Berthold Breid, Tina Völker

TREE-Project: Transfer Renewable Energy & Efficiency

RENAC
Renewables Academy

Trainings

Client specific and open trainings in the RENAC Training Center or anywhere else

- Photovoltaic
- Solar thermal
- Wind energy
- Hybrid systems
- Grid integration
- Energy efficiency

Academic courses

Master Study *GPE Solar* in cooperation with Technical University Berlin

- Interface to solar companies and practice
- Marketing
- Students mentoring

Services

- Consulting and market research
- International PR / dissemination of knowledge
- Conferences and workshops
- Delegation program
- Client specific courses

Selection of RENAC References

berlin

PREPARATORY COMMISSION FOR INTERNATIONAL RENEWABLE ENERGY AGENCY IRENA

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

gtz

معهد الكويت للأبحاث العلمية
KUWAIT INSTITUTE FOR SCIENTIFIC RESEARCH

Federal Ministry of Economics and Technology

aleo

inWent
Capacity Building International Germany

EAUXWELL

kfw FÖRDERBANK

RCREEE

SCHÜCO

dena German Energy Agency

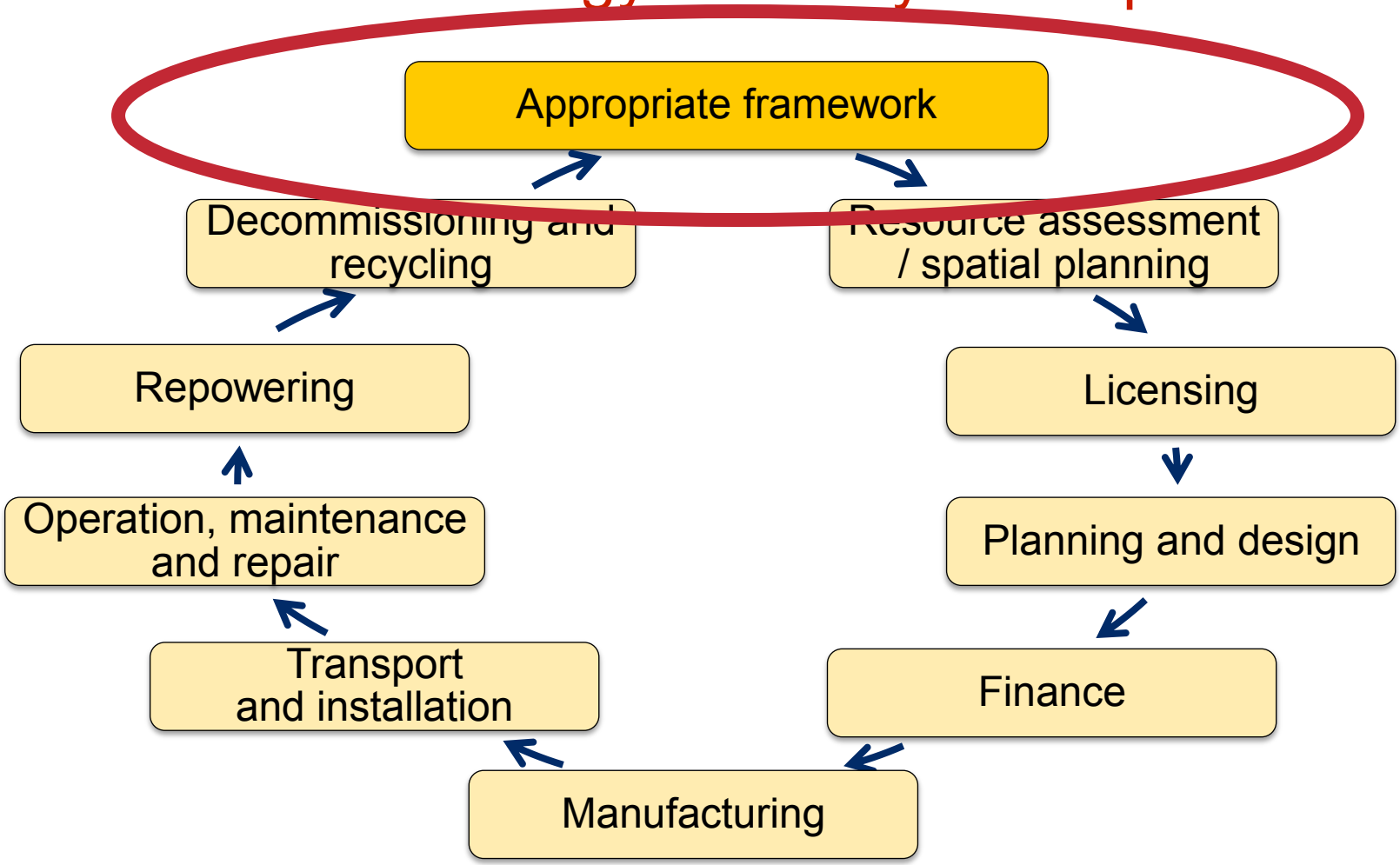
SOLARPRAXIS

Know-how Transfer for Decision Makers and Engineers in Countries wanting to raise the Proportion of Renewable Energy

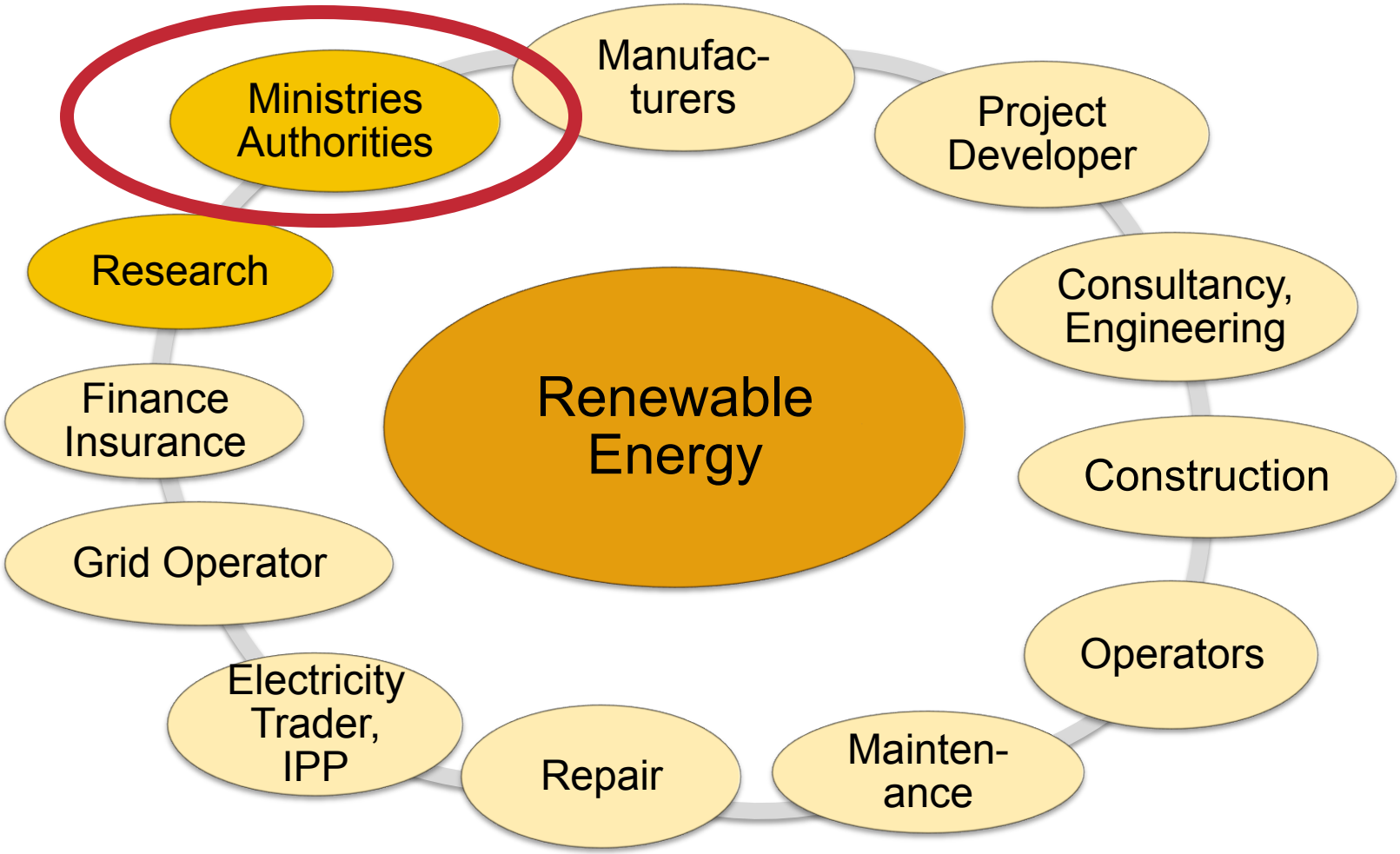
TREE – Background

- Implementation of renewables energy technologies (RE) and energy efficiency (EE) is crucial for a secure energy supply, economic growth and climate protection
- **Know-how** is a **prerequisite** for implementing RE and EE and oftentimes actually a bottleneck
- **Decision makers** from public and private institutions as well as engineers are **key persons** for implementing RE and EE
- **Germany has experience** in creating suitable frameworks and implementing RE-technologies and EE measures
- The **German Climate Protection Initiative** supported by the BMU allows to **facilitate know-how transfer** on RE and EE

Renewable Energy – Life Cycle Steps



Renewable Energy – Stakeholders along the Life Cycle



Issues for Renewable Energy Implementation

- Technical aspects 
- Economics and financing 
- Project development, sizing and simulation 
- Legal and regulatory aspects, support schemes 
- International market development 
- Marketing and sales 

TREE-Project 2008-2009 (TREE-1)

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Nachhaltigkeit lernen
Weltdekade der Vereinten Nationen 2005-2014
Bildung für nachhaltige Entwicklung
UNESCO
Offizielles Projekt der Weltdekade 2009 / 2010

TREE – Objectives and Design

Through know-how transfer and capacity building TREE supports the participating countries in:

- Creating **suitable frameworks** for the development of RE and EE
- Finding solutions for **financing** RE and EE
- Building up new working sectors for RE and EE and strengthening **economics and employment** sector
- **Reduction of greenhouse gas** emissions
- Encourage discussion and **international network** building

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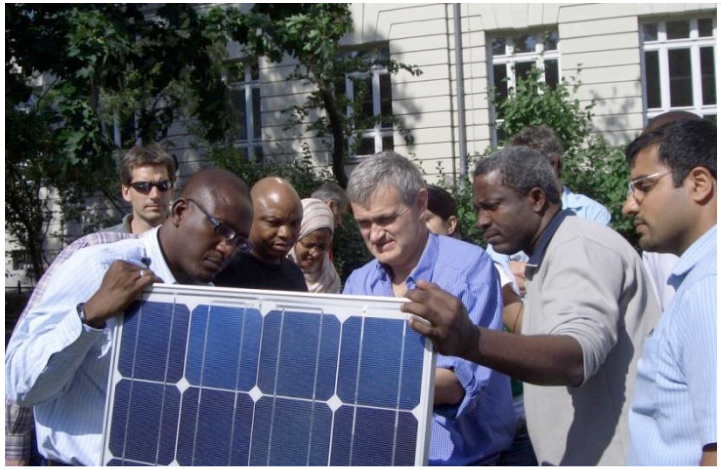
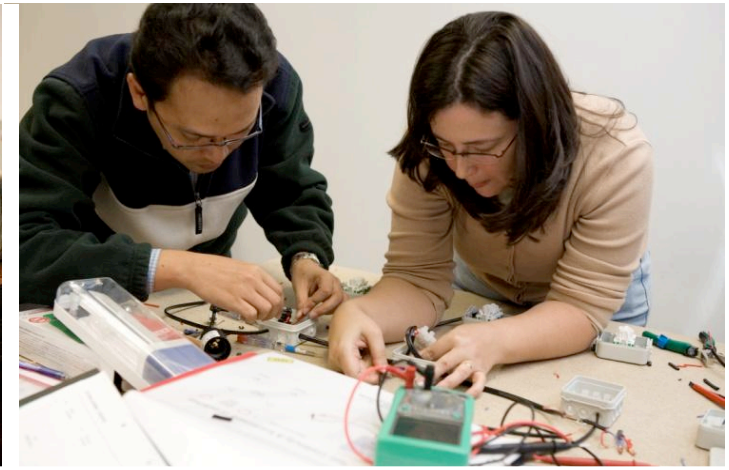
TREE 1 – Activities

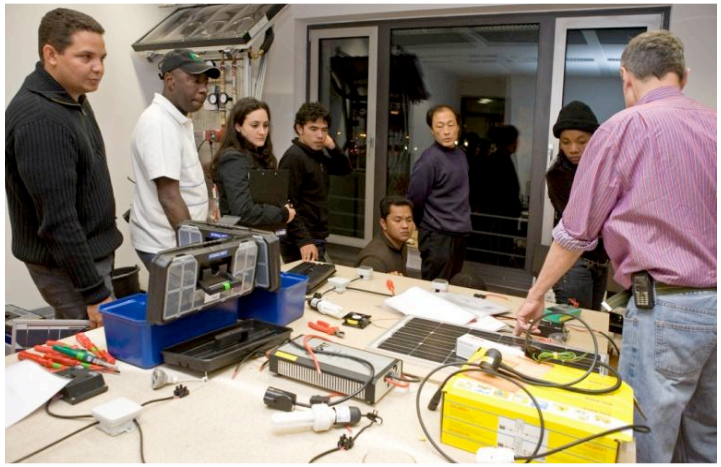
- Provided 7 week-long **seminars for decision makers** until Feb. 09 in 2008 (overview on RE and EE) – 110 scholarships.
- Provided 7 week-long **seminars for engineers** until Feb. 09 in Berlin (solar thermal, Photovoltaics offgrid and grid-connected) – 120 scholarships
- Provided 5 seminars on **solar thermal power plants** (CSP) in South Africa, Namibia, Peru, Chile and Jordan.
- Provided 6 **advanced seminars**: Solar Thermal Systems, Hybrid systems, Biogas, Wind Energy, Grid-connected Photovoltaics, Energy efficiency in the building sector, industry & commerce – 60 scholarships
- Offered **distance learning** modules with the University of Applied Sciences
- **Follow-up advice**
- Networking through **TREE-community**

TREE-1 – Training on Photovoltaics




TREE-1 – Training on Photovoltaics





TREE 1 – Training on Solar Thermal

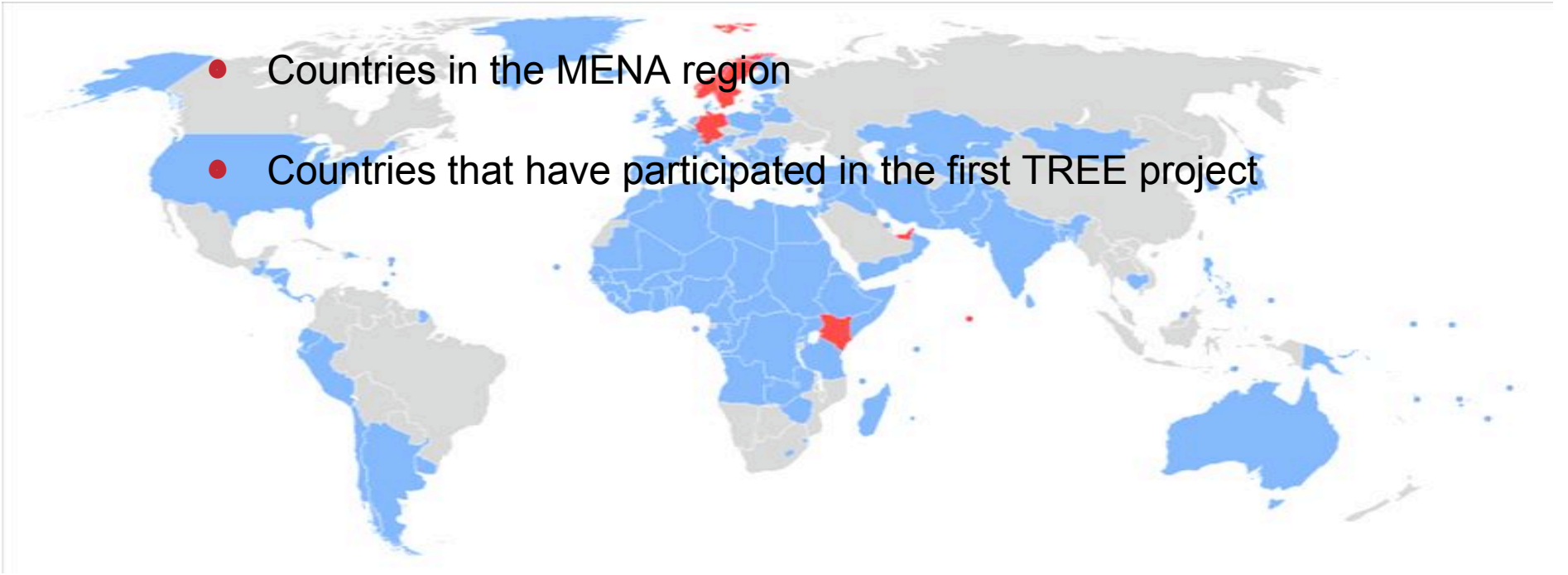



TREE-Project 2010 (TREE-2)

Transfer Renewable Energy & Efficiency

TREE-2 – 111 countries are invited to participate

- Developing and emerging countries which signed IRENA
- Countries in the MENA region
- Countries that have participated in the first TREE project



TREE-2 – Project outline 2010

	March/April	May/June	August - December 2010
Berlin	**Applications from 10/3 - 30/4/2010**	**Admissions at beginning of June**	4 overview seminars on RE and EE 7 technology-specific seminars
In target countries	**Seperate application procedure**	**Promotion and applications**	3 CSP seminars 4 seminars on financing

Guidelines, distance learning, TREE community

TREE-2 – Target Groups

Staff from government bodies responsible for RE and EE legislation	→	11 seminars in Berlin Duration: 5 days each
Finance sector, Project developers	→	4 financing seminars in Abu Dhabi, South-Africa, Mexico, Malaysia Duration: 2 days each
Engineers, Decision makers	→	3 CSP seminars in Abu Dhabi, Mexico, India Duration: 3 days each

TREE – Seminars for government staff

RE and EE overview seminars (place: Berlin)

- Rural Electrification: Technologies - Frameworks - Financing
- Grid Connected Renewable Energy: Technologies – Frameworks – Financing

Technology specific seminars (place: Berlin)

- Photovoltaics grid connected and offgrid systems
- Biogas and biofuels
- Wind energy (small and large scale)
- Solar thermal systems (small and large scale)
- Energy efficiency in industry and commerce and in the building sector

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TREE – Seminars on Financing RE and EE

- Objective: facilitate financing on RE and EE through Capacity Building for financing institutions towards renewable energy and energy efficiency.
- 2-day seminars in Malaysia, South Africa, Abu Dhabi and Mexico for countries in the region.
- Overview on RE and EE technologies to get basic understanding and case studies on financing.
- Technologies: wind energy, biogas, photovoltaics and energy efficiency.

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TREE – Seminars on Solar Thermal Power Plants

- Objective: Providing core know-how and bringing together relevant stakeholders to proceed in the strategy-development for CSP in the target country
- Content: Available technologies, operation and maintenance, site analysis and ecological impacts, finance, business models, project phases and future developments
- 3-day seminars in Abu Dhabi, India and Mexico for countries in the region

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TREE-2 – Distance learning and Publications

- Distance learning in cooperation with University of Applied Sciences Berlin:
  - RE-and EE-Technologies
  - Financing of RE and EE projects
  - International markets and business development
  - RE and EE quality and supply chain management
  - International energy policy
- Guidelines for staff from ministries and other government authorities on legal aspects of renewable energies: PV, biogas, wind energy, energy efficiency, solar thermal systems

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TREE-2 – Application Procedure

- Participants for TREE can be proposed by institutions or apply by themselves.
- Institutions that can provide proposals are ministries, embassies and other public authorities from partner countries as well as German institutions abroad.
- Preconditions: integration of knowledge gained in profession and daily work, qualification, motivation statement, English skills
- Scholarship includes seminar costs and materials; participants have to finance flight and accomodation.
- Application at **www.tree-project.de**

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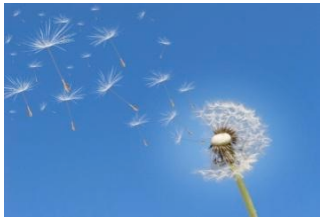

We would like to ask embassies from participating countries to support us in finding the RIGHT participants.

Please forward information on TREE to relevant entities in your home countries to encourage applications.

Application forms available at www.tree-project.de

Thank you to

Ministry of Environment for your support!

Embassies for your interest and dissemination

Lecturers, staff, service providers for realizing TREE!