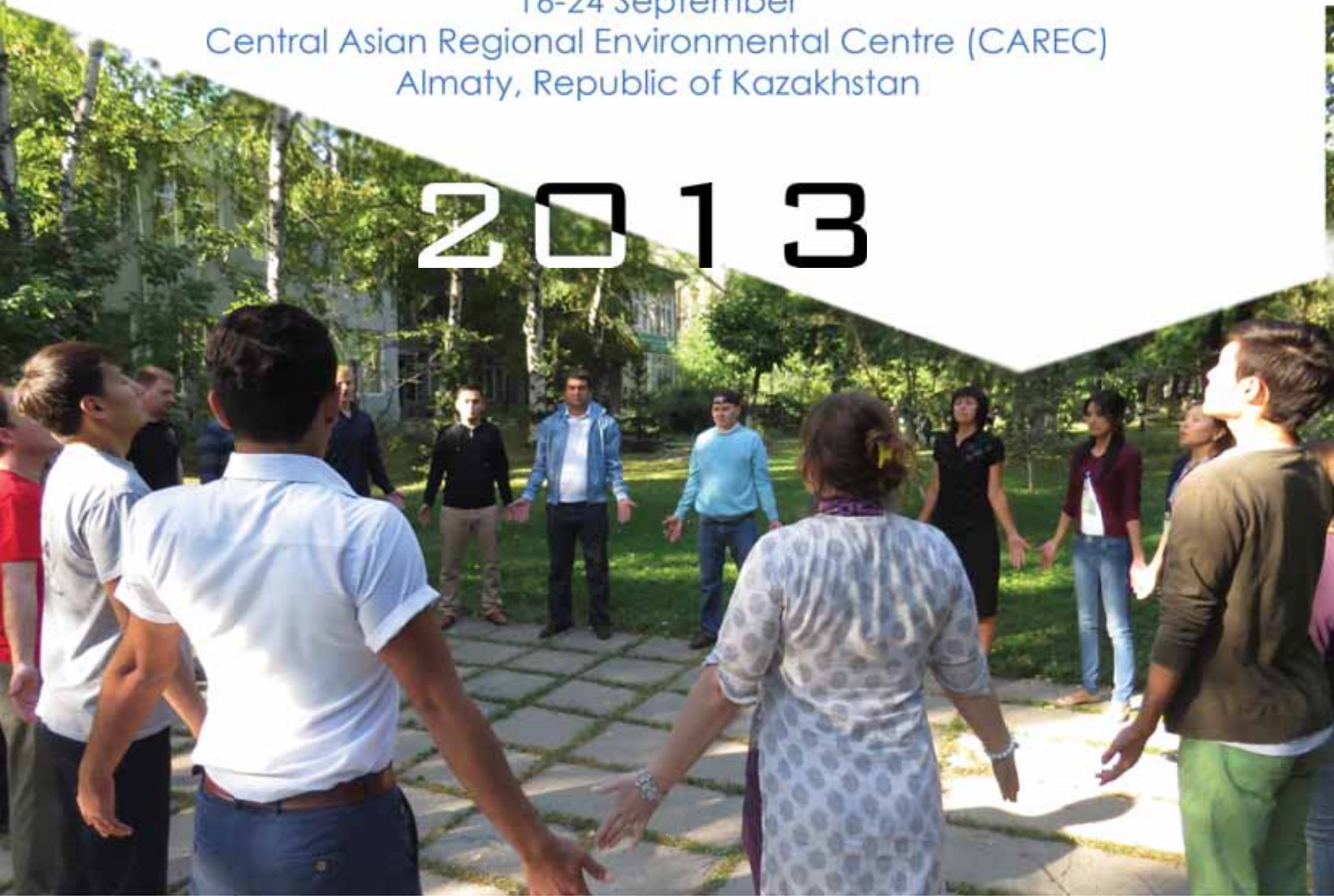




4TH CENTRAL ASIAN LEADERSHIP PROGRAMME ON ENVIRONMENT FOR SUSTAINABLE DEVELOPMENT

16-24 September
Central Asian Regional Environmental Centre (CAREC)
Almaty, Republic of Kazakhstan

2013



ABBREVIATIONS

NME – Norwegian Ministry of the Environment

UNEP – United Nations Environment Programme

CAREC – Central Asian Regional Environmental Centre

SME – Small and Medium Enterprises

AIT – Asian Institute of Technology

NGO – Non-Governmental Organization

CA – Central Asia/Central Asian

CALPESD – Central Asian Leadership Programme on Environment for Sustainable Development

KBCSD - Kazakhstan Business Council for Sustainable Development

KAAE - Kazakh Agency of Applied Ecology

OSCE – Organization for Security and Cooperation in Europe

SD - Sustainable Development

ESD – Education for Sustainable Development

DESD – UN Decade of Education for Sustainable Development

UNEP RRC.AP - UNEP Regional Resource Centre for Asia and the Pacific

CB – Capacity Building

CD – Capacity Development

PES – Payment for Ecosystem Services



ACKNOWLEDGEMENTS

With the next few paragraphs we would like to express our appreciation to those people who made the 4th CALPESD a success

First of all, we would like to extend our gratitude to all the CA applicants who expressed their interest to participate in the 4th CALPESD. CAREC received more than 70 applications from different CA countries, sectors and regions. Not all of them were able to participate this year, but we hope they will be able to join us in the open competition next year.

Our special thanks to the participants for their keen interest, their pursuit of innovation and creativity, and their energy.

Of course, the 4th CALPESD would have not been possible without the generous contribution, cooperation and support of our partners, namely the United Nations Environment Programme (UNEP), the Norwegian Ministry of the Environment (NME) and the Organization for Security and Cooperation in Europe (OSCE) Centre in Astana.

We also would like to express our gratitude to Mr. Mahesh Pradhan, Chief, Environmental Education and Training Unit Division of Environmental Policy Implementation of UNEP for providing advice and guidance.

THE SCOPE OF THE CALPESD (FEATURES, OBJECTIVES, TARGET GROUPS, PARTICIPANTS)

The theme of "leadership" is relevant in various aspects of our life: business, politics, and sports. In view of the growing role of civil society in Central Asia, leadership in support of sustainable development necessitates truly inspired and dedicated people.

The First Central Asian Leadership Programme was held in Astana in September 2010 as a side-event of the VI Ministerial Conference on Environment and Development in Asia and the Pacific (MCED6), and developed for young leaders and future specialists from governments, private sector and civil society of the CACs. The working language of the workshop was English. A three-day Programme was hosted by the Nazarbayev University in partnership with the Asian Institute of Technology (AIT), UNEP RRC.AP and CAREC.

The Third Central Asian Leadership Programme

on Environment for Sustainable Development was held on 17-18 September 2011 in CAREC. Activities were organized in collaboration and support of UNEP and the Government of Turkey, and with the help of other members in Central Asia.

Today

Activities of Leadership Programme are actively involved in environmental activities and CAREC projects in all

The Second Central Asian Leadership Programme on Environment and Development was hosted by CAREC and held on September 14-17, 2011 in Almaty in cooperation and with support of UNEP, AIT, the OSCE Centre in Astana, and Kazakhstan Business Council for Sustainable Development (KBCSD) in the run-up to the VII Ministerial Conference «Environment for Europe».



At every level the greatest obstacle to transforming the world is that we lack the clarity and imagination to conceive that it could be different

WHY WE BUILD UP CAPACITIES ON SUSTAINABLE DEVELOPMENT?

ESD allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. ESD means including key sustainable development issues into teaching and learning; such as climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. ESD consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way.

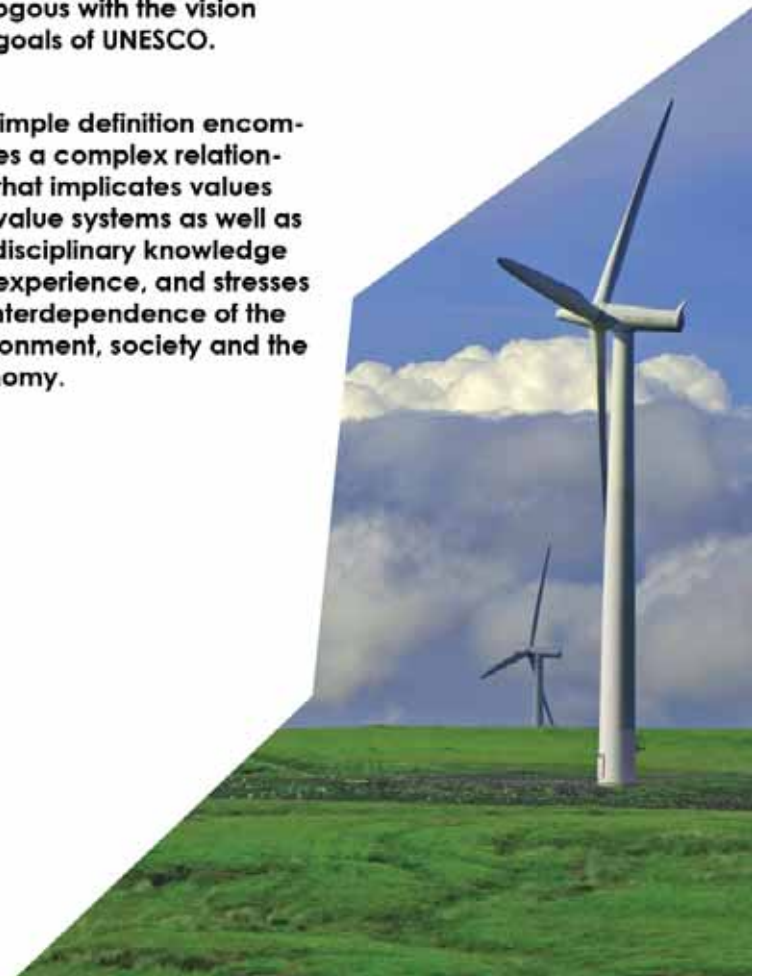
ESD requires far-reaching changes in the way education is often practised today.

The role of ESD is to help people develop the attitudes, skills, and knowledge to make informed decisions for the benefit of themselves and others, now and for the future, and to act upon those decisions.

ESD is an approach to teaching and learning based on the ideals and principles that underlie sustainability - human rights, poverty reduction, sustainable livelihoods, peace, environmental protection, democracy, health, biological and landscape diversity, climate change, gender equality, and protection of indigenous cultures. In these and many other dimensions, education for sustainable development is analogous with the vision and goals of UNESCO.

This simple definition encompasses a complex relationship that implicates values and value systems as well as interdisciplinary knowledge and experience, and stresses the interdependence of the environment, society and the economy.

Well, we call them together and let them create by organizing for leaders a fine platform for CB and CD.



INTRODUCTION TO THE 4th CALPESD

The sustainable development of Central Asia stands for the new leaders.

The 4th CALPESD took place from 16th and 24th of September at CAREC in Almaty. This year, the programme was supported by UNEP, NME and the OSCE Centre in Astana.

This 8-day program was designed for young and promising representatives of the public sector, the private sector and civil society in Central Asia.

The main purpose of the 4th Asian Leadership Programme was to foster comprehensive thinking and decision-making in order to establish relationships among participants from governments, the private sector, and civil society.



INTRODUCTION TO THE 4th CALPESD

The principle goals of the 4th CALPESD:

- to motivate comprehensive thinking and ability of make decisions among young professionals as well as representatives of middle government line, private sector and civil society;
- to motivate integration of environment and sustainable development topics for effective decision making;
- to create and develop network between new leaders of Central Asia that represent Government, civil society and private sector.

Participants had the opportunity to acquire new knowledge, skills and competences in areas related to sustainable development. Particular attention was paid to the issues of green growth, climate change, water management, access to drinking water trans-boundary cooperation in Central Asia, and development of renewable energy.

For the first time, the 2013 CALPESD was attended by representatives from Afghanistan - experts in the field of water issues and trans-boundary water cooperation.

Another great value for the 4th CALPESD was the visit by Mr. Mahesh Pradhan, Chief, Environmental Education and Training Unit Division of Environmental Policy Implementation from UNEP, Nairobi, Kenya. Also CAREC's Deputy Executive Director Mr. Heinrich Wyes and the Director of the Economy and Environment Department of the OSCE Centre in Astana Mr. Alexander Peytchev participated in the opening of the Programme and welcomed the 4th CALPESD participants.



THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

PARTICIPANTS

The group included 36 people from five countries of Central Asia, as well as from Afghanistan, representing non-governmental, governmental organizations, as well as from the science- and education sector. More than half of the invited leaders had already had some work experience in environmental issues as well as the in the use of planning instruments, development of environmental projects, fund-raising, team-building and management of non-governmental organizations. Many of the participants manifested a good level of English language knowledge.



THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

MODULE AND KEY TOPICS INCLUDED:

- Learn to map international players - sustainable development stakeholders. Investigate their peculiarities and mandates with the aim to boost the efficiency of interaction and cooperation.
- Learn from those survived – i.e. learn from organizations that are experienced in working with different social groups, learn their history of fundraising, advocacy.
- Speak the language of international processes. Study the history of environmental initiatives and the history of Sustainable development process.
- Learn how to come up with bright ideas addressing environmental problems (Eco-branding), which may attract the attention of other people, including representatives of donor organizations and give them a shove to become your adherents.
- When submitting project proposals learn to identify priorities of different donors and their financial capabilities.



THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

MODULE AND KEY TOPICS

In the course of a game session the participants discussed such environmental concepts as "resources", "environmental limits" "eco-risks", "ecological balance", "leadership" and "strategy"

The games helped to formulate the following lessons:

- The concepts "resources", "environmental limits" and "ecological balance" are central in ecology. To assess the situation with environmental problems, both at the global and local levels, it is useful to "try" (review) them within the given terminology.
- Assessment of risks and impact of their own activity (activity of the team) is an extremely important skill for leaders.
- One of the successful models is the leadership model of a "penknife", which aims people at development of comprehensive leadership qualities.



THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

MODULE AND KEY TOPICS

During the session "Global challenges of modern society and the role of sustainable development" and "Rio + 20 and institutional frameworks for sustainable development" participants found interesting examples of civil engagement, presented by CAREC's Deputy Executive Director Mr. Heinrich Wyes. Three key components of resource mobilization: fundraising, communication and advocacy: Special attention has been given to "advocacy" given that this stage of resource mobilization should be preceded by a political process, which is to be gradually developed by the organization. The follow up work of the participants in 5 groups made it possible to identify significant global environmental problems.

The session facilitated by the CAREC manager Mr. Benjamin Mohr was devoted to the preparation of the CA countries to the EXPO-2017 and based on the outcomes, posters and presentations were developed by the national teams, illustrating the vision of the contribution of their countries to the upcoming exhibition EXPO-2017 that will be held in Kazakhstan, in Astana.

Key issues for the discussion were:

1. How can the country be presented at EXPO 2017?
2. Energy of the future. What practical solution can the country offer?
3. What can other countries learn from your country?



THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

MODULE AND KEY TOPICS

The lecture on "Skills of corporative leadership for sustainable development" outlined aspects of cooperation between non-governmental and business-organizations, which increasingly take a more active part in the environmental discussions in Central Asia.



The discussions on "Renewable Energy Sources and Energy Efficiency in CA", "Climate Change Mitigation", "Development of Central Asian Economies, Reducing Impact on Climate", "Renewable Energy Sources – International Experience" identified a number of lessons learnt:

- Use of mechanisms of life quality assessment, alternative to GDP growth rate, is a pertinent sphere to exercise efforts by the leaders of the CA countries.



- Global problem of climate change is a framework in relation to international processes and initiatives in as far as Green economy is concerned. Understanding the concept and the content of the given issue is necessary for the leaders working in environmental area.

- Promotion of methods of PES is a promising area of work both for the beginners and for experienced environmental leaders. The presentation of Pavel Koktyshov "Moral Leadership" was of great interest for the group, for the author of it offered another interesting informational resource for the participants available on the website www.hvli.org, on which articles of Alexander Hovard, author of the moral leadership concept, are to be found.



THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

MODULE AND KEY TOPICS



"Overview of the national IWRM legal frameworks of Central Asian countries", consolidated theoretical material the participants learnt. In the course of this session all those present participated in a very lively discussion of legal documents from the point of view of the implementation of the IWRM principles and interests of the stakeholders.

The session "National Water Legislation" facilitated by the I. Petrakov, an expert from Kazakhstan, helped to create a general picture of water problems in Central Asia with a special focus on transboundary water use.

Interactive session "Overview of the national IWRM legal frameworks of Central Asian countries", which was also presented by Mr. Petrakov, consolidated theoretical material the participants learnt. In the course of this session all those present participated in a very lively discussion of legal documents from the point of view of the implementation of the IWRM principles and interests of the stakeholders.

The session facilitated by Alexander Nikolayenko, regional GIZ expert was dedicated to issues of Integrated Water Resource Management; the participants highlighted the following lessons learnt:

- Implementation of IWRM methods is necessary for the current environmental leaders working in the sphere of water-resources conservation methodology.
- The approach "bottom-upwards" seems to be promising, given that it helps to involve local community and make it a real stakeholder of this management.
- The list of stakeholders is individual for each water basin. Their identification is a vitally important element of the Basin Management Plan development.
- In the process of interaction of parties it is necessary to find a compromise between the process participants as well as to find coordinated solutions.

THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

MODULE AND KEY TOPICS

The fifth day of the 4th Leadership Programme on Environment and Sustainable Development of Central Asia started with the welcoming speech of Mahesh Pradhan, Director of the Environmental Education and Training Unit of the Department of Environmental Policy, UNEP; he congratulated CAREC with holding the regular leadership programme, which has become a good tradition in CA region. 4-years of growing interest and active participation of young leaders show the evidence of the Leadership topic priority for the CA countries, partners and donors. He also dwelt upon global aspects of environmental initiatives implementation, including the launch of new environmental conventions (including a new Convention on mercury – Minamata Convention). The presentation provoked an active discussion on such issues as: Rio+20 process, Millennium Development Goals, UNEP priorities for the nearest future, global and regional cooperation, green climate fund, biodiversity values, ecosystem services and etc.

The 4th CALPESD ended up with a discussion with the aim to assess the course results and to exchange views. The discussion was followed by the award ceremony; the participants of the school were awarded mementos and the international type certificates.

During a weekend all the participants of the Programme made a field trip to the environmental village "Alma-ral". During the visit the excursion was organized for the group on the territory of the village, where currently environmental houses of different type are being built (on the basis of framework structures out of metal containers with the use of energy efficient technologies and etc.). Different types of water-saving irrigation system of the "drip irrigation" type have been demonstrated to the participants. The system of drip irrigation of "EuroDrip" company produced great impression on the school participants; this system does not require dismantlement in winter time and may also be used for quite a long period of time. Visiting this eco-village became a good tradition for participants of the CALPESD for the last two years, which have an opportunity to make their input into environmental friendly construction and organic agriculture.

THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

Conclusions and recommendations (developed on a base of comments of facilitator and participants):

1. Given the important role the CA Leadership programme plays as a unique podium for experience exchange and integrating efforts of CA countries in addressing environmental problems publication of the collection of school materials in a ram disk format is recommended;
2. The Agenda of the follow up CA Leadership programmes should include a time management session (at the discretion of participants);
3. The Agenda of the follow up CA Leadership programmes should include a programme management session (at the discretion of participants);
4. The content of fundraising sessions and project development should be expanded (at the discretion of participants);
5. The use of the educational resource "Green Pack", adapted by the CAREC for the Central Asian countries is recommended in the course of the follow up CA Leadership Programmes;
6. The programmes of the follow up CA Leadership Programmes should stipulate exercises that would include not only the activity within the framework of the country delegations but with the involvement of participants from different countries;
7. Given the increasing pertinence of topics "Environmental management, ISO 14000" as well as "Ecosystem approach and payment for ecosystem services" it seems to be effective to include them as informative modules into the follow up CA Leadership programme;
8. It seems promising to include small practical sessions on drip irrigation, self-assembly of solar installations and etc. into the agenda of the follow up schools. It will make it possible for the participants to get better idea of state-of-the-art eco-technologies;
9. Given extensive positive feedback of the participants it seems promising to include field visits to eco-village and excursions to the companies that claim to be "green business" into the follow up CA Leadership programmes;
10. Widening the "Pyramid" session is recommended given that more time is required to carry out this session (only 2 hours have been allocated to it in the given programme, which is enough only to present methodology but not to use it as a full-fledged planning tool).

THE PROGRAMME PARTICIPANTS, MODULE AND KEY TOPICS

List of exercises used during the 4th CA Leadership Programme:

1. Familiarization game "My name letters";
2. Warming up exercise "Mexican Rain";
3. Ecological game "Crocodiles and resources";
4. A game with a hoop "Environmental balancer";
5. Energizer "Nodules";
6. Creative exercise "Sustainable Development Elixir" (Youth balsam, leadership elixir, sustainability tincture, "Central Asian Spirit" essence);
7. Energizer "Sit on the table as ..."
8. Game "Area";
9. Energizer "Life ring – boat-dinghy";
10. Discussion with the use of a ball "What do you like? What do you remember?"
11. Energizer "Leo, Samson and Delli";
12. Game "Confidence Path";
13. Game "Green economy of Service and Flow";
14. Game "Design office: new design of common things";
15. Game-energizer "Water music";
16. Warming up exercise "Uroboros";
17. Warming up exercise "Guess, who I am";
18. Warming up exercise "Greenhouse gases";
19. Game-discussion "Three sectors of SD";
20. Game "Fantasy binomial";
21. Exercise "Compass of sustainability";
22. Exercise "Sustainability Pyramid";
23. Practical exercise "Solar furnace with your own hands!";
24. Exercise "Flexible pencil";
25. Exercise "Widening the vision framework" (according to D. Medows).

PARTICIPANTS' REVIEWS



Abdul Khakim

Development Alternative Inc (DAI) and International city/country Management Association (ICMA)
The Republic of Afghanistan.

I work in the field of water resource management and I'm very glad being here, on this programme organized by CAREC. All presentations from the beginning till end were very interesting for me. As of being here for the first I'm very happy to meet with colleagues from the entire Central Asia, to learn from their experience and share my experience for better cooperation and management in coming future.



Ivan Belikov

The State Committee for Nature Protection, Environmental Management Information and Forecasting
The Republic of Uzbekistan.

The 4th CA Leadership Programme in which I was lucky to participate, firstly has improved my intellectual potential, gain a huge store of knowledge which I plan to use in my future career. A lot of interesting materials associated with such controversial issues as water resources, energy efficiency and green economy. I think that consolidation of efforts in environmental issues, especially when in a dialogue involving representatives of not only government agencies but also the private and business sectors, is one of the main mechanisms in solving these problems.



Farkhod Abdurakhmanov

Master of the Kazakh- German University,
Faculty of Integrated Water Resources Management
The Republic of Tajikistan.

It was my first experience in the Central Asian Leadership Programme and most of all I liked the regional approach, organized by CAREC. It has presented all the countries of Central Asia, including Afghanistan - new people, new perspectives and new ideas. The idea of such a project at the national level in the context of the Central Asian region is needed. It is able to rally even more people to help find a common ground, to establish a dialogue, to hear and understand each other.



Maksad Yeraliyev

Secretariat of Chu-Talas Water Commission
The Kyrgyz Republic.

I work within the water sector and the issue of water management was the most interesting for me. This Programme certainly brought me a lot of knowledge in this area, which I will take home in the future will actively use in my work. In addition, the Programme provided an excellent opportunity to meet many wonderful people from all over Central Asia. Despite the differences in age and scope, I learned a great deal of communication with Programme participants - a very interesting and diverse people.



Amizhan Tatpayeva

Coordination Centre for Climate Change
The Republic of Kazakhstan.

The Programme presented a very great opportunity to meet with colleagues and share experiences between our countries. It is very useful that the Programme brought together young professionals from all over Central Asia, and this was definitely a good reason for new thoughts and new ideas. The agenda was perfectly compiled and covered all areas of ecology. I wish a fruitful work, new useful contacts and fruitful cooperation for future participants.

PRESENTATIONS OF THE 4-TH CALPESD

Heinrich W. Wyes,
Deputy Executive Director,
CAREC

Are you prepared?

GLOBALIZATION, DIGITIZATION, ...
GREEN GROWTH, WFP, S.M., ...
GREEN IT, MOBILITY, ...
VIRTUALIZATION, ENVIRONMENT
SUSTAINABILITY, AGING, ...
...
... MASS COLLABORATION



Today's lecture....

- WHICH ROAD TO TAKE?
- FROM SOCIAL MOVEMENTS TO COGNITIVE NETWORKS: THE MIXTURE OF GREEN GROWTH NETWORKS
- TRANSFORMING THE GREENING OF INDUSTRY INTO THE BUSINESS OF GREENING
- THE LEAD MARKETS FOR GREEN TECHNOLOGIES

which road to take?



Top to Bottom?

Small text: Social Institute... government officials... industry... property...



The history of Green Growth networks

- The **oppositional stance** that tended to dominate environmental politics in the 1960s and 1970s
- in the course of the 1980s and 1990s, the '**discourse of ecological modernization**'
- a '**positive-sum game**' in which economic growth can be combined with, or even reinvigorated by, environmental improvements.
- Business leaders identify '**eco-efficiency**' as a new driving force for industrial progress

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the surrogate sector....

- '**surrogate**' social movements, taking the place in society that was previously occupied by a more coherent or unified environmental movement.
- **hybrid formations**: coalitions, alliances, round tables, working groups, etc
- The **new networkers translated the environmental message into terms that their new partners can understand and find acceptable.**

cognitive networks

- The **cognitive praxis of ecological modernization** – this new phase of social development is seen to include a number of different activities that have a cognitive, or learning, dimension
- Environmentalists have come to be involved in a growing range of networks, businesses and consulting firms that can be characterize as a **new kind of green commerce**

from networks to business – the axioms of green business



from network to business: the axioms of green business

- Economic growth can be **reconciled** with the goal of protecting the environment
- Environmental technologies **can deliver solutions** to the challenges of industrialization, urban sprawl, population growth and the scarcity of resources
- Market is **growing** faster than expected

green growth – an engine of growth and employment

- Environmental technology is one of the most **important markets of the 21st century**
- Environmental technologies help companies to handle precious resources more **efficiently**
- Both now and in the future, this opens up vast potential to reduce costs and make business more **competitive**

PRESENTATIONS OF THE 4TH CALPESD

Economic trends

- All around the globe, green tech is proving to be a successful model **outstripping the forecasts** of industry experts
- Revenues in environmental technology industries will more than double to 3,100 billion by 2020

Example Germany

- Example Germany environmental technology around 8 % of Germany's GDP – in 2020 it will have climbed to 14 %
- Environmental technology is creating an increasing number of jobs
- Environmental technology ranks as one of the most innovative industries in Germany

employment through green growth

Market	Past	Future
Environmentally friendly power	14	21
Energy efficiency	11	15
Material efficiency	7	11
Water management and recycling	10	14
Sustainable waste management	11	14
Sustainable mobility	8	13

Past and future workforce growth in the various lead markets (%)

The six lead markets for green business

Lead markets for green business

Market	Value
Energy efficiency	100
Environmentally friendly power	80
Water management and recycling	60
Sustainable waste management	40
Material efficiency	30
Sustainable mobility	20

Pivotal role of the six lead markets:

- They constitute **attractive business propositions** and they can do a lot to preserve the very basics for all human life
- They help to **uncouple** the carriages of pollution from economic growth
- Moreover, using energy and resources efficiently will create **competitive advantages** for traditional branches of industry

Heinrich W. Wyes
Deputy Executive Director, CAREC

HEINRICH W. WYES- DEPUTY EXECUTIVE DIRECTOR- CAREC

Today's programme

- What strategy should be followed in resource mobilisation?
- What sources should you look for?
- How should your organisation first contact donors?
- What counts in terms of your strengths and credentials?
- What are the elements of a practical resource mobilisation strategy?
- What is the best way to write a funding proposal?
- What are some of the funding riches for your organization?
- Finally - what are some of the common problems to be avoided?

The six six for fundraising

- Get a Map of Donors
- Get Talking
- Go Out to Meet
- Get an Portfolio
- Get Back to the People
- Get Going!

What sources to look for?

Sources of funding:

- Prepare an overview of these various funding sources
- Priorities and criteria
- Donor analysis
- Procedures
- Types of support

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What counts in terms of your strengths and credentials?

- Visibility -
- Track record
- Engagement -
- Cost effectiveness
- Transparency and efficiency -

PRESENTATIONS OF THE 4TH CALPESD

<p>What are the elements of a fundraising strategy?</p> <p>Cultivate your funders:</p> <ul style="list-style-type: none"> • Exceed expectations • Do your homework • Be selective • Develop the relationship 	<p>What is the best way to write a funding proposal?</p> <p>Only good ideas make good funding proposals !</p> <ul style="list-style-type: none"> • Use convincing language • Ensure stakeholder participation • Highlight demand-driven aspects • Highlight relevance and linkages • Highlight implementation • Ensure value for money 	<p>What are some of the common problems to be avoided?</p> <p>Don't send unsolicited funding proposals to donors.</p> <p>Avoid writing a lengthy proposal. Twenty pages is the upper limit; add annexes if you have to.</p> <p>Keep the operational budget to a minimum, and don't ask for vehicles.</p> <p>If the request is successful, do not forget to thank the funder.</p>
<p>What are some of the common problems to be avoided?</p> <p>Don't send unsolicited funding proposals to donors.</p> <p>Avoid writing a lengthy proposal. Twenty pages is the upper limit; add annexes if you have to.</p> <p>Keep the operational budget to a minimum, and don't ask for vehicles.</p> <p>If the request is successful, do not forget to thank the funder.</p>	<p>Resource Mobilisation</p>	<p>Resource Mobilisation</p> <ul style="list-style-type: none"> • Integrated Resource Mobilization Strategy = Fundraising + Communication + Advocacy

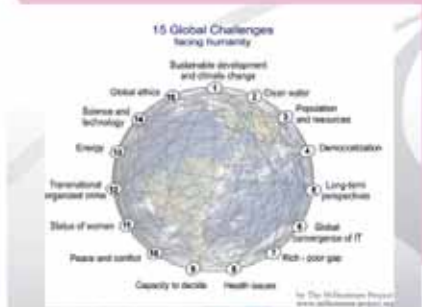
Heinrich W. Wyes
Deputy Executive Director, CAREC



Personal introduction:

- A few words about your biography
- Your motivation
- How do you define a „Young environmental leader“?
- The role of civil society

a talk about
challenges & courage



- The challenges are interdependent
- These challenges are transnational in nature and trans-institutional in solution
- They cannot be addressed by any government or institution acting alone
- They require collaborative action among governments, international organizations, corporations, universities, NGOs, and creative individuals

personal courage
institutional courage
private courage

PRESENTATIONS OF THE 4TH CALPESD



CAREC in the context of global and sustainable development issues



1. CAREC in a global- and regional context
2. CAREC's main programmes
3. What you can learn from CAREC's experiences

1. CAREC in a global- and regional context:

The five global development narratives:

- Changing patterns of poverty
- Sustainability oriented transformation of developing countries
- Transformation of international cooperation from aid to global public policies
- The future of regional governance
- The development implications of the New Middle Classes



REGIONAL CHALLENGES

- uneven economic development - dependence on raw materials
- short investment cycles
- aging infrastructure
- mutual dependencies - fragile mechanisms to cooperate
- international possibilities
- relations with emerging forms of sovereignty
- transforming institutional systems
- accelerated climate change impacts
- Lack of sufficient legal frameworks, transparency and accountability



CAREC's self understanding:

the catalyzing – and coordinating role of CAREC

CAREC in a global- and regional context

CAREC transforming risks into regional cooperation:

- By promoting cooperation between nongovernmental organizations, government agencies, businesses
- By addressing environmental problems at both the national and regional levels
- By promoting the exchange of information
- By assisting nongovernmental environmental organizations, and
- By enhancing public participation in the decision-making processes

CAREC in a global- and regional context

Regional environmental governance

- International Fund for the Saving of the Aral Sea (IFAS)
- Executive Committee of IFAS
- Interstate Sustainable Development Commission (ISDC)
- Interstate Committee on Water Coordination (ICWC)
- CAREC

CAREC'S GOVERNANCE:

The Board of CAREC comprises:

- a representative from each of the five countries (Vice Ministers of Environment)
- An elected representative from the NGO community of each of the five countries
- A representative from the OSCE and
- A representative of the German Ministry of Environment, representing the OECD EAP Task Force

PRESENTATIONS OF THE 4TH CALPESD

CAREC participating in international processes



environmental stewardship



2. CAREC's programme and its main achievements
1st and 2nd quarter 2013

- Water management and policy
- Environmental management and policy
- Support for transboundary cooperation (TWC)
- Water initiatives support
- Climate change and sustainable energy
- Water resources management

Environmental Management and Policy



- Facilitate multi-stakeholder environmental dialogues
- Facilitate the enforcement of the environmental legislation
- Promote the efficient environmental management tools
- Support local environmental initiatives and environmental management action plans
- Promote sustainable production and consumption

Environmental Management and Policy Programme (EMP):

- Asia-Pacific Adaptation Network (APAN) & Drynet
- Payment for Ecosystem Services (PES)
- Shared Environmental Information System (SEIS)
- Assessment of Assessments (AoA)

Water Initiatives Support



- Promote the integrated water resources management (IWRM) approach in Central Asia
- Support the regional water cooperation and transboundary water resources management (TWRM)
- Assist stakeholders to enhance the water use efficiency in Central Asia
- Reduce the level of pollutants concentration in surface and ground water
- Streamline the standards and policies on water management in Central Asia

Water Initiative Support Programme (WIS)

- Assessments of pilot territories
- Capacity building
- Establishment of basin councils in pilot watersheds.

Water Initiative Support Programme (WIS)

- USAID: "Fostering transboundary cooperation on small watersheds in Central Asia"
- Norwegian Ministry of Environment: "Support towards local initiatives in the environmental governance and water resources management in CA"
- EU-GIZ: "Supporting water management and strengthening transboundary river basin administrations in CA" and
- EU-GIZ: "Capacity building on river basin planning for water management organizations and joint river basin structures"

Climate Change and Sustainable Energy



- Bring local practices to develop joint-private partnerships for climate change mitigation and adaptation
- Promote local maintenance and post-harvest strategies
- Enhance the energy efficiency and increase the use of renewable energy in Central Asia

Climate Change and Sustainable Energy Programme (CCSE)

- To promote new international financing mechanisms
- to assist the governments in development of policies for promotion of renewable energy and energy efficiency
- Capacity Building

Climate Change and Sustainable Energy Programme (CCSE)

- IKI – DIW: "Integrated Approach for the Development of Low Carbon Development Strategies in Central Asia"
- EU: "Sustainable Energy Programme for Central Asia"



PRESENTATIONS OF THE 4TH CALPESD

Education for Sustainable Development



- Develop the discipline and networks to exchange experience and best practice on ESD in Central Asia
- Develop the legislative and institutional basis to promote ESD in the educational systems of Central Asian countries
- Improve the national education standards and ESD programmes in Central Asia
- Develop the capacity of stakeholders in ESD and sustainable development
- Advance modern educational and methodological materials on ESD

Education for Sustainable Development Programme (ESD)

- To integrate the concept of sustainable development (SD) and ESD principles, values, approaches, and methodologies into education systems of CA states,
- To raise awareness, capacities and practical experience on SD issues and ESD principles;
- To adapt SD and ESD to local conditions;
- To facilitate and support sub-regional multi-stakeholder dialogues, and
- To represent CA states in global and regional ESD processes and promoting understanding the role of ESD

Education for Sustainable Development Programme (ESD)

- GIZ – IKI – Goethe Institute “Green Pack for Central Asia - Glacier Edition” for Kazakhstan and Kyrgyzstan
- UNDP – Coca Cola “Caspian Green Pack” for Kazakhstan (UNDP, Coca-Cola)
- COMO East Covenant of City Majors Project
- ITA – WHD-EUIRD: SEARCH – School Environment and Respiratory Health of Children
- EU EMPUS: I-WEB (Water, Education and Business)
- UN-ESCAP, NDR: Central Asian Leadership Programme
- ICFI: E-Learning Portal on Energy efficiency and renewable energy

Civil Societies Initiatives support



- Provide dialogue platform for environmental NGOs, their representatives and politicians at the international conferences, forums and forums online
- Support development of environmental NGOs
- Develop and conduct the development and implementation of the projects on CA priorities

Information and Capacity building

- Information, awareness and capacities are key prerequisites for improving the current environmental situation in CA region. I
- CAREC aims to address awareness gaps of the CA governments, experts, civil society, private sector and media in all CA countries on important and yet unaddressed areas in environmental governance and integration, thus, providing them with knowledge and tools to improve their overall performance

Information and Capacity building

- EU project: “Targeted awareness raising for EU-CA partnership (AWARE)” to increase awareness on environmental issues in water management, environmental governance and climate change in five Central Asian states

CAREC’s achievements

- Understanding resource mobilisation: = political advocacy + communication + fundraising
- Moved CAREC from an asymmetrical resource mobilisation - to a symmetrical situation
- Transition from a core funded organisation into a project financed organisation
- Great achievement: Start up phase – but now we move to a consolidation phase

2. Challenges for CAREC

- Transition period
- Financial sustainability
- Staffing
- Strengthening CAREC country offices
- Strategic orientation in a regional- and global context

Resource Mobilisation

- Moved CAREC from an asymmetrical resource mobilisation - to a symmetrical situation
- Transition from a core funded organisation into a project financed organisation
- Great achievement: Start up phase – but now we move to a consolidation phase

factors in CAREC’s sustainability:

- ✓ resource mobilisation
- ✓ transparency
- ✓ motivation
- ✓ inhouse culture
- ✓ life work balance

Challenges in RMB

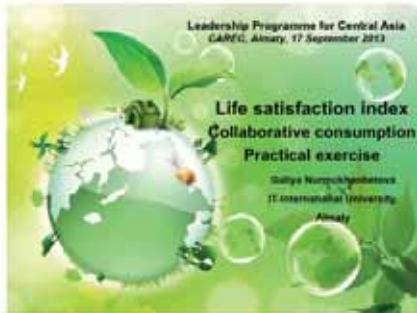
- Overtendering
- donor fatigue
- donor burning
- Lack of qualified staff
- Role of country offices
- Prerequisites for tenders
- Consortia building
- No local donors

Cause development

- From anecdotal fundraising to cause development
- Understanding resource mobilisation = political advocacy + communication + fundraising

PRESENTATIONS OF THE 4TH CALPESD

Galiya Nurmukanbetova
IT International University, Almaty



- The concept of "Sustainable Development"
- GDP – definitions and drawbacks
- Alternative indices to GDP
 - ISEW, MDP, SWB...
 - Human Development Index
 - Happy Planet Index
- Moving towards Happy Earth

- What does mean "sustainable"?**
- Sustainable development: "Development that meets **needs** of present without compromising the ability of future generations to meet their own needs." (Brundtland)
 - Working towards **one-planet** living within our environmental **limits**.
 - Accounts needs and interests of **future generations** (inter-generational equity)

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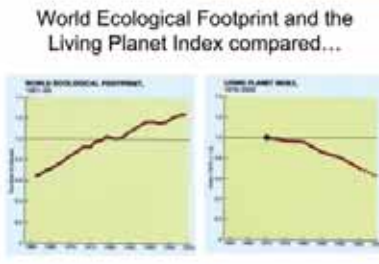
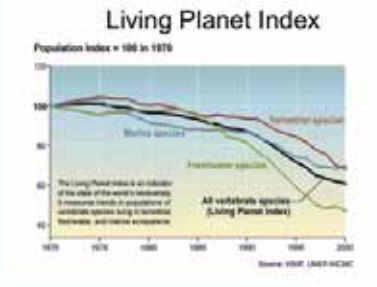
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- Any suggestions?**
- MDP – Measure of Domestic Progress (based on 58 indicators!)
 - SWB – Subjective Well-being
 - ISEW – Index of Sustainable Economic Welfare
 - GNH – Gross National Happiness (Bhutan)
 - GPI – Genuine Progress Indicator
 - ESI – Environmental Sustainability Index
- Mmm... A kind of "lost in abbreviations"...

Living planet index

- **Living planet index** - It is an indicator of the state of the world's biodiversity, measuring trends in populations of vertebrate species living in terrestrial, freshwater, and marine ecosystems around the world (measured in units which are % of diversity compared with that in 1970).



- Human Development Index**
- HDI – composite index measuring the average achievements of a country in **three basic dimensions**:
 - life expectancy at birth
 - knowledge (literacy and educational enrolment)
 - living standard (GDP per capita)
 - People and their capabilities (NOT economic growth) are the ultimate criteria for assessing the **development** of a country.

PRESENTATIONS OF THE 4TH CALPESD

Weaknesses and Limitations of HDI

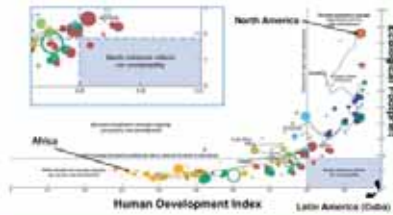
- HDI has been proposed by UN and so has to follow UN's own low-, middle- and high-development categories.

Low development: Africa*
 Middle development: Middle East, West Pacific, Central and South America, Southeast Asia, Central Asia, Transition countries
 High development: North America, Australia & NZ, Europe

- Does not account ecological aspects of sustainability.
- Does not include political or civil issues.

*Here heading. Study the website your assigned index on TED.com

Human Development and Ecological Footprint



Happy Planet Index

- HPI estimates the ecological efficiency with which nations deliver happy and long lives for their populations.



3 Components

- Ecological efficiency — Ecological footprint
- Happy life — Life satisfaction
- Long Life — Life expectancy

Happy Planet Index

$$HPI = \frac{\text{Life Satisfaction} \times \text{Life Expectancy}}{\text{Ecological Footprint}}$$

HPI – average number of **happy years** produced by a given nation per unit of planetary resource consumption.

$$\text{Life Satisfaction} \times \text{Life Expectancy} = \text{Happy Life Years}$$

Components of HPI

Ecological footprint → Total area of bio-productive land that is required to sustain a population and its associated level of resource consumption

Bi-productive area / Total population = 11.4 gha / 6.3 bn
 Ecological Footprint < 1.8 gha per person

Life satisfaction → Self-reported data, overall evaluation of life.

Life expectancy → Number of years the person born in a given country can be expected to live.

! No income measure (does not include GDP)

Well-being

- Basic materials for good life
- Security
- Health
- Good Social Relations
- Freedom of choice and action

Well-being correlates with **life satisfaction**, but life satisfaction also accounts personal **values and attitudes**

HPI vs GDP per capita

Linear dependence up to \$5,000!
 Then GDP is increasing, but HPI is decreasing



Nov. 2008

Hypothetical HPI Scores

	Life Satisfaction	Life Expectancy	Footprint	HPI
High-Well-being / Low-Product	75	80	1.8	32.2
High-Well-being / High-Product	75	80	3.3	36.0
Low-Well-being / Low-Product	65	80	1.8	30.0
Mid-Well-being	65	80	3.3	30.0

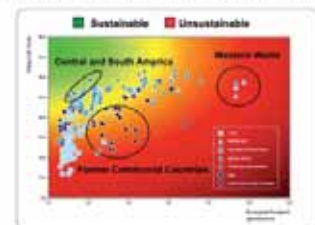
Life Satisfaction > 7 Life Expectancy > 75 Footprint < 1.8

HPI > 60

	Low-Well-being	Mid-Well-being	High-Well-being	Footprint
Life Satisfaction	< 65	65-75	> 75	< 1.8
Life Expectancy	< 75	75-80	> 80	< 1.8
Footprint	< 1.8	1.8-3.3	> 3.3	< 1.8

Nov. 2008

Happy Life Years vs Ecological Footprint



Nov. 2008

HPI for Countries

Countries	Life Sat.	Life Exp.	EP	HPI
Colombia	73.0	73.4	1.9	62.2
Costa Rica	73.0	76.0	1.8	66.0
Poland	72	74.5	1.8	65.5
Honduras	62	72.8	1.8	61.8
Guatemala	60	70.2	1.9	61.7
Kazakhstan	5.5	61.2	2.8	36.0
Russia	66	65.3	6.8	31.8
Ethiopia	51	51.3	0.8	24.7
Liberia	48	49.1	0.3	22.2

Nov. 2008

Why "THE HAPPY PLANET INDEX" ?

- Former Communist Countries:

- Rapid industrialisation
- ...and Environmental disasters



Cont'd

- Perestroika, economic recession, unemployment...
- Cultural difference

...Russian melancholy

- Рыда неумога немца-продукта?
- Чего делать?
- Кто виноват?
- Горе от ума...



HPI is low, because Life satisfaction is low

PRESENTATIONS OF THE 4TH CALPESD

Cont'd

African Countries

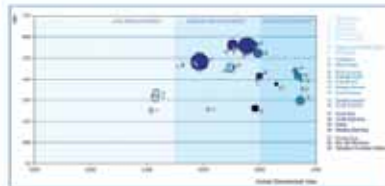
- HIV, AIDS outbreaks
- Malaria, poor sanitation
- Malnutrition

...and high death rates



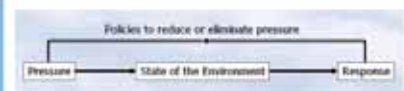
HPI is low, because Life expectancy is low

HDI vs HPI



Nov. 2006

Pressure-State-Response Model



Transition to adjust our lives towards greater sustainability

Moving towards Happy Earth

Our Home



References

- European Parliament's Committee on the Environment, Public health and Food safety. 2007. Alternative progress indicators to Gross Domestic Product (GDP) as a means towards sustainable development.
- New economics foundation. 2007. The happy Planet Index.
- WWF International, Institute of Zoology and Global Footprint Network. 2006. Living Planet Report. WWF New Economics Foundation

Tatyana Shakirova
ESD Programme Manager, CAREC

United Nations Economic Commission for Europe Steering Committee on Education for Sustainable Development

Panel discussion: "Taking stock and looking forward - Education for Sustainable Development in the context of the United Nations Conference on Sustainable Development"

Sustainable thinking

Tatyana Shakirova
CAREC ESD Programme manager

"Rethink, refuse, reduce..."
Education for sustainability in a changing world - Ken Webster, FSC, 2004

- The challenges of consumerist and individualistic culture, rapid globalization and the clear presence of the effects of global warming, add to increasing inequality and loss of biodiversity.

Interrelations between different concepts:

- Sustainable Development
- Education for sustainability
- Sustainable thinking
- Green economy
- Green thinking

Sustainable development

- "... sustainable development is a complex issue, encompassing economic, environmental and social dimensions. In other words, development is essential to satisfy human needs and improve the quality of human life. At the same time, development must be based on the efficient and responsible use of all of society's scarce resources - natural, human and economic

Appendix 2 to the UNECE Strategy on ESD

Sustainable development

- Sustainable development requires a shift in the mental models which frame our thinking and inform our decisions and actions. UNESCO 2005; UNESCO 2009). This is reflected in national and international policies from around the globe as well as the goals of specific national and regional programmes.
- This combined understanding of sustainable development provides the foundation for ESD efforts and informs the intended contributions of ESD activities to sustainable development.

Education for Sustainable Development. An Expert Review of Processes and Learning. Prof. Danielle Tibury (University of Gloucestershire, United Kingdom) is the author of this publication commissioned by UNESCO, UNESCO, 2011

Sustainable development

"Sustainable development is a way of thinking about how we organize our lives and work - including our education system - so that we don't destroy our most precious resource, the planet ... It must be much more than recycling bottles or giving money to charity. It is about thinking and working in a profoundly different way."

Department for Education and Skills, UK, 2005, p.6
Education for Sustainable Development. An Expert Review of Processes and Learning. Prof. Danielle Tibury ... UNESCO, 2011

PRESENTATIONS OF THE 4TH CALPESD

What are the main linkages between ESD and the green economy?

- "Education, in addition to being a human right, is a prerequisite for achieving sustainable development and an essential tool for good governance, informed decision-making and the promotion of democracy. Therefore, education for sustainable development can help translate our vision into reality"

the UNECE Strategy for ESD, 2005



What are the main linkages between ESD and the green economy?

- "ESD is the instrument for achievement of sustainable development, as well as mobilizing people for SD.
- The purpose of ESD is to empower individuals, groups, communities, organizations and countries to take actions towards sustainable development.
- Linked to different needs and living conditions of people as well as to local cultures, ESD at the same time promotes universal values and competences for good governance, informed decision-making and the promotion of democracy in order to make our world safer, healthier and more prosperous"

the UNECE Strategy for ESD, 2005



What are the main opportunities/topics for creating synergies?

15. Key themes of SD include among other things poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, security, human rights, health, gender equity, cultural diversity, **rural and urban development, economy, production and consumption patterns, corporate responsibility**, environmental protection, natural resource management and biological and landscape diversity. Addressing such diverse themes in ESD requires a holistic approach.

The UNECE Strategy for ESD, 2005



The second national implementation reporting, conducted in 2010, showed that

- still the environmental component of sustainable development largely prevails. As in phase I of the implementation of the Strategy, least attention is given to the economic conceptualization of sustainable development, in particular little attention is given to the issues of **corporate social responsibility and rural/urban development**. If these themes are addressed they solely find a place in the higher ISCED levels.

ISCED stands for International Standard Classification of Education as designed by UNESCO.
UNECE, Learning from each other. Synthesis report on the first mandatory reporting cycle. Advanced draft, (2011).



Sustainable thinking

13. A prerequisite for achieving a shift in economic thinking is learning about and understanding of the concept of sustainable development as well as of the link between the multiple crises to unsustainable economic activities. It might entail a re-orientation of values and attitudes and has to encompass a broad variety of actors, ranging from the individual consumer, to policy makers and multinational corporations.

Discussion paper on the role of Education for Sustainable Development in shifting to a green economy



Sustainable thinking

14. In order to prompt and facilitate the re-thinking process, neither financial incentives, nor regulations or the pure transmission of knowledge about sustainable development will be sufficient.
Therefore the concept of ESD is a unique and valuable approach to greening the economy, since it is designed in a way to facilitate the development of values and to initiate the re-consideration of existing values and attitudes.

Discussion paper on the role of Education for Sustainable Development in shifting to a green economy



How can ESD in the UNECE region make an even stronger contribution to greening the economy?

15. However while the ESD concept addresses explicitly all three pillars of sustainable development, the practical implementation of ESD in the UNECE region is still very much focused on the environmental pillar. In 2007, the national implementation reporting under the umbrella of the UNECE Strategy for ESD has revealed that it is mostly the environmental component of ESD that is addressed in the region. Most sustainable development conceptualizations are of ecological and environmental nature.

UNECE, Learning from each other. (Geneva, 2007)



How can ESD in the UNECE region make an even stronger contribution to greening the economy?

16. While ESD is conceptually well equipped with shifting people's mind towards a greener economic thinking, there is the challenge and opportunity to further explore this area of ESD in the UNECE region in practice. The green economy process could be a chance to advance a holistic implementation of ESD. Embracing also the economic component of ESD might be necessary to foster the transition to a green economy in the region.

Discussion paper on the role of Education for Sustainable Development in shifting to a green economy



The role of ESD in shifting to a green economy

- The working definition of UNEP describes a "green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (...) a green economy can be thought of as one whose growth in income and employment is driven by public and private investments that lead to enhanced resource efficiency, reduced carbon emission, waste and pollution, and prevention of biodiversity loss and ecosystems degradation"

UNEP, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers. (2011), p. 5.



The role of ESD in shifting to a green economy

- A similar, but broader definition is provided by the United Nations Economic and Social Commission for Asia and the Pacific, which states that a "green economy can be defined as an economy where economic prosperity can go hand-in-hand with ecological sustainability."

ESCAP, Conceptual Framework of Green Economy and Green Growth. (2011), p.1



The role of ESD for greening the economy

- ESD is one key element for achieving transformation, since it is able to change people's mind towards valuing sustainability.
- ESD and green economy are two sides of the same coin.
- ESD can contribute significantly to greening the economy because it has the ability to equip people with values, competences, knowledge as well as skills which are necessary for them to put the green economy concept into practice.



The role of ESD for greening the economy

- ESD should be a pillar for implementing the green economy concept, since key issues for the transition to a green economy, i.e. raised awareness, public participation, sustainable consumption as well as re-skilling the labor force - are essentially connected to a shift in people's attitude towards sustainable development.



PRESENTATIONS OF THE 4TH CALPESD

A variety of views on the policies and sectors that should be at the centre of greening the economy

- Among countries and major organizations a variety of views persists concerning the policies and sectors that should be at the centre of greening the economy... In addition there appears to be wide agreement that greening the economy needs to be adapted to regional and national needs.


General Assembly, First Intersessional Meeting for the United Nations Conference on Sustainable Development: Synthesis Report on Best Practices and Lessons Learned on the Objective and Themes of the Conference, (2011). Available from <http://www.unctad.org/files/intersessional/Synthesis-Report-Final.pdf>



At the regional level, the substantive document for the 7-th Conference "Environment for Europe"


- in order to achieve a green, inclusive and competitive economy in the UNECE region, a comprehensive policy-mix will be needed. The policy-mix follows an integrated approach, which includes major economic sectors such as transport, housing, energy and agriculture and also the promotion of education as a cross-cutting issue.

UNECE, Mainstreaming the Environment into Economic Development



How sustainable thinking is facilitated in practice in Central Asia:

- Specific CA examples:
 - Central Asian Initiative (WSSO, 2002)
 - "Green Bridge Initiative" of Kazakhstan (2010)
 - Green Growth – as a theme of the 6-th Asian-Pacific Conference in Astana in 2010 – MCEB-6
 - Greening the Economy – as a theme of the 7-th Conference "Environment for Europe" in Astana in 2011
- Outstanding CAREC project results:
 - Course for bachelors of technical universities of Kazakhstan "Energy Efficiency and Sustainable Development" (2008-2009)
 - Courses for Sustainability for Kazakhstani and CA governmental officials (multi-sectoral cooperation)
 - Green Pack for Central Asia (2010-2011)




Sub regional/National processes, projects for greening economy

- New discipline "Energy Efficiency & SD" for the Higher Technical Education System of Kazakhstan (Chevron, GEF SGP) – 2008-2009
- 40 governmental officials from 10 ministries are trained at the Course for Sustainability (REC, ITI, VIU, IMELIS) – 2008-2009
- 20 governmental officials from 3 ministries – education, environment and energy of Kaz, Kg, Tj, Trm, Uz are trained at the Course on SD and ESD (UNESCO) – 2009
- Developed "Green Pack CD-ROM for Central Asia" (REC, Chevron, OSCE, UNESCO, GEF SGP) – 2009-2010. Approved & recommended for Kazakhstani education system.
- CA Leadership Programme for EP & SD (2010-2013)
- Developed "Glaciers Green Pack for Central Asia" and "Caspian Green Pack" in 2012-2013 (CAREC, REC, UNDP, Coca-cola, BMU, GIZ, Goethe Institute)



How does ESD promote and facilitate Sustainable Development?

- Learning about Energy Efficiency provided opportunities for young people to become change agents for sustainability.
- In future years they will show leadership and advocacy to address climate change and energy efficiency in universities, offices and homes, and they will help to shift understanding and actions to promote energy saving.
- Students' new knowledge, skills and competences will lead to changes in behavior and decision-making processes on issues of sustainable energy, energy efficiency and the introduction of renewable energy sources in Kazakhstan. This will lead to informed decision-making and help to reduce negative impacts on the environment.



How does ESD promote and facilitate Sustainable Development?



- The most important and immediate effect of this project is to contribute to challenging the citizens of Kazakhstan to reduce exploitation of natural environmental resources such as oil and gas, and to introduce and promote more sustainable energy sources and energy efficient technologies, to serve the wellbeing of future generations.



DR Lian Lundy
Middlesex University, UK

Integrating Water cycle management: building capability, capacity and impact in Education and Business (I-WEB)

Dr Lian Lundy
Middlesex University, UK

EU TEMPUS I-WEB

- Why?
- What?
- Who?
- How?

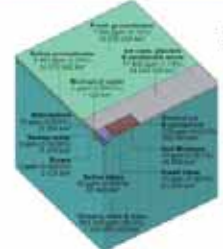


EU TEMPUS I-WEB

- Why?
- What?
- Who?
- How?



Water distribution on earth



Each small cube = 100km³ of water

Our current impact?

- Collapsing fisheries, shrinking forests, eroding soils, expanding deserts, falling water tables, more destructive storms, melting glaciers, rising sea levels, dying coral reefs, disappearing species....
- Additional 2.1 billion people predicted to live on the planet by 2050
- Intergenerational responsibility?



Photo credit: www.blog.santitas.com

Do we have the resources?

Can we change?

- 1972: no country had a government ministry for the environment
- 1902: petroleum ~2% of energy supply (and growing)
- 2013: renewables ~2% of energy supply (and growing)

Can we afford it?

- US\$ 200 billion: cost estimated to supply every city, town and village with clean water and sanitation
- US\$200 billion: estimated cost spent on advertising in US every year.

Do we have the will to change from short-term interest to collective survival?

PRESENTATIONS OF THE 4TH CALPESD

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Do we have the will to change from short-term interest to collective survival?

World water withdrawal



<http://www.earthsumo.com>

EU TEMPUS I-WEB – what?

Integrating Water cycle management: building capability, capacity and impact in Education and Business

- Integrating Water cycle management
- Building capability, capacity and impact
- Education and Business



EU TEMPUS I-WEB

• Integrating Water cycle management:

- surface and groundwater management
- water supply, sanitation, stormwater management and industry agriculture
- academic, regulation, business, practice
- co-identification of current and emerging graduate skills
- environmental-social-economic-technical teaching platform
- inclusion of business/regulatory expertise within teaching programmes
- reference to international best practice

• Building capability, capacity and impact
• Education and Business



EU TEMPUS I-WEB

• Integrating Water cycle management

• Building capability, capacity and impact

- increased numbers of graduates develop skills to support the sustainable use of surface and ground waters
- technical skills e.g. analytical skills (GC-MS, ICP-AES), GIS, modelling
- soft skills e.g. critical thinking, stakeholder engagement, language, presentation skills
- integrated environmental-social-economic technical teaching platform
- opportunities to broaden participation e.g. CPD courses
- links with accreditation by professional bodies

• Education and Business



EU TEMPUS I-WEB

• Integrating Water cycle management

• Building capability, capacity and impact

• Education and Business

- Bologna process and Tuning methodology; experiential learning approaches; constructive alignment
- Collaboration between academia, regulation and business - key component of KZ's national higher education policy
- Co-identification of current and emerging graduate skills
- Inclusion of business/regulatory expertise within teaching programmes
- Identification of business / regulatory research needs as themes for MSc and PhD dissertations



I-WEB: who are we?

Partner	City	Country
Middlesex University	London	UK
Al-Farabi Kazakh National University	Almaty	KZ
Ahmed Yasar International Kazak-Turkish University	Turkistan	KZ
Kokshetau State University named after Shokan Ualikhanov	Kokshetau	KZ
Universität Leipzig	Leipzig	DE
Universitat Politècnica de València	Valencia	ES
University of Cyprus	Nicosia	Cy
The Regional Environmental Centre for Central Asia	Almaty	KZ
Institute of Professional Development and Retraining	Kokshetau	KZ
Kazakh Scientific Research Institute of Water Economy	Taraz	KZ
Institute of Geography of the Republic of Kazakhstan	Almaty	KZ
Kazakh Research Institute of Fishery	Almaty	KZ
Ministry of Education and Science Control Committee	Almaty	KZ
National Accreditation Centre, Ministry Education & Science	Almaty	KZ
Fund Zhas Olan, Almaty region	Kokshetau	KZ

EU TEMPUS I-WEB – how?

Key operational actions for I-WEB

1. Collaborative establishment of a clear operational plan
2. Critical evaluation of current IWCM and educational practices
3. Development and delivery of intensive IWCM and educational modernisation training courses
4. Development of the educational framework
5. Delivery of MSc and PhD programmes and collaboration with industry
6. QA and on-going implementation of MSc and PhD programmes



I-WEB: key deliverables

- Validated IWCM MSc and PhD courses recognised by universities and programmed to run in subsequent years
- Adoption of International Advisory Board
- Institutionalisation of I-WEB quality assurance project and programme processes
- Multi-disciplinary, cross-sectoral IWCM text books



I-WEB (2012-2015): achievements so far

- EU fact-finding mission to understand current water management and educational practices in KZ
- Completion of questionnaires by (almost!) all partners including a range of external NGO and industry partners
- Hosting of the 1st International Advisory Board meeting
- Training of 15 KZ teachers in IWRM, business and pedagogic development hosted by the University of Cyprus
- Hosting of a specialist workshop on IWRM methods (output of the workshop is a student textbook)
- Funding of English language classes



Can I get involved?

- Join our I-WEB mailing list for updates on activities
- Join our International Advisory Board
- Attend our final conference in Almaty in 2015

- Get involved in your own EU ERASMUS+ project: information on its launch at: http://ec.europa.eu/education/news/20120710-erasmus-plus-preparation_en.htm

*Note: The publication only reflects English language presentations. All presentations are available for download by the following link: <http://www.ex.ua/944440138933>

PRESENTATIONS OF THE 4TH CALPESD

List of Presentations

- Introduction to the 4th Central Asian Leadership Programme on Environment for Sustainable Development – Tatyana Shakirova, CAREC
- Astana initiative "Green Bridge"- Partnership Program for European and the Asia-Pacific region towards the "Green Growth" – Ludmila Kiktenko, CAREC
- Leadership Skills and Qualities – Yekaterina Strikeleva, CAREC
- Corporate leaders for sustainable development – Artyukhina G.V., Kazakhstan Association of Natural Resource Users for Sustainable Development
- Green Growth, Fundrising and Resource Mobilization – Heinrich W. Wyes, CAREC
- "Refuse, reduce, rethink", New life style and values for SD promotion – Dariya Gylmzhankyzy, Ecoldea
- Human capital and sustainable development – Vladimir Oskolkov,
- Life satisfaction index, Collaborative consumption, Practical exercise – Galiya Nurmukhanbetova, IT-International University, Almaty
- The Project of the European Commission Initiative "Covenant of Mayors - East" – Olar Maxim, CoMo-East
- 4th Central Asian Leadership Programme on Environment for Sustainable Development. An integrated approach to the development of low-carbon economy strategies in Central Asia, NAMA – Asel Sakibzhanova, CAREC
- Global challenges of modern society and the role of education for sustainable development – Tatyana Shakirova, CAREC
- Panel discussion: "Taking stock and looking forward - Education for Sustainable Development in the context of the United Nations Conference on Sustainable Development" - Tatyana Shakirova, CAREC
- Roundtable Discussion: competences for Education for Sustainable Development - Tatyana Shakirova, CAREC
- "Caspian Green Pack for Greening the Economy" - Tatyana Shakirova, CAREC
- International Water Law – Dr. Barbara Yanush-Pawletta, German-Kazakh University
- Project - Raising Environmental awareness to improve the partnership between the EU and Central Asia (AWARE) / Green Business Club Central Asia – Arailym Shulgauova, CAREC
- E-Learning for Educators - Galia Nurmukhanbetova, International University of Information Technologies
- Green Economy: Challenges and prospects of development of the private sector – Guljamal Issayeva
- Ways to promote the water sector to the "green economy." – Igor Petrakov
- Legal framework of integrated water resources management in Central Asia
- The role of sustainable production and consumption in achieving sustainable development - Faima Urazaeva, "Centre for Sustainable Production and Consumption"
- Legislative basis for the possible implementation of IWRM principles, design and implementation of basin plans - Alexander Nikolayenko, GIZ
- Integrated water resources management: concept and key elements – Alexander Nikolayenko, GIZ
- Small transboundary rivers in Central Asia: Aspara, Isfara, Ugham – Yekaterina Strikeleva, CAREC
- Water quality in Central Asia - Guljamal Jumamuratova, CAREC
- Development of the Basin Plans – Yekaterina Strikeleva, CAREC
- Recycling water supply in Central Asia – Anna Inozemtseva, CAREC
- Adaptation to climate change at the community level (ACCCL) in Kazakhstan (the experience of projects in Kazakhstan) – Yekaterina Yushenko, GEF SGP
- Adaptation to climate change in Central Asia – Rustam Arstanov, CAREC
- Water and human health – Iskandar Mirhashimov, Kazakh Agency of Applied Ecology (KAAE)
- CAREC Water initiatives support programme. The Project "Clean drinking water for rural communities." - Iskandar Mirhashimov, KAAE
- CAREC programme "Clean Water for rural settlements" - Iskandar Mirhashimov, KAAE
- Water resource protection in Central Asia: transboundary and national aspects - Iskandar Mirhashimov, KAAE
- Introduction: climate change scenarios, impacts, and adaptation needs with the focus on water sector - Bekturova G.B., expert
- Socio-Technical Aspects of Water Resources Management – Dr. Iskandar Abdullaev, CAREC
- Integrating Water cycle management: building capability, capacity and impact in Education and Business (I-WEB) – Dr. Lian Lundy, Middlesex University, UK
- "Examination for a better environment" – Saniya Kartayeva, CAREC
- The Aarhus Convention and the development of SEIS in Europe - Saniya Kartayeva, CAREC
- Global impact starts with local in-house changes. Case study of Environmental Partnership Foundation (Nadace Partnerstvi), Czech Republic - Marie Rimanova
- Working on Sustainable Water Solutions Globally. Case studies from Pakistan and Afghanistan. Experience of ZOA, the Netherlands - Geke Kieft

REFLECTION IN PICTURES

Day 1



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Day 2 (Yoga)



REFLECTION IN PICTURES

Day 3



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Day 4



Интегрированное управление водными ресурсами:
Концепция и основные элементы



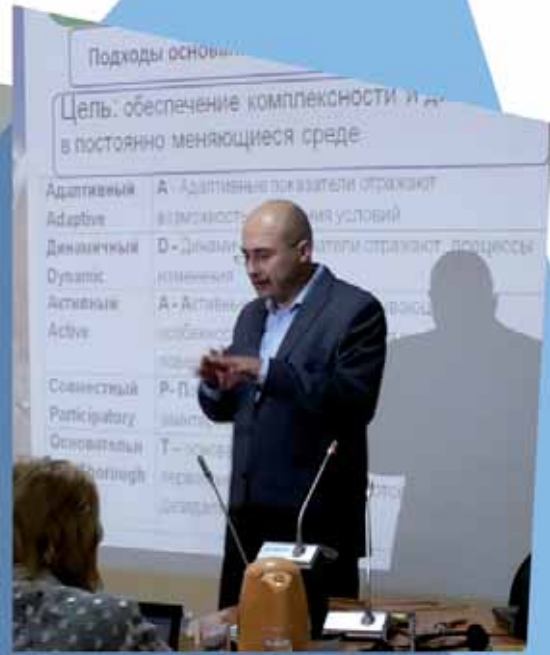
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Day 5



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Day 6



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Day 7 (Eco-village)



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Day 8



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Day 9 (Final)





To be continued...

United Nations Environment (UNEP)

UNEP is the United Nations system's designated entity for addressing environmental issues at the global and regional level. Its mandate is to coordinate the development of environmental policy consensus by keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action. UNEP's Environment Education and Training Unit (EETU) is responsible for the implementation of Environment Education and Training Activities in close collaboration with all UNEP Divisions through the three pillars of Education, Training and Networking. EETU's activities are founded on UNEP's mission of inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations.

Central Asia Regional Environmental Centre (CAREC)

CAREC's mission is based on decisions on the field of environment protection and sustainable development adopted during recent years and also on positions reflecting a contemporary understanding of the essence of environmental and development problems. CAREC's role:

- Bridging Europe, Asia and Pacific environmental processes;
- Independent and neutral platform and catalyst for cooperation on SD issues within CA and beyond;
- Contribute Global, Regional, European and Asian environmental initiatives through the own activities;
- Support Central Asian Initiatives: CAI and Green Bridge Initiative;
- Develop mutually beneficial cooperation with part-

OSCE Centre Astana

With 57 States from Europe, Central Asia and North America, the OSCE is the world's largest regional security organization. It offers a forum for political negotiations and decision-making in the fields of early warning, conflict prevention, crisis management and post-conflict rehabilitation, and puts the political will of its participating States into practice through its unique network of field missions.

The OSCE has a comprehensive approach to security that encompasses politico-military, economic and environmental, and human aspects. It therefore addresses a wide range of security-related concerns, including arms control, confidence- and security-building measures, human rights, national minorities, democratization, policing strategies, counter-terrorism and economic and environmental activities. All 57 participating States enjoy equal status, and decisions are taken by consensus on a politically, but not legally binding basis.

Royal Ministry of the Environment of Norway

The Ministry of the Environment has a particular responsibility for carrying out the environmental policies of the Government. Norway will assume a leadership role in environmental policies and play an active and constructive role both in the solution of global and regional environmental problems and in the solution of environmental damage in Norway, which is due to activities, and emissions in other countries.

Norway will put great emphasis on facilitating international conditions in non-environmental areas, which promote an environmentally favourable development at the global, regional and national levels. The aim of the Norwegian effort is to improve the environmental situation and promote a more sustainable development in neighbouring areas and on developing countries.

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