workshops

Prepared by the Youth Employment Summit (YES) Campaign  
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55 Chapel Street  
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# YES Mexico 2004

## Fourth Global Workshop on Renewable Energy

Boca del Rio, Veracruz, Mexico

October 4-5, 2004 at the World Trade Center

### Description

Both sessions discussed several approaches that link the potential of environmentally benign renewable energy technologies with enhancing job opportunities for youth through provision of reliable energy services in remote and inaccessible areas. It explored how to enable youth to use their capacities towards benefiting society, and set forth a proactive process leading to sustainable energy services for income generation and productive use activities.

With the increasing concern about possible global climate change, the focus has shifted to development of renewable energy. Youth unemployment and environmental degradation are two highly pressing challenges of our time. While the youth unemployment agenda is scattered across many sectorial and thematic areas, many of the key environmental degradation issues are linked to energy generation and utilization in both developed and developing countries. Further, the lack of reliable energy services also acts as a serious constraint to development in rural areas of many developing countries

### Presentation

In this session UNIDO shared its project activities implemented in partnership with YES Campaign in augmenting the youth entrepreneurship in renewable energy.

### Speakers

- Dr. Pradeep Monga, Senior Technical Adviser Industrial Energy Efficiency Branch, PTC Division UNIDO
- Mr. Ulises Cano, Electric Research Institute, Mexico
- Mr. Lubunda Mambwe, YES Zambia Network Coordinator



# **UNIDO and YES Collaboration**

**MEXICO YES CAMPAIGN**

**4 - 7 October 2004**

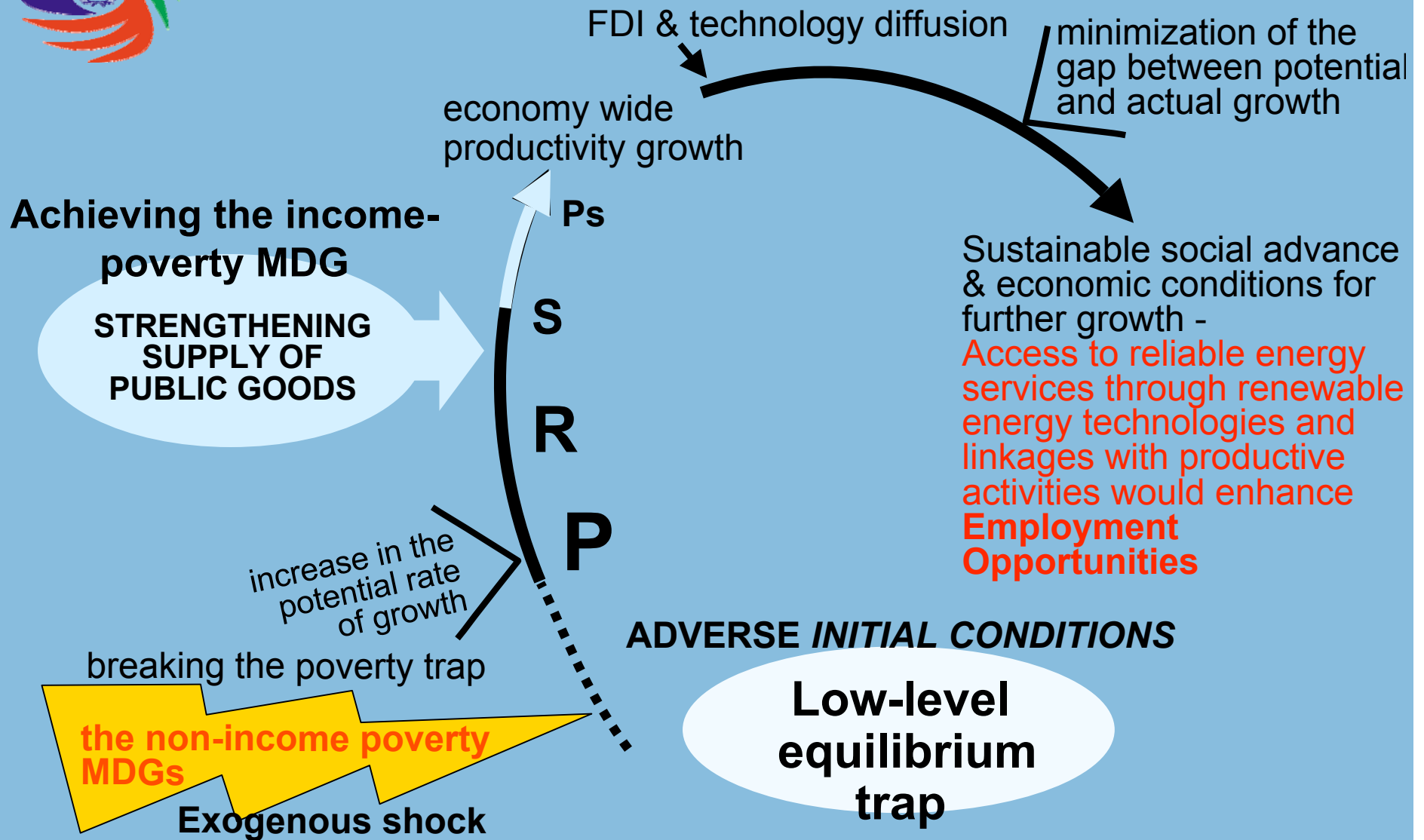


## **UNIDO's Mandate and Activities**

**UNIDO's core mandate is to develop the productive capacity and enhance employment opportunities in the developing countries through technology transfer, capacity building and investment promotion.**

**In its approach to promote renewable energy linked employment generation activities, UNIDO brings in global expertise and experience to the developing countries in terms of enhanced local capacities, technology diffusion and strengthening partnerships for commercial harnessing of potential of renewable energy resources and systems.**

# UNIDO, MDGs and Sustainable Industrial Development





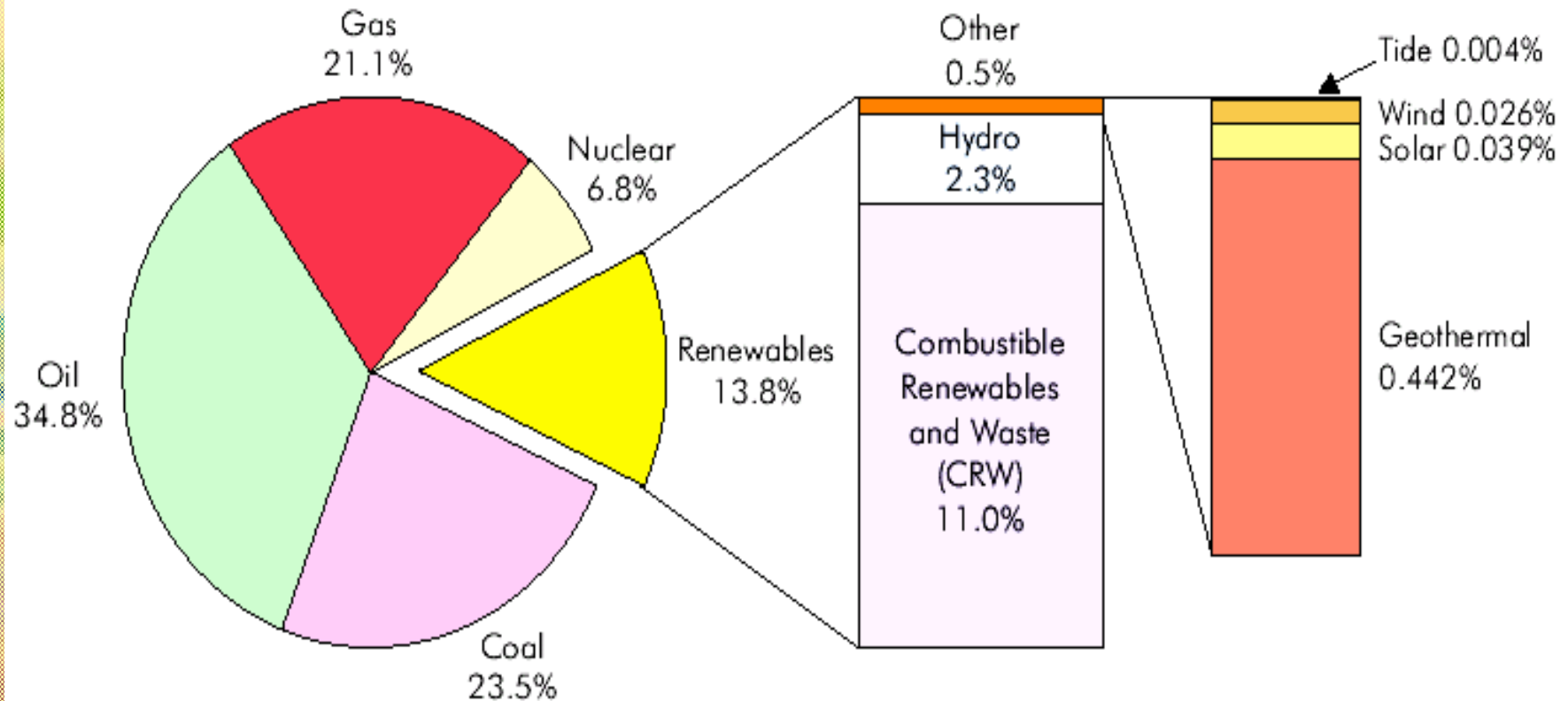
## Renewable Energy Technologies (RET) and Millennium Development Goals



- **MDG 1 – Eradicate/reduce extreme poverty – i.e. through productive use activities such as RET based pumping water for drinking and irrigation.**
- **MDG 2 - Achieve universal primary education - i.e. RET based ICT systems, reducing time spent on gathering fuel and cooking etc.**
- **MDG 3 - Promote gender equality and empower women – i.e. RET based increased opportunities for women and girl child.**
- **MDG 7 - Ensuring environmental sustainability i.e. use of cleaner technologies & RET based on/off grid power generation.**

# RENEWABLE ENERGY SHARE IN TOTAL PRIMARY ENERGY SUPPLY

## 2000 Fuel Shares of World Total Primary Energy Supply\*



Source – IEA Report 2002

## Key Regional Renewables Indicators for 2000

	TPES*	Of which Total Renewables	Share of Total Renewables in TPES	Share of the Main Fuel Categories in Total Renewables		
				Hydro	Geothermal, Solar, Wind, etc.	Combustible Renewables and Waste
	Mtoe	Mtoe	%	%	%	%
Africa	508	259	50.9	2.3	0.2	97.5
Latin America	456	127	27.9	37.3	1.3	61.3
Asia**	1 123	382	34.0	4.0	3.3	92.7
China***	1 158	234	20.2	8.2	0.0	91.8
Non-OECD Europe	95	9	9.9	46.1	0.9	53.0
Former USSR	921	30	3.3	65.5	0.2	34.3
Middle East	380	3	0.8	41.3	22.7	35.9
OECD	5 317	329	6.2	34.4	10.8	54.8
<b>World</b>	<b>9 958</b>	<b>1 372</b>	<b>13.8</b>	<b>16.5</b>	<b>3.7</b>	<b>79.8</b>

\* Total Primary Energy Supply calculated using the physical energy content methodology.

\*\* Asia excludes China

\*\*\* China includes People's Republic of China and Hong Kong, China

Source – IEA Report 2002



## RENEWABLE ENERGY, PRODUCTIVE USE ACTIVITIES AND YOUTH EMPLOYMENT OPPORTUNITIES

- Lack of reliable energy services seriously impedes growth and development. Renewable energy technologies have a large untapped potential to support productive and income generation activities in on/off - grid rural areas of developing countries.
- A rough estimate puts employment potential linked directly and indirectly with renewable energy technologies and productive activities world wide at about 150 million jobs.
- Since youth constitute almost 50% or more of working age group in total population in developing countries, this aspect assumes special significance when seen in the context of enhancing opportunities for youth employment.



## **UNIDO YES Partnership - Renewable Energy Based Entrepreneurship Development Programme**

### **Three Key Elements:**

- **Facilitation of access to reliable energy services**
- **Creation of employment opportunities**
- **Technology Transfer**

### **Through**

- **Implementing Pilot projects – to demonstrate social, technical and economic feasibility of RETs.**
- **Creating sustainable local enterprises - to deliver reliable energy services based on RETs.**
- **Identifying income generation activities based on RETs - to build local capacities through youth entrepreneurship development programme**



## **RENEWABLE ENERGY, PRODUCTIVE USE ACTIVITIES AND YOUTH EMPLOYMENT OPPORTUNITIES**

**Some Concrete Examples of Productive Use and Employment Generation Potential of Renewable Energy Technologies are:**

- Solar water pumps for enhancing agricultural productivity**
- Renewable energy based ICT systems can stimulate economic and social activities**
- Renewable energy based agro-industries can generate employment opportunities at the local level.**
- Fishing in lakes in night using solar lanterns**
- Biomass gasifiers based mini- grids – bamboos waste as a fuel and finished product for marketing.**



# UNIDO and YES Collaboration

## First Project in Zambia

- **Introducing Renewable Energy Youth Entrepreneurship Development Programme**
- **Setting up of a Renewable Energy Park for Demonstration and Training Purposes at Kasama**
- **Providing Leadership and Managerial Skills to Youth to mobilize resources, set up Renewable Energy Enterprises and succeed as renewable entrepreneurs.**

## Expected Outputs and Achievements

- **A Pilot Renewable Energy Park set up for demonstration and Training at Kasama**
- **500 Youth and 50 Master Trainers trained under Entrepreneurship Development Programme**
- **A Micro-finance Plan developed for promoting youth led Renewable Energy Enterprises in Zambia**



# UNIDO and YES Collaboration

## Second Project in India

- **Establishing** YES Academy and Networking in the State of Andhra Pradesh
- **Introducing** Renewable Energy Youth Entrepreneurship Development Programme
- **Creating** a Network of institutions, experts and private/non-governmental organizations for information dissemination and enhancing synergy

## EXPECTED OUTPUTS / ACHIEVEMENTS

- YES Academy set-up at Hyderabad
- Training material and curriculum developed and training imparted to 75 youth on renewable energy based entrepreneurship development programme
- National consultations organized for creating a network of YES Institutions and Cooperating Partners



# UNIDO and YES Collaboration

## Third Proposed Project in Mexico

- **Introduce Renewable Energy Youth Entrepreneurship Development Programme**
- **Develop a Micro-financing Plan and Provide for Seed Funding**
- **Provide Leadership and Managerial Skills to Youth, especially women, to set up Renewable Energy Enterprises**

## EXPECTED OUTPUTS / ACHIEVEMENTS

- **Training curriculum developed for building capacity of youth entrepreneurs in Mexico**
- **100 Youth entrepreneurs and 5 youth trainers trained, and 10 entrepreneurs selected to set up renewable energy enterprises**
- **A micro-financing plan developed and seed funding provided to the selected youth to set up renewable energy enterprises**



## Renewable Energy Training Project Augmenting Youth Employment

Mexico-Summit 4<sup>th</sup> to 7<sup>th</sup> 2004

**Paper Presented by:**

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## **BACKGROUND:**

Wood fuel is Zambia's principal household energy and it accounts for 80% per cent and followed by charcoal which accounts for 16.5 per cent. While installed capacity stands at a 1,750-mega watts. Zambia's hydropower potential is estimated at 4000 MW (selenje et al). Other sources of energy including coal and on small scale, solar and wind energy.

From the above shown statistics renewable energy such as solar, coal, biomass, biogas and wind energy is still in its infancy stage in Zambia. The government of the republic of Zambia has embarked on a programme to review a national energy policy that will look at the energy sector as a whole.

The UNIDO – YES renewable energy project augmenting Youth employment was as a result of an understanding that was reached at global level to examine job opportunities for young people in the renewable energy sector.

Following extensive research on renewable energy in Zambia by various International organisations, local and Government Energy Department, there has been a realisation to enhance the use of renewable energy sources by both Public and Private Sector.

YES – Zambia as a concerned network developed a partnership with YES Boston to chart a way forward in employment opportunities in the renewable energy sector.

## **⌘ Problems**

The economy of Zambia is suppressed resulting into high unemployment and exacerbates HIV/AIDS, drug abuse and crime amongst youths who constitutes more than 50% of the national population.

### **1. *Lack of current Country statistics.***

In many countries young people constitute a very high proportion of the total population and total unemployment, comprising more than half the total number of the unemployed in Africa. In many countries the young unemployed are looking for their first job. It is hard to know exactly the scale of the problem with inadequate and incomplete data. Some of the features of the problems related to the data for the purpose of making cross-country comparisons are: (1) cross-country variations in the definition of youth; (2) cross-country variations in measurement of employment, unemployment and underemployment; and (3) country-specific data gathering and survey systems.

2. Deforestation is not addressed as a serious environmental hazard both by government and the people who the custodian of the land.
3. Low pollution density and high poverty levels resulting in people being complacent toward environmental issues.
4. Lack of funding cover.
5. Youth apathy in environmental issues.
6. Lack of awareness on the benefit of using renewable energy

#### ☞ **WHAT YES ZAMBIA HAS DONE**

Implementation of the renewable energy training augments youth employment. The project started with a consultative workshop which was aimed at identifying major stakeholders such as The ministry of Energy and resources, Energy services company (ESCOS) Ministry of youth, Central statistical Office, UNIDO and CYP etc. This took place at the Commonwealth Youth Programme-Africa Centre on 8<sup>th</sup> February 2004.

Secondly, the national workshop was organised after the consultative meeting and through the host organisation MAPYE to identify the possible participants to be trained as master trainers. Participants were drawn from Universities, colleges, NGOs, streets and the church. The initial number invited was 20 but organisations kept on sending more participants until we trained 33 youths. The training took place from 4<sup>th</sup> –7<sup>th</sup> of June 2004 and the Minister of sports Youth and Child development Minister Hon Rev. Gladys Nyirongo officially launched the project in Zambia.

After the national workshop the review meeting was held on the 29<sup>th</sup> of June 2004 with UNIDO representatives from Austria and India who demonstrated some of the technologies that can be developed in Zambia that are working in India. The resource persons came from IT power India and the Institute of science and Technology India. During this review meeting attracted 165 youth from different organisations.

The provincial workshops started a bit late due to the delay in the release of funds from the global secretariat. Only four provinces so far have benefited from the training and we are remaining with 2 more provinces, which were in the implementation plan. In each province 10 youths have been trained as master trainers which makes 40 in four provinces and these include, Central, Western, Eastern and Southern provinces of Zambia.

## IMPACT/RESULTS.

The project has stimulated a lot interest amongst young people as it has presented a challenge of starting businesses in renewable energy technologies. The total number of youths who have benefited in this program is as follows:

- ⌘ In every province 1 trainer is training other 5 youths to make the number in each province to be 50. In 4 provinces so far we have 200 young people who have come together to form the network of young people in renewable energy. The Network is called Renewable Energy entrepreneurship Network (REEN) it is currently rehearsing with UNIDO country office through the ad-hoc committee which was ushered in during the meeting. The country Network through these training has received 40 business plans and 33 from Lusaka respectively. Many youths in other provinces are demanding that also the programme be carried in their areas. So there is need for more funds to cover the whole nine provinces of Zambia to have an effective youth participation in this programme.

### CONSTRAINTS AND OPPORTUNITIES PROFILE

#### *Renewable energy project augmenting Youth employment in Zambia 2004*

Description	opportunities	constraints
Economic/ demographic conditions	More ECO job opportunities	Resources to explore the potential Renewable Energy
Institutional arrangement	Good commitment between YES Boston YES Zambia	The project ownership and control of resource was done by YES Boston
Norms and Values	Women being the custodian of energy	Language barrier/energy terms too technical gender imbalance
Political/events	Support from energy ministry and ministry of labour and Youth	Partial political implementation of the project/lack of effective co-ordination between the line ministries
Legislation	Participation of young people in policy formulation process	No assurance that the aspirations of young people would be considered, they are used as fillers
Training and education	Able to train young people through donor support.	Lack of capacity building within the network and appropriate curriculum on entrepreneurship education
Other	YES Zambia is Hosted by MAPYE COMESA Centre Regional Organisation	Office equipment has been lacking to effectively implement the project.
	YES Zambia has signed for web Development through partners in Netherlands IICD	
	Yes Zambia has managed to implement the mentorship program under the regional support plan funded by the	It was a pilot project with little resources.

	royal Netherlands Embassy through (YDN) Youth Development Network.	
	YES Zambia is capacitated with the Host Organisation which has many projects: the joint UNDP/UNESCO project Foundations for Africa Future Leadership, Governance project YCCC/ YES members Participate	

**SUPPORT:**

Infrastructure development to stimulate participation of youths in matters of environmental conservation

Capacity building/ open up training centres in high densely populated areas.

More resources are needed to cutter for the rising demand of energy in Zambia and the need for many young people. For sustainability of the projects we suggest that country networks should be accorded an opportunity to manage revolving fund to help the project run after donor support. UNIDO has pledged to put some funds aside for micro-credit plan, which is underway in Zambia, and we call for many sponsors to come forward to support the youth who have developed businesses in renewable energy enterprise development.

To further support the initiatives that are flourishing we need backup support from the global secretariat to effectively implement projects.

**CONCLUSION**

The UNIDO/YES renewable energy project in Zambia has many opportunities and challenges.

Under the banner of the 6Es: **E**mployability, **E**mployment Creation, **E**quity, **E**ntrepreneurship, **E**nvironmental Sustainability, and **E**mpowerment, the renewable energy project will address most 6Es mentioned above. The challenge is the implementation of the strategies and policies aiming at achieving the above aspiration.

### **Employability**

There so many eco-jobs in renewable energy that includes the maintenance of solar, the set up of bio-gas digesters.etc

### **Employment Creation**

Many trained young people will have more opportunities for employment in running solar power stations and biogas digesters to serve the communities, especially the rural areas.

### **Equity**

The project gives equal opportunities to both players male and female participants.

### **Entrepreneurship**

This project has been designed to help young people to come up with their own business enterprises.

### **Environmental Sustainability**

The Renewable energy sector present both unique opportunities and unique challenges. It is key to poverty reduction, sustainable development and the maintenance of environmental services. Indeed, renewable energy technologies that can make an effective contribution to poverty reduction and environmental conservation are central to achieving the millennium Development Goals set by the UN. Achieving a sustainable path of development in this respect, is one path of the development global strategic priority for the survival of our planet.

### **Empowerment**

The issue of empowerment is cardinal to youth development. Through this project young people have been empowered through skills and knowledge in renewable energy. To achieve more practical results we need to focus on helping governments improve policy, economic management, and governance in the energy sector, including energy concessions and other allocation policies as well as addressing the potential impacts of economy wide adjustment operations upon renewable energy.

This project under empowerment will further address The Micro – Financing Plan for Youth Renewable Energy Entrepreneurship

The output of the Entire Training Programme will be realised when all trained young people have access to funds to run their own renewable energy Enterprises.

Finally let me to talk about choices that we make as young people,

Democracy and Love.... What is common to both? Maybe we can find many things, but neither of them can exist, or be true, without freedom of choice. If you force either democracy or love, they will lose their strength, and will no longer be respected. Take choice away and there can be no longer democracy and no love.

Entrepreneurship and Aspiration...What is common to both? Again, many commonalties can be found, but the truth is that both of these will only succeed in the future if we make and implement the right choices today. Tomorrow is the result of the choices we make today. We can never escape the inevitable consequences of our choices. Try as we might, the future is always the results of the choices which we make today. Even if we make no choice that is in itself also our own choice, and the future will reflect it too.

Freedom does not mean we can all do as we please. There is no freedom where there is free for all, because the wrong choices of some can enslave and remove freedom. Can we be transparent in all what we hope to do for our networks and implement without the heart of greedy that will defeat the whole purpose of various project we are implementing in achieving our goals.

I want to echo the words by the Co Chair of the YES summit Madame Suzanne Mubarak to the participants in Egypt on the reduction of the youth unemployment in the world. ***"IT CAN BE DONE, IT MUST BE DONE AND IT WILL BE DONE"***

"The future for Tomorrow starts today".

Thank you.