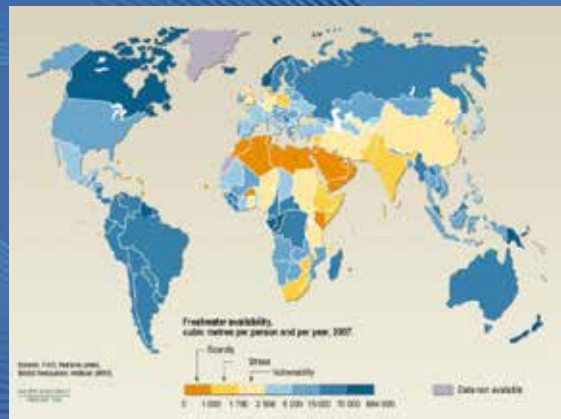


International Inner Wheel
Women for Europe 5 - WfE5



Espoo, Hanasaari 29th and 30th March 2014
Hosted by Inner Wheel Finland District 142



In Women for Europe 5 Conference (WfE5) the participants will show responsibility for the future of the world.

Organizing Committee | Inner Wheel



Raija Partanen
District Chairman,
D142, Inner Wheel Finland



Kaija Keijola
Past District Chairman,
Content Organizer,
D142, Inner Wheel Finland



Pirkko Kiiikka
Past Board Director,
Chairman of
the Organizing Committee,
D142, Inner Wheel Finland



Hannele Karhunen
Board Director,
Communication and Marketing,
International Inner Wheel

Inner Wheel Organization was founded in England 90 years ago and the first club in Finland year 1958 in Järvenpää. During the 55 years Inner Wheel has shown the ability to serve as one of the important voluntary organization in Finland. Inner Wheel is known as the donator of drug sniffer dogs to the Customs and for the education of 20.000 children yearly by Life Education Foundation. District 142 has collected money to be donated also to the Children's Hospital Project 2017.

Finland is a country of innovations. In all fields there is a large number of researchers, who work with devotion for the better future.

In Women for Europe 5 Conference (WfE5) the participants will show responsibility of the future of the world. The Theme is Let's leave our Children a Sustainable Planet. Based on the presentations during the WfE5 conference we'll decide what kind of actions and practices we can plant into our daily decision making for the future.



Pirkko Kiikka
Welcome

Welcome to this conference which will open a new era for Inner Wheel clubs. We will be moving with friends towards service and deeper understanding. We will also struggle towards practical actions.

We are worried about the situation in World and that means we are worried about the development our Planet has to go through. There are different opinions about the warming up progress, is it air, the seas, the water the lack of energy and food, getting older or are there any other threats we have to consider as the worst enemy of the Globe. What will we leave to our children. We need to show that we care.

Today we will get some information so that we can form our opinions and try to convince our members around the world that this is something we can do together and this is something we have influence in. Every member and every club counts. We need to work within the

demands of today's women. This conference gives us an opportunity to get inspired of our diversity.

We all can do something and today and tomorrow we will learn which areas are the most threatened and which steps we all can take. I quote Eleanor Roosevelt who said: "Stop talking about darkness and light a candle".

I am sure that we will learn about great efforts and projects which have been going on around the world with the help of Inner Wheel members.

Ladies and gentlemen, change, keep changing and never stay still. I wish you all a very productive and inspirational conference.

Pirkko Kiikka
International Inner Wheel
Past Board Director
Chairman of the Organizing Committee



Gabriella Adami
Greetings



I was born in Terni as you all might know, in the "Green Heart of Italy" so the green values are a natural part of my life. During my Inner Wheel career I have served the organization in many different positions.

As Inner Wheel members we are capable and also have continuity in our minds. Sustainability of the Globe should deeply concern us all around the world. I am glad to be here with you and share this conference. This is a great opportunity to cherish my Motto "We, for Women" and start looking for the well-being of next generations.

Changes are requested in the attitudes. We must change our way of thinking, working upon ourselves, our community needs, upon our organization, in order to have influence and have a say in facing year 2020. The Inner Wheel of tomorrow is here in our hands. We all will be involved and committed to Inner Wheel values through Friendship and Service and International understanding. Let's make this Conference, Women for Europe 5, a fruitful meeting.

Gabriella Adami
International Inner Wheel President



PROGRAM



Friday, March 28th, 2014

Arrival of participants and check-in at Hanasaari

6:00-8:00 pm **Registration at Hanasaari**

7:00 pm **Dinner at Hanasaari**

7:30 pm **Get together**

Saturday, March 29th, 2014

7:00 – 9:00am **Breakfast served at Hanasaari restaurant**

7:30-9:00 am **Registration at entrance hall**

9:00 am **Plenary Session in auditorium**

Flags

Opening of the Women for Europe 5 – WfE5 Conference

Pirkko Kiikka, *Committee Chairman IIW WfE5, Finland.*

Gabriella Adami, *International Inner Wheel President*

Maija-Leena Virta-Kangas, *National Representative Inner Wheel Finland*

Conference Patron's greeting, Mayor Jukka Mäkelä, City of Espoo

Rotary greetings, DGE Birger Stjernberg, D1420

Music

Board Director Luisa Vinciguerra's Greetings Inner Wheel towards Europe 2020

10:00 am **Introduction to Environmental Health, which is Vital for Development**
Mikko Paunio, *Medical Counselor, Ministry of Social Affairs and Health, Finland*

Case study: Future of Healthcare is Preventive and Personalized,
Nelli Lähteenmäki, *CEO & Co-Founder, Health Puzzle*

Introduction to Clean Water in Changing Circumstances,
Lea Kauppi, *Director General, the Finnish Environment Institute (SYKE)*

Case Study: Clean Sea
Marjukka Porvari, *Director Clean Sea Project, Nurminen Foundation*

Presentations of Papers

12:00 **Lunch**

1:30 pm	<p>Introduction to Air Quality Ari Laaksonen, <i>Professor</i>, Finnish Meteorological Institute</p> <p>Case Study: Impact of Urban Land use on Air Pollutant Emissions Leena Järvi, <i>Researcher</i>, Department of Physics, University of Helsinki</p> <p>Presentations of Papers</p>
3:30 pm	<p>Coffee in Restaurant</p> <p>Change of Banners</p>
6:30 pm	<p>Coctails, the City of Espoo</p>
7:00 pm	<p>Gala Dinner at Hanasaari Restaurant</p> <p>District Chairman D142 Raija Partanen</p> <p>Speeches</p>

Sunday, March 30th, 2014

8:00-9:00 am	<p>Breakfast at Hanasaari</p>
9:00 am	<p>Flashes of Finland</p> <p>Introduction to Renewable Energy, <i>Professor Esko Valtaoja</i>, University of Turku</p> <p>Case study: Project Renewable Energy, Extended Triple Helix Model in practice, Ritva Jäättelä, <i>Senior Lecturer</i>, Laurea Mrs. Oluyemisi Alatise, <i>Past BD</i></p> <p>Presentations of Papers</p>
10:30 pm	<p>Introduction to Sustainable Use of Nature Resources – World is changing – Renewable Europe, Esa Vakkilainen, <i>Professor</i> - Sustainable energy systems, Lappeenranta University of Technology, Energy Technology</p> <p>Case study: Solar Energy - Changing Energy Business Petra Lundström, <i>Vice President</i>, Solar Business Development, Fortum</p> <p>Presentations of Papers</p>
12:30 pm	<p>Closing Ceremony</p>
12:30	<p>Lunch</p>

Webpage for registration and additional information:

<http://www.innerwheel.kotisivukone.com>

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Maija-Leena Virta-Kangas

Our honoured Guests,
Ladies and Gentlemen,
Dear Friends,

In 2008 in Italy, Naples was the Grand Opening of "Women for Europe" held. Three years later in North Cyprus, Girne the theme of the gathering was "The Status of Women". In the very same year we had a conference here in Finland, Tuusula. Our theme was "The Role of Inner Wheel in Europe". The next conference in Italy, Turin was the fourth and the matter under consideration was our "Responsibility of the Future".

At this weekend here in Hanasaari we are looking for means to meet the requirements which were set in Turin and Istanbul in 2011. Our "Global Goal and Responsibility" has to do with environmental health, clean water, the quality of air, renewable energy and sustainable use of nature's resources. Our main target is to support the development in Europe towards 2020. Our responsibility is also to bring the awareness of our International Inner Wheel voice as the active third sector to authorities and governments.

I am sure that we have the potential to produce good results. We are over 100 000 members in approx 100 countries. Let us do it in Inner Wheel spirit; friendship, help, care and tolerance!

I bring to this meeting the best wishes from the Inner Wheel National Council in Finland. May we have a great success with our aims to leave a sustainable planet for our children. Let us make this "Women for Europe the fifth" conference an excellent conference!

Maija-Leena Virta-Kangas
President of National Council 2012-2014
National Representative 2012-2014



Welcome

I wish you all a warm welcome to Women for Europe 5 Conference. We are proud to host you here in Hanasaari.

Hope all the Participants have an inspiring time.

Yours
Raija Partanen
District Chairman D142

Birger Stjernberg

On behalf of Rotary District 1420 I have the honour and pleasure to bring the greetings to the WOMAN FOR EUROPE 5 – WfE5 conference in Finland.

The Rotary International is working for a better tomorrow. The importance of the voluntary work is growing and the international cooperation within different Rotary organizations is in this respect generating new avenues. The position of International Inner Wheel in this activity is of considerable value. Together we can come to remarkable achievements by paying attention to our nature and to the values of fresh water and unpolluted environment.

One of the most important activities in our district related to the environment is The Baltic Sea -project. The project has as a long-term plan to clean the polluted water of the Baltic Sea and teach the people round the sea to understand the value of environmental protection.

Rotaries are taking part in the project by arranging lectures, fund raisings and other campaigns. The International Youth Exchange Camp for young exchange students under the heading “Baltic Sea -Nature camp” was a success last year. This event was located to the old fortress Suomenlinna outside Helsinki. A similar camp is scheduled for the coming summer as well.

We have mutually the responsibility of the future of the next generation. Environmental protection is one of the most important issues. I am glad to see the remarkable efforts which The International Inner Wheel is taking in this area.

I wish great success to your conference with the very interesting subjects and presentations.

Birger Stjernberg
DGE
District 1420

Jukka Mäkelä

Espoo – city of growth and prosperity

It is my pleasure to welcome the Women for Europe 5 – WfE5 Congress and guests to the embrace of the marine landscape of the beautiful island of Hanasaari in my home city of Espoo.

Located right in the heart of the metropolitan area, Espoo is Finland’s second largest city in terms of number of residents. The extensive campus of Aalto University – where science and the arts meet technology and business – numerous other R&D units and a lively business community together with a high quality and safe living environment create a unique base for growth for people and well-being as well as for companies and positive development.

Espoo Innovation Garden, named by the European Union as one of the most important areas of innovation, aims in collaboration with other players in the locality to solve even global challenges relating in particular to well-being and sustainable development.

Children and young people are the subject of our particular attention. Espoo is an active participant in the Education for Sustainable Development co-operation network under the auspices of the United Nations and implements these values in its day-care centres and schools.

The theme and objective of WfE5 “Let’s Leave our Children a Sustainable Planet” accords therefore well with what I personally, the entire city organisation and our Innovation Garden community working in a productive network find important. We make the tomorrow of our children today, together.

Jukka Mäkelä
Mayor
City of Espoo



Luisa Vinciguerra

Inner Wheel towards Europe 2020

After Tuusula, Inner Wheel of Finland again welcomes the Multi-Year Project «WOMEN FOR EUROPE, THE ROLE OF INNER WHEEL», with a fifth edition entirely dedicated to the sustainability of our planet. A Conference of great importance and relevance, in which Inner Wheel proves to be an Organization interested and active even at environmental issues.

Since 2008, under the banner of the mission *A Europe for Women, Women for Europe, the role of the Inner Wheel*, members of numerous European Countries have participated in our Project, promoted by the IWC of Naples Luisa Bruni, the first Italian Club born 40 years ago, in 1974.

Three important key WORDS: **Europe, Women, and Inner Wheel**, with the intention of drawing out the correlations, conscious how being a Member of Inner Wheel was and is, concretely, a privileged tool, through which we can help to satisfy needs, resolve problems, and improve life conditions of Women in the European Union.

The Project, during these six years, has concerned many European countries, members and, more recently, not only of Europe, crossing the boundaries... Especially it has generated a transverse movement of study and reflection, capable of assign to the Inner Wheel an active role in society, attentive to all women's issues, into the European area. Certainly, the *interactive strategy* has been the merit of the success, through *call for papers* and workshops, modules and debate. Significant was the number of papers produced by our Inner Wheel members; interesting the variety and quality of their contributions on Family, Job, Culture and Society.

The opening to *Sustainable Development* took place in the fourth edition, Turin, November 2011, during the International Colloquium «WOMEN FOR EUROPE4 - THE ROLE OF INNER WHEEL TOWARDS EUROPE 2020», where *Europe 2020* is the EU's growth strategy for this decade, having set five ambitious objectives – on employment, innovation, education, social inclusion and climate/energy – to be reached by 2020.

Three Modules: WOMEN, KNOWLEDGE AND INNOVATION; WOMEN, ECONOMICS AND SOCIAL COHESION; WOMEN AND SUSTAINABLE DEVELOPMENT.

A resource-efficient Europe is one of seven flagship initiatives as part of the Europe 2020 strategy aiming to deliver smart, sustainable and inclusive growth. It aims to create a framework for policies to support the shift towards a resource-efficient and low-carbon economy which will help us to boost economic performance while reducing resource use; identify and create new opportunities for economic growth and greater innovation and boost the EU's competitiveness; ensure security of supply of essential

resources; fight against climate change and limit the environmental impacts of resource use.

Over these decades, governments, communities and businesses have all responded to the challenge of sustainability to some extent. Despite all these efforts, recent statistics and studies on the state of global ecosystem show that nearly two-thirds of the essential services provided by nature to humankind are in decline worldwide, and in many cases we are literally living on borrowed time. Also the poverty is increased at global level and the gender issue is still a problem worldwide. Clearly the warnings, the policy, the education, the sustainable city guidelines and the green building assessments are not making enough of an impact to bring about meaningful change in the 21st century's development trajectory and its environmental impact. Improving the basis for sound decision-making is, therefore, a high priority.

At higher levels social strategic choices have been treated, but important is also the role of the women, with their daily choices, doing much to carry out a project of an environmentally sustainable development that does not waste resources, which recycles waste, which teaches young people a way of life not based on waste and attentive to the preservation of traditions and habits of our culture.

The Colloquium, honored by participation of IIW President 2011|2012 Catherine Refabert, was able to enjoy the contribution of illustrious experts and personalities from the IIW, Academic world, from the European Union, from Unesco, that focused work primarily on themes coming from the 2020 Strategy of the European Union, at the centre of our International Meeting. With the objective of identifying paths of research and experience aimed at investigating and giving back visibility to the individual and the collective role of women in these sectors – through the network of Female Association and of the Inner Wheel in the specific – in the European construction. To promote the work of IW members as Citizens of Europe.

Moreover, the sensitization to these issues of non-European countries represented in the Event, such as Egypt, Nigeria, Reunion, has shown that the Project «Women for Europe, the Role of Inner Wheel» was ready for its transformation and diffusion in other areas of the world. As it happened during the XV Convention in Istanbul, becoming «Inner Wheel Women for the World». This extension and new Project has had the first Edition in Lagos, Nigeria, on November 2012 with «Women for Africa - Role of Inner Wheel».

Ad maiora.... We, for Women..... as Energy in action!

Luisa Vinciguerra
IIW Board Director 2013/2014

Mikko Paunio

PRAISE WATER CONSUMPTION (ABSTRACT)

Current mainstreamed conservation policies often clash with environmental health practice and interventions, which result in acrimonious public debates. Moreover, little attention has been paid to the public health consequences of implementing sustainable development policies that advocate water and energy conservation as an overriding principle. Hygienic practices in households, industrial settings and hospitals need water in quantity and rely upon an uninterrupted power grid to supply that water. Recent reports from the World Health Organization and the World Bank found that unhygienic conditions are the root cause of undernutrition that affects 800 million people around the globe: most notably in South-Asia.

Mikko Paunio

MD, MHS Medical Counselor (Environmental Health),
Finland's Ministry of Social Affairs and Health
PO Box 33 00023 Government
mikko.paunio@stm.fi

Senior Environment Specialist in the World Bank
1.1.2006–31.12.2007 (term employment)

adjunct professor in general epidemiology
University of Helsinki, Department of Public Health

Nelli Lähteenmäki

FUTURE OF HEALTHCARE IS PREVENTIVE AND PERSONALIZED

Unhealthy habits are decreasing quality of life. As a result, 40% of premature deaths are due to those unhealthy choices. We believe it is now possible to take true preventive health actions, for two reasons:

Technological service concepts have become an integral part of our lives

- Mobile devices have become ubiquitous. Mobile service user experience has greatly improved
- Health sensors technology is now cheap, small and increasingly user-friendly
- Social networks have become THE way to share experiences
- "Gamification" as means for motivation is on the rise in consumer services

We are generating health and wellness data to support medical decision making

- People are generating mountains of health data through increasingly automated trackers
- The strides in genomics will allow even more individualized recommendations in the future
- We are starting to understand how behavior change happens (and does not happen)

We believe the healthcare industry is on the brink of a revolution. That is a good thing. Today's healthcare is inefficient, expensive,

not personalized and completely concentrated on treating the consequence rather than the cause. In its current form it will not be able to respond to the worldwide epidemics of lifestyle diseases like obesity and diabetes 2.

Health Puzzle wants to be the piece combining the brave, new technological world with the health-focused medical world.

We want to create personalized, preventive healthcare that actually works. For both individuals and health professionals.

Nelli Lähteenmäki

CEO & Co-Founder of Health Puzzle

The logo for Health Puzzle consists of the words "HEALTH" and "PUZZLE" stacked vertically. The letters are in a bold, teal, sans-serif font. The letters are slightly irregular, with some gaps and a blocky appearance, giving it a puzzle-like aesthetic.

Clean water in changing circumstances

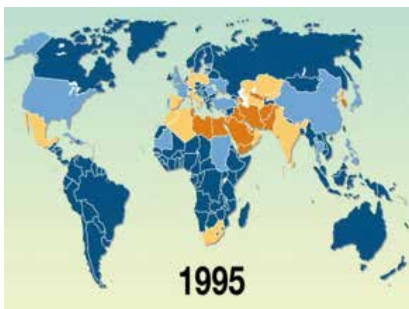
Lea Kauppi

INTRODUCTION TO CLEAN WATER IN CHANGING CIRCUMSTANCES

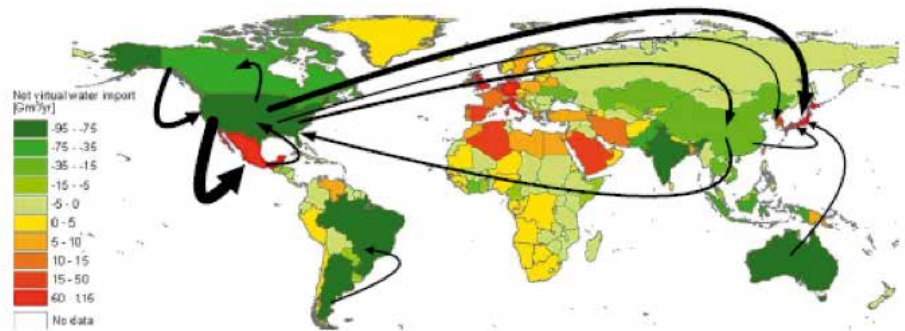
Global freshwater resources are unevenly distributed: 85% of the world population lives in the driest half of the planet, 20% of the global population lacking access to safe drinking water, and 2.4 billion people do not have access to any type of improved sanitation facility. About 2 million people die every year due to water-borne diseases from faecal pollution of surface waters; most of them are children less than five years of age.

Water availability is expected to decrease in many regions. Yet future global agricultural water consumption alone is estimated to increase.

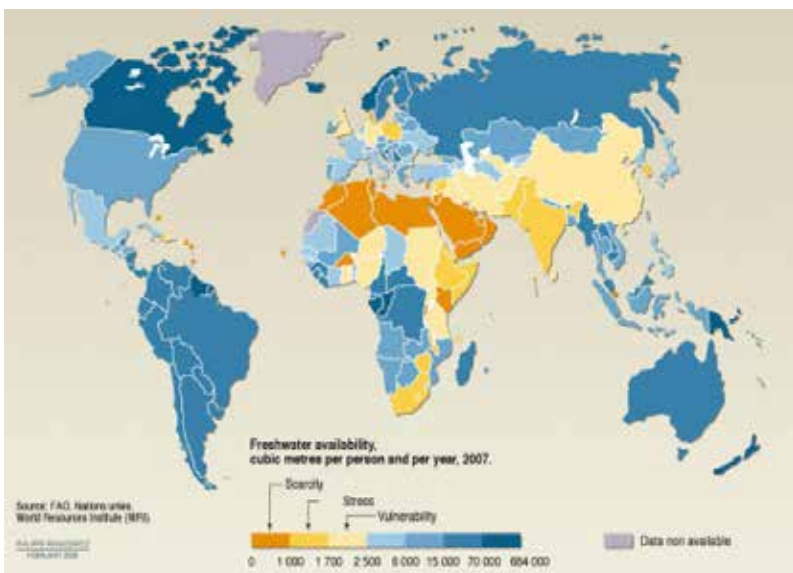
Also in Europe the distribution of water resources is highly uneven. Almost 20% of water resources are north of 60°N, while only 2% of people live there. Water stress over central and southern Europe is projected to increase. In the EU, the percentage of land area under high water stress is likely to increase from 19% today to 35% by the 2070s, by when the number of additional people affected is expected to be between 16 and 44 million. As a result of climate change, in southern Europe and some parts of central and eastern Europe, summer water flows may be reduced by up to 80%.. (www.climateadaptation.eu/finland/fresh-water-resources). The figures below do not tell the whole truth. In addition to the water we consume in our own country, there is a lot of water embedded in the products.



Source: UNEP-GRID 2008



Source: <http://www.waterfootprint.org/Reports/Report50-NationalWaterFootprints-Vol1.pdf>



Sustainable integrated water management policies are built on (1) proper legislation and institutions (2) proper knowledge base on water resources, (3) modern water saving technologies and, (4) functioning financing mechanisms. The food-energy-water- ecosystem interrelationship is a major challenge for the whole mankind.

Lea Kauppi
 Director General, Professor
 Finnish Environment Institute

Marjukka Porvari

CASE STUDY: CLEAN SEA

Concern about the condition of the Baltic Sea and frustration with speeches were the starting point for the John Nurminen Foundation's Clean Baltic Sea project in 2004. The original purpose of the Foundation, fostering Finnish maritime cultural heritage, did not seem very meaningful if the Baltic Sea were to die before our eyes. The aim was to achieve a visible improvement in the condition of the Baltic Sea, so that the clean sea would remain a part of the life of Finns and all inhabitants on the shores of the Baltic Sea.

The Baltic Sea knows no territorial boundaries, which is why the Foundation takes action where each euro brings about the largest positive impact on the environment. The Foundation's operational policy is to function as a catalyst between various sectors of society and the countries around the Baltic Sea, and to expedite actions which are critical with respect to the condition of the Baltic Sea.

The John Nurminen Foundation's Clean Baltic Sea projects help the Sea in two fronts: by reducing nutrient load to the Sea and by aiming to prevent a major oil catastrophe from happening in the Gulf of Finland.

Projects on eutrophication

Symptoms of eutrophication are many, for example, the blue-green algal blooms that occur every summer. After having become concerned about the condition of the Baltic Sea in 2004, the Board of the John Nurminen Foundation consulted leading experts on the marine environment to find out if the Foundation could play a concrete role in protecting the Baltic Sea.

According to the experts, the fastest and most cost-efficient method of improving the condition of the Baltic Sea would be to intervene in the operation of wastewater treatment plants located in its catchment area by intensifying their phosphorus removal. The Foundation has since launched 16 projects to improve phosphorus removal at the wastewater treatment plants of Russia, Belarus, Poland, Latvia and Estonia.

In addition, the Foundation cooperates with Russia's largest mineral fertilizer producer EuroChem to prevent phosphorus discharges to the Luga River and the Baltic Sea from EuroChem's fertilizer factory in Kingisepp. The Foundation has also started a project to reduce phosphorus leakages from poultry manure storages at the Udarnik poultry farm close to Vyborg, Russia.

Altogether, the target of the Foundation's Projects on Eutrophication is to achieve an annual reduction of 2,500 tonnes of phosphorus discharges. It is one sixth of the total phosphorus reduction target which according to the Baltic Marine Environment Protection Commission HELCOM needs to be achieved to restore the Sea in a good ecological status.

Tanker Safety project

The Foundation's Tanker Safety project aims to reduce the risk of an oil disaster by introducing a new navigation service ENSI® (Enhanced Navigation Support Information) to tankers in the Gulf of Finland. According to experts, the adoption of the ENSI service will increase vessel traffic safety in the Gulf of Finland. An accident-prevention service is essential for the protection of the environment. In addition, the service enables oil tankers to optimise their schedules, and thereby shorten waiting times at ports, which creates savings.

The Tanker Safety project creates the preconditions for a novel approach to vessel traffic control. Checking and supervising route plans are, as such, very important new additional measures for ensuring maritime safety. In addition, the two-way exchange of information between the vessel and the on-shore official related to the Tanker Safety project opens up new opportunities for promoting tanker safety. When the basics for the exchange of information are in place, the ENSI service can be employed to develop an unlimited number of new services benefiting seamen and to expand the operating method to an international level.

Marjukka Porvari
Director/ Projects on Eutrophication
John Nurminen Foundation, Finland

Air Quality

Ari Laaksonen

INTRODUCTION TO AIR QUALITY

Air quality affects the life of billions of people every day. Current estimates indicate that 2,5 million people worldwide, and hundreds of thousands in Europe may die prematurely every year as a result of bad air quality. The main cause of the increased mortality is particulate matter (PM) originating mostly from combustion processes. PM has been connected to heart and pulmonary diseases as well as lung cancer, and infections of the respiratory system. Other harmful air pollutants include gases such as ozone and nitrogen oxides.

In the western world, air quality has been improving for decades. However, traffic and industrial sources still create problems in major urban areas in Europe and North America. In cleaner areas air quality situations are usually caused by forest fires or special meteorological conditions. For example, ozone concentrations tend to increase during heat waves, and air stagnation situations are related to increased concentrations of PM. Indeed, one of the earliest Clean Air Acts was introduced by the British Parliament in 1956 in response to the deadly smog event, which killed 4000 people in the London area in 1952. Air quality legislations aimed at limiting transboundary air pollution were introduced in Europe and North America in the 1970's, and are being continuously developed. In contrast, the control of pollutant emissions is still limited or even non-existent in many developing countries. Especially in China, India, and many African countries the problems are severe. The Chinese air pollution is for a large part due to old coal-burning power plants and industrial facilities. In the

coming years, emission reductions are expected to take place in China with replacement of the old facilities, and with introduction of end-of-pipe cleaning technologies. In India and Africa, solving the problem is likely to be much more difficult as a major part of the emissions come from cooking and biomass and trash burning. Nevertheless, progress might take place in small steps such as introduction of cleaner and affordable cooking stoves.

Air quality is not only a health problem, as fine particles also influence the climate. Particles cool the surface of the Earth by scattering sunlight back to the space. However, one special type of fine particles, black carbon, or soot, absorbs sunlight in air and thereby tends to warm the climate. Black carbon deposited on snow and ice can also cause faster melting in the springtime, and therefore warms Arctic areas and mountain ranges. Recently, it has been estimated that black carbon is the second strongest warming agent after carbon dioxide to cause climate change. Black carbon particles originate from diesel engines and from other burning processes, and they have been indicated among the most hazardous particle types for human health. It therefore is clear that curbing their emissions would bring a double benefit, limiting the warming of the planet, and reducing health problems and excess deaths.

Ari Laaksonen
 Professor
 Finnish Meteorological Institute

Leena Järvi

CASE STUDY: IMPACT OF URBAN LAND USE ON AIR POLLUTANT EMISSIONS

Currently over half of World's population resides in urban areas and the fraction is further expected to increase rapidly in the future. Thus, cities are hotspots both for people and anthropogenic activities, like traffic and power generation, that increase air pollutant emissions to the atmosphere. These pollutants cover both particulate matter and gaseous pollutants and they have adverse effects on human health and nature, and participate to the ongoing climate change. The vertical exchange of air pollutants between the surface and the atmosphere can be directly measured using a micrometeorological measurement technique, called the eddy covariance. This technique gives the net exchange of mass, heat or momentum between some upwind surface area and the atmosphere, and it can be used to examine how different urban surface covers and emission sources affect the various exchange processes.

In Helsinki, Finland, the technique has successfully been used to measure the exchange of aerosol particles, carbon dioxide (CO₂) and nitrous oxides (N₂O) above different surface types varying from dense city center to cultivated green areas. The local traffic has been found to have the largest impact to the exchange of the studied pollutants at the measurement sites, with similar

importance in city center and next to a main road leading to the city center. The impact varies according to season with typically higher emissions in winter than in summer. Partly this is due to more stable atmosphere but also e.g. in the case of aerosol particles, the mixed fleet emission factors have been found to increase with decreasing air temperature.

In the case of CO₂ and N₂O the impact of vegetation is also important and in areas with high fraction of vegetation cover it can be more important than the anthropogenic emission sources. From multiple city study it has been found that when urban surface is 80% covered with vegetation, the vegetation carbon sink is higher than the anthropogenic CO₂ emissions from the same area. Helsinki center emits annually 4740 g C m⁻² to the atmosphere whereas from suburban Kumpula this annual emission is 1764 g C m⁻².

Leena Järvi
Researcher
University of Helsinki

Renewable Energy

Esko Valtaoja

INTRODUCTION TO RENEWABLE ENERGY

The future is an ideological, economical and political battleground. For some extremists the main driver in discussing and planning the future of our species and our planet is the almost religious conviction that mankind is just another species with no special rights or capabilities, having inherently no more value than, say, one species of butterflies. For other extremists the only important driver is economic growth, with all other considerations remaining subordinate. Even for more moderate people, the ideological battle lines are often immutable. As just one example, hardly any other political party is as absolutely committed to a single principle as the Greens are in their opposition of nuclear power.

With strong and conflicting interests, it is no wonder that even basic concepts are often totally muddled. What qualifies as “sustainable development”? What is “renewable energy”? For example, in Finland strong pressure groups, with backing from the state, insist that peat is a renewable energy source. Globally, there are persistent demands that nuclear energy should be classified as a renewable, in particular the breeder reactors which, paradoxically, produce more fuel than they consume.

The planet must be saved for our children. That should be a more important goal than ideological purity or short-term local interests. Facts should not be the first casualties when discussing the best choices for tomorrow.

In my talk I will try to do two things. First, science can provide us with estimates of the total amount of energy available from various sources, “renewable” or not. It is also possible to estimate the fraction available for utilization, although this depends strongly on ecological, economical and political constraints. Comparing these numbers to the present global demand, and the projected demand in the year 2100, provides us an objective basis for discussing the importance of, say, wind or biomass energy.

Second, I will try to look at the real world and the available main facts regarding global energy production and future plans. For example, we do have good estimates of the true burdens, from human health to global ecology, of various energy sources. These are sometimes very different from the public perception.

The only reasonable goal for the year 2100 must be unlimited, non-polluting energy. This is feasible, but not through the means usually presented as solutions to our energy problems. Traditional “renewables” can never be more than a part of the interim solution for the next decades.

Esko Valtaoja
Professor of Space Astronomy
University of Turku

Renewable Energy

Ritva Jäätelä

RENEWABLE ENERGY – EXTENDED TRIPLE-HELIX MODEL IN PRACTICE

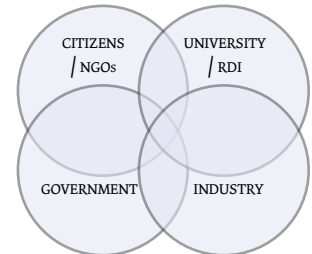
In Women for Europe –conference in Turin Italy 2011 the idea of more active role of Inner Wheel including joint projects with for example universities was raised. At the same time in Finland, CONNECT research project, seeking new ways to build links between renewable energy solution providers and customers seeking sustainable solutions for their energy problems, was started. One thing led to another and I found myself presenting the ideas of CONNECT in the Women for Africa –conference in Lagos in November 2012.

The conference was a mind-blowing experience. The Nigerian Inner Wheel ladies were so action oriented and full of energy and determination. In the communique issued by the National Governing Body of Inner Wheel Club of Nigeria, their decision to identify rural hospitals in the need of electricity, with expert assistance implement projects to provide them electricity from renewables, and to involve local government and communities in the fundraising, was announced.

And on the 5th of February 2014, the commissioning of solar energy project in Idembia Health Centre took place in Ebonyi State. The project was carried out by District 914, chaired by Mrs Beth Oluka.

In triple-helix model universities, government and industry collaborate for improved knowledge exchange and innovative capacity in the society. Extending the model to include NGOs, sustainability and social responsibility can be emphasized in the

decision-making. Through collaboration and joint efforts of the network, the impact of Inner Wheel work can be intensified and become visible in the society.



In the Idembia Health Centre Case the initial actors were universities, the solar system solution providers, the expert, who has been trained in Finland and currently operating a company in Nigeria, the InnerWheel members and the local stakeholders. The project had its ups and downs. A lot was learned during the process. At the end the project was completed by local stakeholders, and it was their determination and endurance that made it happen. The financial support that had been collected by the Finnish Inner Wheel sisters will be reserved for next IW renewable energy project in Nigeria.

There is a lesson to be learned from our Nigerian Inner Wheel sisters.

Opening up and joining forces with other value adding actors Inner Wheel can make an impact. Taking stand and making noise, demanding our public decision makers to work for sustainable future for our children. Taking initiative and action in defending the most vulnerable members of our societies.

Climate change is real. It is the most pressing challenge of our time. If we so decide, we have the muscles to make an impact. As one of the largest women’s service organizations in the world, with nearly 100.000 members in more than 100 countries, International Inner Wheel can have a new role to play.

Ritva Jäätelä
Executive committee member
Inner Wheel Espoo-Tapiola club.

Senior Lecturer
Laurea University of Applied Sciences



Sustainable use of natural resources

Esa Vakkilainen

WORLD IS CHANGING – RENEWABLE EUROPE

He is researching renewable energy especially biomass usage, energy efficiency, biorefineries and their environmental effects. Vakkilainen is an expert advisor on energy for industries and utilities. He participates in organizing international conferences in biomass use, thermochemical conversion and bioenergy.

We have reasons to change our attitudes towards energy. World economy is weak, oil prices have soared and carbon dioxide emissions from energy have reached record highs. The ways we supply and use energy threaten our security, health, economic prosperity and environment. We must find a new way to our society that is sustainable. We must change our use of energy and natural resources before it is too late.

Economic progress is not tied to increased energy use. The world is changing! Even current small yearly decreases in our industrial energy use make a big difference. EU has during past ten years managed to increase GDP without significant increase in energy use. We have learnt to save energy and resources. Our transportation is now more energy efficient. We are buying smarter appliances and reducing electricity use. Progress is slow but it will make a difference.

Renewables are already here. They are making an impact. We are building renewables at record pace around the world. Energy markets are changing. Renewable prices are decreasing. We must define how future markets work.

There are three ways to change the world. We must put our money where our mouth is. Everybody needs to do something themselves. Empowering people will guarantee a brighter future.

Esa Vakkilainen
Professor - Sustainable energy systems
Lappeenranta University of Technology



Petra Lundström

SOLAR ENERGY – CHANGING ENERGY BUSINESS

What is solar energy? Solar energy is either electricity or heat that has been converted from solar irradiation. Different technologies are available for this conversion, the most important ones being photovoltaic modules (PV), solar thermal collectors and concentrating solar power plants (CSP) or concentrating PV. Examples of various applications will be shown in the presentation (PV rooftop installations, large PV plants, a solar district heating plant). PV in particular is on a very steep learning curve. Investment costs are decreasing dramatically and growth is very fast. Solar PV is becoming competitive on many markets.

How is solar different from other energy technologies? With its origin in the semiconductor world, solar PV is very different from conventional energy technology based on combustion in a boiler and electricity generation with a turbine + generator. The PV module is a very simple structure that can be mass produced. A significant difference between PV and other power generation technologies is that PV works quite efficiently also on very small scale. A roof-top PV system on kW scale for the purpose of generating electricity for one family is quite feasible. Other energy technologies are much more efficient when the plants are bigger. Thus, solar PV will accelerate the growth of decentralized electricity production. Pure electricity consumers will in the future be consumers and small-scale producers at the same time.

What will the impact be on the energy system and energy business? The presentation will demonstrate with a concrete example how a larger share of fragmented, smaller scale renewable energy sources with a fluctuating generation pattern will change the energy system. Also the traditional utility (power company) value chain will be impacted:

- New smart ICT solutions will make electricity consumption more flexible: demand will be adjusted based on the situation on the power market.
- Smart solutions on the consumption side will also enable higher energy efficiency.
- Consumption and small scale production at the customer's premises go hand in hand.
- The electricity customer needs both to buy and to sell electricity.
- Because electricity production becomes more fragmented, new aggregator business models will emerge.

Well-functioning electricity markets and developed distribution grids are of vital importance to ensure a balanced overall system with an increasing share of renewables, often in small scale, in the future.

Petra Lundström
Vice President, Solar Business Development
Fortum Oyj

Ceja Gregor-Hu

SUSTAINABLE DEVELOPMENT IN AN AGEING WORLD

Achieving sustainable development to ensure the well-being of all people is a global development goal. Decent jobs for all, energy, sustainable cities, food security, water, oceans and disasters are highlighted as priority areas. Demographic change and a rapidly ageing population in developing countries show ramifications that requires urgent attention.

Population ageing is one of the most significant trends of the 21st century. It has important and far-reaching implications for all aspects of society. With one in nine persons in the world aged 60 years or over, projected to increase to one in five by 2050, population ageing is a phenomenon that can no longer be ignored. Ageing is a triumph of human development, the increasing longevity is one of our greatest achievements.

The ageing of the world population is progressive and rapid. It is an unprecedented phenomenon that is affecting nearly all countries of the world. While overall the world population is ageing, there are differences in the speed. It is happening fastest in the developing world. Today, almost two in three people aged 60 or over live in developing countries, and by 2050, nearly four in five will live in the developing world. People aged 65 and over will account for 22 % of the global population.

The numbers are staggering. In the past 10 years alone, the number of people aged 60 or over has risen by 178 million - equivalent to nearly the entire population of Pakistan, the sixth most populous country in the world. And in China alone, the estimated number of older people in 2012 is 180 million.

The number of people who turn 60 each year worldwide is nearly 58 million, equivalent to almost two persons every second. In 2000 there were already more people aged 60 or over than children under 5. In 2012, people aged 60 or over represent almost 11,5% of our total global population of 7 billion. By 2050, for the first time there will be a larger number of older people than children under 15.

In 2012, 6 % of the population in Africa was 60 years and over, compared with 10 % in Latin America and the Caribbean, 11 % in Asia, 15 % in Oceania 22 % in Europe. By 2050, it is expected that 10 % of the population in Africa will be 60 years and over, compared with 24 % in Asia, 24 % in Oceania, 25 % in Latin America, and the Caribbean, 27 % in Northern America and 34 % in Europe.

Women tend to live longer than men, with the result that worldwide there are more older women than older men. In 2012, for every 100 women aged 60, there were 84 men. The proportion of women rises further with age. The so-called "feminization of ageing" has important implications for policy. Women and men differ on health and morbidity patterns and women usually have lower income but larger and better family support networks. In many situations older women are usually more vulnerable to

discrimination, including poor access to jobs and healthcare, subjection to abuse, denial of the right to own and inherit property, and lack of basic minimum income and social security.

This rapid demographic change presents great challenges to eradicating poverty in the poorest countries and achieving sustainable, resilient economies, societies and environments. Many older people are among the poorest, often living in the most ecologically depleted and environmentally risky areas with young dependents.

They struggle to secure their livelihoods and live in dignity. Despite their poverty and marginalization, older people are not passive or dependent.

They support their families and communities as leaders, consumers, workers, farmers, educators, business people, health providers and environmental knowledge holders. Increasing numbers of older people becoming heads of households and primary carers for ill family members and children whose parents are absent as a result of HIV and Aids or migration. Older people also contribute to rural development; in a number of countries, farm work forces are growing older, with increasingly proportions of smallholders aged 50 and older.

Ageing is happening in all countries and must be embraced as an opportunity rather than seen as a problem everywhere. Sustainable development requires the engagement of the world's older population, especially of women through adult literacy programs, self-help groups, access to credit and help with accessing entitlements as well as protection from land-grabbing.

The UN Millennium Development Goals of 2000 in their current form do not explicitly respond to the issues of ageing populations. Annual reports on the situation undertaken since 2005 by the United Nations Department of Economic and Social Affairs revealed no mention of the situation of older people or any intervention geared towards them, although the "Vienna International Plan on Ageing", initiated by the Vienna NGO Committee on Ageing and adopted by the first World Assembly on Ageing in 1982, the "United Nations Principles for Older Persons" of 1991 and the "Madrid International Plan of Action on Ageing" in 2002 have called for viewing older persons as active participants in the development process, whose rights must be respected, protected and guaranteed. The Madrid Plan emphasizes the relation between gender and ageing, positioning older women as agents and beneficiaries of socio-economic progress.

An indication that the interconnection between sustainable development and ageing has by now been recognized can be found in a message of Secretary General Ban Ki-moon of August 26, 2013: "To ensure sustainable development we need to know how many people inhabit the planet now and how many will be added in the

years to come.... We need to know how old they are and how age distribution will change. Population growth and aging, migration and urbanization affect all development objectives”

One of the issues of sustainable development is the creation of a healthy food system which is the key to overcome hunger and malnutrition around the globe. This goal is challenged by changing climate conditions, reduced crop yields, dependence on non renewable energy sources, overproduction and waste in developed countries; lack of food storage, processing and packaging facilities in developing countries.

While food production has tripled since 1945, there are still 840 million people that go hungry every day. This affects their ability to work and negatively impacts the development of the children.

The future capacity of food production will be strongly influenced by the “Ecological Footprint”. It tracks humanity’s demand on the biosphere by comparing the renewable resources people are consuming against the Earth’s biocapacity: the area of land available to produce renewable resources and absorb CO₂ emissions.

In 1961 humanity’s footprint was about half of what the earth could supply- we were living of the planet’s annual ecological interest. Around the 1970s and 1980s human demand first exceeded the planets ability to meet it. Since then we are in an ecological overshoot situation.

The latest figures for 2008 show that it is taking the Earth 1,5 years to fully regenerate the renewable resources that we use in a single year. Instead of living off the interest we are eating into our natural capital. There are however distinct differences: If all of humanity lived like an average resident of Indonesia, we would use only two-thirds of the planets biocapacity; living like an average Argentine we would need more than half of an additional planet; and if everyone lived like an average resident of the USA we would need four Earths to regenerate our demand on nature.

While humanity will have to rethink consumption it is equally important to consider ways to improve this imbalance and specifically look at ways to increase food production.

Farmers comprise one-third of the world’s population and are the “primary managers” of our ecosystem and are hence best suited to securing sustainable development. Worldwide there are an estimated 450 million small scale farms. They support a population of roughly 2,2 billion people and represent 85% of the world farms. As younger generations seek employment in cities, farm

workforces especially in developing countries are aging. However, older farmers often have knowledge of weather and climate patterns, farming techniques and land use that can potentially mitigate climate and environmental change. Women when given basic training, access to land and credit can have a major impact on the nutritional status of their families.

With an aging farming population global food security and older people’s livelihood are intrinsically tied. Therefore there must be a focus on working with older farmers, promoting sustainable and ecologically sound farming practices and utilizing older farmer’s knowledge and skills along with new technologies. There is an urgent need to adapt farming technologies and agricultural policies to the capacities and need of older farmers.

While significant improvements in global health in the last century have resulted in people living longer and healthier lives, for the growing number of older people, especially in poor countries, infectious diseases, chronic conditions and especially non-communicable diseases (NCDs). For example, older people in developing countries lose five times as many years from chronic lung disease and twice as many from stroke as in developed countries. In developed countries the prevalence of ischaemic heart disease is 2,2 million whereas in developing countries it is 11,9 million.

By the year 2050, Alzheimer’s disease or other dementias will affect 115 million people. 71% of those will be living in low- and middle-income countries.

In May 2012 the UN System Task Team on the Post-2015 Development Agenda published the following Statement: “A post-2015 development agenda should account for a progressively and rapidly ageing world by promoting healthy ageing and economic well-being in old age, and by providing enabling and supportive environments where older people are integrated into the development process as an asset rather than a burden”.

In view of the fact that the Madrid Plan of Action of 2002 today is still not implemented in large parts of the world, it seems that tremendous efforts will be needed to achieve all the above in the foreseeable future.

Ceja Gregor-Hu
Inner Wheel member since 1993.
Club President 1996/97; and other functions
District Chairman 2013-2014
International Inner Wheel UN Representative since 1998

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Marketta Koivisto

FACTORS INFLUENCING PEOPLE'S RESPONSIBLE ENVIRONMENTAL BEHAVIOR

Abstract

Companies and society are increasingly interested in the environmental impacts caused by their various actions. The environmental impacts of industrial activities have been considerably reduced as a result of increased economic and normative steering. However, the majority of organizations nowadays operate in the service sector where normative steering is rare. This study concentrated on finding factors that encourage environmentally responsible behavior in service sector companies.

The methodological choices were quantitative survey research and a qualitative case study. The survey examined the effect that employees' environmental knowledge, attitudes, social pressure, and the company's environmental management system have on environmentally responsible behavior. 756 office workers' in four companies answered the survey. The case study considered the efficiency of electricity saving measures in a service company.

The research results included the three main findings. Firstly, the research showed that knowledge of causes of environmental problems did not lead to environmentally responsible behavior without appropriate environmental training being organized by the employer. Secondly, the results indicated that environmental training in companies improves employees' knowledge of both how to behave in an environmentally responsible manner and also of the environmental and economic effects of environmental behavior. Thirdly, the research results suggested that environmental training should be repeated regularly.

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Laurea University of Applied Sciences

CORPORATE SOCIAL RESPONSIBILITY – ONLINE COURSE

Laurea is a multidisciplinary university of applied sciences that operates in several locations in the Greater Helsinki Region. At Laurea students can study in Bachelor's and Master's degree programs in Finnish and English. Laurea's largest local unit is in Leppävaara, Espoo. The programs offered in Leppävaara are Business Management, Business Information Technology, Hospitality Management, Hotel and Restaurant Management, Information Systems, Security Management, and Service Management.

Corporate Social Responsibility (CSR) has been offered to students as an online course since 2011. This 5 ECTS course is compulsory for all Laurea Leppävaara students meaning that 400-500 students annually take the course. It is designed to teach students about CSR from environmental, social and economic perspectives. One of the goals is to develop students' skills in different practical tools and learn how CSR can be combined with actions and strategy. During the 10 week course students study the different aspects of CSR and actively take part in online discussions. Course implementations are cross-cultural as many of the incoming exchange students attend the course during their exchange period.

Environmental Responsibility

The course looks at the environmental aspect of CSR: biodiversity, the meaning of a carbon footprint and its influencers, as well as ways to live an eco-friendly lifestyle is discussed. As assignments students watch educational videos e.g. on climate change, after which they are tasked with answering a list of questions based on the viewed material. There is also an online discussion about environmental issues.

Social Responsibility

This phase of the course emphasizes the benefits of socially responsible actions for corporations. Students are introduced to international social responsibility standards such as GRI (Global Reporting Initiative) and ISO 26000. Students learn to describe the seven key principles of ISO 26000 and study the GRI guidelines for reporting. Assignments relate to studying online material on the subject and to writing short reports based on that material. Students choose one issue from each of the seven core subjects of ISO 26000 and value its importance to an organization.

Economic Responsibility

Economic responsibility is tackled from the viewpoint of stakeholders and their CSR. Students identify indicators such as HDI (Human Development Index) for sustainable economic well-being and the shortcomings of GDP (Gross Domestic Product) are discussed. As assignments students watch educational videos on climate change, after which they are tasked with answering a list of questions based on the viewed material e.g. the first question is: “What is your own opinion about Tim Jackson's idea that people are being persuaded to spend money they don't have, on

things they don't need to create an impression that doesn't last, on people they don't care about.”

During the last three weeks a CSR report is conducted by the students in teams. The aim of this assignment is to summarize all the things they have studied so far. They choose an organization (preferably an SME) and describe how environmental, social and economic responsibility can be seen in its practices and reporting.

Laila Blässar

CLEAN WATER

LET'S LEAVE OUR CHILDREN A SUSTAINABLE PLANET

Clean water is a basic need for human life and the right of every child on this planet. Although it is hard to understand for us who grow up in the Industrial Countries like Finland that many people could lack access to safe drinking water. Nearly one billion people do not obtain enough clean water and one third of the world's population – 2 billion people – do not have regular means for sanitary facilities. More people in the developing world have a mobile phone than a toilet. According to Water Org. (American Nonprofit Development Merger) every 20 seconds a child dies of contaminated water. This problem should be solved in countries like India and Africa by better water delivery systems, i.e. wells and pipes. One of the reasons for this is high birthrates in these countries. In some countries like Bangladesh and Sub-Saharan Africa tube wells contain unacceptable levels of arsenic (a very poisonous element). The wells should be dug deep enough, i.e. as much as more than 100 meters. In the developing world 90 % of the children below five years die of diarrhea because of contaminated water.

According to 500 leading water scientists from around the world, who took part in Bonn at “A Global Water System Project”

Conference in May last year, warned: “in the short span of one or two generations, the majority of the 9 billion people on Earth will be living under the handicap of severe pressure on fresh water, an absolutely essential natural resource for which there is no substitute. This handicap would be self-inflicted, and ought to be entirely avoidable.” Heavy storms, floods, earthquakes, overuse of resources, armed conflicts and climate change pose long-term threats to human well-being. Human activity plays a central role in the behavior of the global water system. Sustainable development requires both technological and institutional innovation. The existing focus on potable water supply, sanitation and hygiene has delivered benefits to people around the world, but we need to consider wider Sustainable Development Goals in the context of the global water system.

Laila Blässar
 Chair of District 142, 1993-1994
 Member of Kallio-Berghäll Inner Wheel Club

Ulku Somer

CLEAN WATER

Historical Water Supply Systems

Anatolia, homeland of modern Turkey, serves as an open-air museum for waterways since antiquity. The earliest settlements in Anatolia, the Grecians & the Romans, then the Ottomans have structured waterways, aqueducts, reservoirs, baths & fountains to supply clean water to ancient metropolis as Izmir, Ephesus, Istanbul, Antalya, & many, many ancient centers. Remnants of stone&earthenware pipes, aqueducts, reservoirs, fountains & baths are to be found in historical sites as old as 8000 years BC. Many have been subject to extinction due to natural disasters, climate changes & increasing urban habitation.

Many of the “Long Distance Water Conveyance” systems built by Romans, Byzantines & Ottomans in early decades have survived up to our day through comprehensive upkeep, especially by the Ottomans. Now, they bear testimony to the great effort old rulers had for clean water for their people. Strong & esthetic, most of them are still standing up with the care of conscientious successors of power through time, as symbolic reminders of awareness of the vital role of WATER for LIFE!

In Istanbul where I live, the most important problem since its settlement has been “providing clean water supply” to the city. The first installations started in the 2nd century AD, by the Roman emperor Hadrianus to be followed by emperor Valens (4th century AD), & then by the Byzantine emperors Theodosius & Justinianus building reservoirs to collect the water conveyed by the aqueducts from long distances. (Many of you who attended the Istanbul Convention will remember “the Cistern of 1001 Columns “where we had the hospitality evening), & visited the “Sunken Palace” as it

is popularly called. Numerous public baths & fountains served the people as social & cultural centers as well as water suppliers.

The Ottomans, especially during Sultan Suleyman the Magnificent’s time have added enormously to the system as well as repairing the old. The great architect Sinan built “the LONGEST AQUEDUCT in Waterway History”! Surviving witnesses of the “WATER CULTURE HERITAGE” of the 3 Empires.

Today in modern Turkey, due to increasing population & the great attraction of urban life, water supplies are getting more & more scarce & insufficient. Urbanization means more construction, more people in the cities, sacrificing vital green land for habitation & industrialization projects. Along with inadequate infrastructure, now the need for energy is threatening our rivers & water sources with hydroelectric & nuclear installations. To reverse this “vicious circle”, great effort & studies are being made for sustainable energy sources like the SUN & the WIND that our country is blessed with, bountifully.



Ancient aqueduct in Izmir



Kızıl Çullu aqueduct, Pergamum



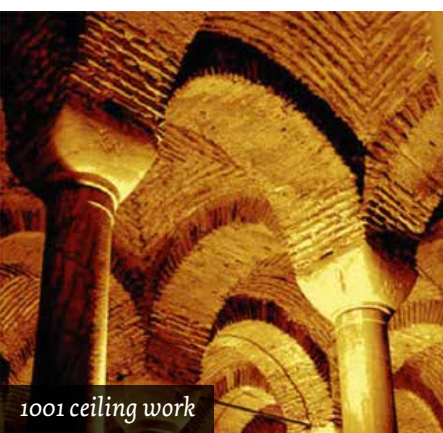
Istranca Aqueduct, Kırklareli, Thrace



Bozdoğan (Emp. Valens) aqueduct



Aqueduct by architect Sinan



1001 ceiling work



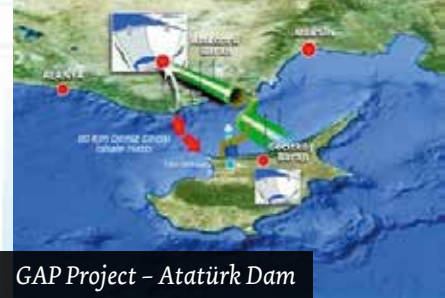
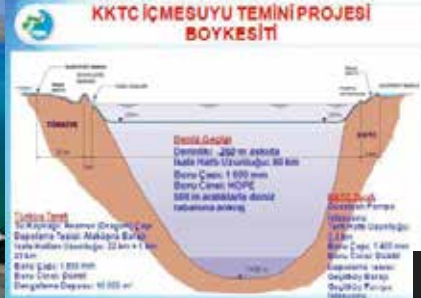
1001 Cistern columns



Yere Batan Sarayı (Sunken Palace)



Clean Water Supply for TRNC



GAP Project – Atatürk Dam

Due to climate changes & the scarcity of rain fall, forests, wild-life, endemic flora & agriculture are being threatened by draught often followed by flood & erosion of fertile soil. Building DAMS to hold water emerged as a viable solution to the problem; so we started to build dams all over the country rivers, East & West, North & South, the greatest being the "GAP PROJECT" over the rivers Euphrates & Tigris in southeastern Anatolia.

A rather daring Project under way is to get the waters of Manavgat & Duden waterfalls on the south coast under control, & by a pipe system 107km long, 250m deep under water on the Mediterranean base, convey to the Turkish Republic of Northern Cyprus, where they also have serious water shortage. The work is nearing the end, It is planned to start the flow this spring, hopefully.

Now let us focus briefly on what we do as Inner Wheelers & Rotarians in Turkey: As we work on educational & health programs for the young generation, we combine "Clean Water & Sanitation Projects as well, believing that while applying our Projects or the schools, we can also educate the children & also the parents we come into contact with, on the hygienic & economic use of water. As a recent example, I'd like to mention a Project IWC Eskisehir carried out successfully. The club repaired the lavatories in a primary school & installed "wise faucets"-photo-cellular faucets in the tubs. Thus the children were given clean safe water & used just as much as needed. The club members, as they visited the school frequently .had the chance to contact the parents & talked with them, demonstrated the importance of the correct use of water.



Economic use of water



Another project where all the clubs in our district lent a hand, was putting "shower cabins" in the bathroom of a girls' high school dormitory in Muş, South eastern Turkey. Under the leadership of IWC Dalyan, 24 Shower cabins were installed & the bathroom facilities were all renewed. Again the members put to use the chance to accent the wise & economic use of water, the importance of hygiene, & awareness on the water problems of the country.

Our Rotary clubs as well, are constantly implementing projects that accent the importance of the use of water. One significant project was carried out by RC Tarabya in Istanbul. The club undertook to reconstruct & rehabilitate 3 historically eminent fountains in Tarabya, built during the Ottoman Empire time. The fountains were out of use & in very poor condition, the marbles all blackened in time, the faucets were gone, the surrounding poorly looked after. The club repaired, rehabilitated the fountains & cleaned the area; & while accomplishing their Project, succeeded to arouse awareness for our historical heritage, & also the economic use of water. The neighborhood people were grateful, the club was happy, the mission was fulfilled.



Hygienic use of water

The aim to promote the wise use of water, the economic consumption of sources, the awareness on historical heritage can only be achieved by EDUCATION, Inner Wheel & Rotary members in Turkey believe that educating the young generations on these vital issues is our hope & primary goal for the future. Therefore most of our projects are targeted to the young people & their families.



Rehabilitation of a historical fountain

Ashnadelle Hilmy Mortagy

EGYPTIAN WOMEN'S PARTNERSHIP FOR ENVIRONMENTAL CONSERVATION: WADI DEGLA PROTECTORATE

Introduction

The objectives of this environmental case study are 1) Protecting the Environment and Natural Heritage; 2) Reducing Air Pollution; and 3) Conservation of biodiversity and natural resources by establishing Wadi Degla, an endangered desert habitat south of Cairo, as a national Protectorate.

Being one of the ancient civilizations in the world, Egypt prioritizes facing numerous global environmental challenges. Efforts continue in saving energy, protecting air and water, reducing pollution in a proactive manner, saving protectorates, recycling human, and agricultural and industrial wastes in addition to facing global climate changes.

Clearly, this endeavor cannot be realistically achieved without the cooperation of civil society.

This paper focuses on the success story of a Cairo NGO and its impact on improving the quality of life of Egyptians around Cairo. This was achieved by improving the quality of air and by saving an endangered 60 million years old geological formation of a natural and fragile desert ecosystem threatened by encroaching urbanization and industrialization in the midst of urban development and making it a national Protectorate.

Case Study

Maadi, a suburb in the south of Cairo where I live, is a haven for Cairenes, being a green area in the middle of urban development. The Maadi Tree Lovers Association (TLA), is an NGO responsible for preserving nature, helping improve the quality of life and protecting the environment and habitat of this area and its surroundings for all Egyptians and future generations.

TLA was founded in 1973 by a group of dedicated Maadi residents who initiated several programs and environmental projects, and developed guidelines and codes of conduct on how to interact with the environment. Its mission and vision focus on the respect and love of nature, and it aims to serve the community by encouraging and assisting the public at large to protect the quality of life, and to increase space for trees, green areas, and wildlife while protecting Egypt's Habitat.

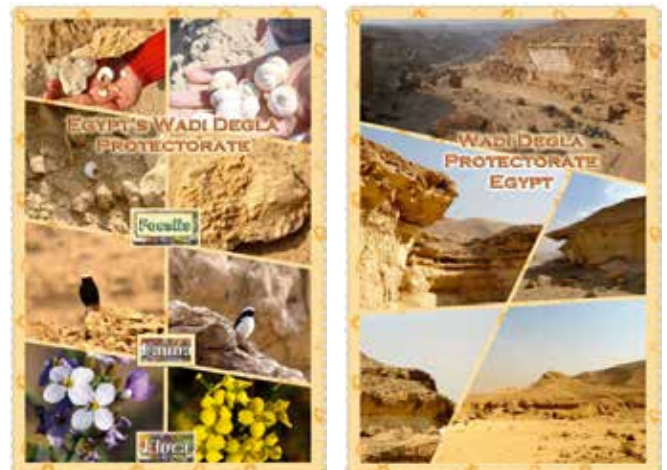
As a powerful pressure group TLA has lobbied against and successfully prevented projects that would have caused irreversible damage to the Egyptian natural heritage and the health and quality of life of its citizens. The driving force behind the Wadi Degla Protectorate is its members Mrs. Asmaa' El Halwagy, Mrs. Samia Zeitoun and Mr. Ahmed El Guindy.

Wadi Degla, Egypt's Grand Canyon, a 60 million year old valley, located only 10 km from downtown Cairo, was threatened by the impact of the encroachment of urbanization hazards especially those related to quarrying, foundries, garbage dumping and burning of solid waste and garbage refuse with its negative consequences on the quality of air around Cairo and the increase of the degradation of habitats for flora and fauna affecting quality of life for inhabitants of the area.

Conflicting interests between governmental and commercial sectors were putting the area at great risk of destruction and causing irrevocable damage to the natural resources and habitat as well as posing a threat to the health and quality of life of all the citizens in the extended area south of Cairo.

Wadi Degla Protectorate, one of 30 Protectorates which form more than **15% of the total area of Egypt**, lies in the Eastern Desert and runs east to west for 30 km to drain into the Nile Valley at Maadi, south of the Governorate of Cairo.

The area, which encompasses 60 km, was declared a Natural Protectorate due to the above mentioned efforts. During the *Upper Eocene epoch*, 50–60 million years ago, Egypt was covered by the Mediterranean Sea. At the same time tectonic movements were raising the seabed and creating the Moqattam Hills. These formed a southward slope that became covered with sedimentary layers rich in marine fossils. When the sea receded, the area with its marine sediments was exposed. During the *Pleistocene epoch*, extended periods of rain eroded the exposed limestone and formed Wadi Degla. Waterfalls cut into the valley and deep rock pools were created. About 10,000 years ago, dry periods began to dominate and the land stabilized. Today, winter rains refill the valley's rock pools. On either side of the Wadi, karst caves provide



shelter and habitat for wildlife that includes the almost extinct Nubian Ibex and the Dorcas Gazelle. The Wadi Fauna features the ubiquitous White-crowned Black Wheatear bird and the majestic Pharaoh's Eagle Owl and the most notable Flora are the Caper, Lycium, and Tamarisk.

The TLA and its dynamic members backed by solid scientific data, with the help of the **International Union for the Conservation of Nature in Gland, Switzerland** and the media, spearheaded a pioneering campaign that successfully mobilized public opinion and the Egyptian Ministry of State for Environmental Affairs (MSEA) to save this endangered area and protect the health of the citizens.

Outcome

The valley was saved not only for the benefit of future generations, becoming the 21st Egyptian Natural Protectorate but also to help in improving the quality of life and clean air in its surroundings. After being threatened by solid waste and having its access blocked by the waste of the quarries, Wadi Degla Protectorate is now a tranquil haven from the frantic pace of life in urban Cairo. It provides a variety of ways to relax including nature trails and bird watching. Biking, mountain climbing, and jogging are available for the more energetic. Despite its proximity to the city, this Protectorate is a home to a variety of wildlife, fossils including ancient sea shells and clean air.

After the implementation of a successful advocacy program and the mobilization of decision makers to establish protectorate status to the valley through the efforts of civil society and women activists in particular, major efforts were extended through the partnership between governmental agencies and NGOs in creating a management plan for the area.

Multi-level networking between the Egyptian Ministry of State for Environmental Affairs under the auspices of H.E. Minister, Dr. Nadia M. Ebeid, and national and international academic institutions resulted in the collection of scientific data of fauna, flora and geological formations, and in monitoring polluting threats of infrastructure hazards to conserve the biodiversity of the valley. As a result, the garbage dumpsites located at the eastern edge



of the protectorate and associated recycling centers were relocated several kilometers towards Al Kattameya.

Conclusion/ Findings

The **role of Egyptian women** as conservation participants in decision making is at the core of this case study which sets a precedent for women in North Africa and the Middle East to lead a campaign for establishment and participatory management of a Protected Area. The proclamation of Wadi Degla as Egypt's 21 Protectorate was a result of a campaign led by women of the TLA in consultation with women from scientific and educational institutions, governmental agencies, media, business sectors and community members at large. This demonstrates the importance of protectorates as a tool for biodiversity conservation and in this case, in an overpopulated urban area.

It is of the utmost importance to continue to **safeguard the status** of the Protectorate from threats of solid waste and polluting infrastructure such as the newly encroaching marble and granite production factories in the Protectorate's buffer zone near Shaq al-Thou'ban, where some of the world's finest grades of marble and granite are found.

Unless NGOs and civil society in cooperation with the State **ensure upholding article Two of Egyptian Law 102 / 1983 for Natural Protectorates** which forbids to partake in activities leading to the destruction or deterioration of the natural environment, all the previous efforts will slowly be eroded. Such activities include the destruction of geological structures in areas serving as natural habitats and breeding sites for flora and fauna. Pollution of the soil, water, or air of the protected area is also forbidden by law. It is imperative **to affirm the social responsibility** of the present generation to ensure the sustainable development and equitable sharing of resources for future generations through a pro-active and effective national strategy for conservation.

Though much more needs to be done for the future of our planet, Egyptians are hopeful to see a growing realization that the concerted efforts for a better quality of life and the ongoing protection of our environment and Protectorates can only be achieved if both governmental and non-governmental entities work in harmony and reach out to involve the public at large. By working together, we can find innovative and comprehensive development strategies that preserve our natural heritage for generations to come and **a sustainable future for our planet. Think Globally, Act Locally.**

Ashnadelle Hilmy Mortagy
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ANTONELLA RONCAROLO

AIMING AT GREAT BEAUTY: PICENO MARINE PARK GROTTAMMARE'S EXPERIENCE OF DEMOCRATIC PARTICIPATION

Introduction

I live in Grottammare, an attractive town on Italy's Adriatic Coast. In Grottammare there are only 15,000 inhabitants, but last year the President of the Italian Republic Giorgio Napolitano, named Grottammare a "City", because of its history, its commitment to the International Cooperation Projects for the South of the World, its great attention for the prevention of all forms of air and soil pollution and the recovery of the artistic heritage. The conquest of this important recognition comes from far away.

History of local democracy

In the late 1980s, local construction interests teamed up with bigger local companies to turn Grottammare into a suburb of San Benedetto del Tronto, the neighboring city more famous for tourism and fishing.

In a few years, Grottammare would have been transformed into a tourist playground of big hotels with a cable car running up to the medieval town.

In a few years Grottammare would have more than doubled its inhabitants, from 12,000 to 30,000, thanks to tall buildings built from the coast inland towards the hills.

In a few years Grottammare would have had a mega marina with the biggest yachts moored on the coast only a stone's throw from another yacht club always empty and at a loss.

The last wound inflicted on the city by these nefarious projects was a tall building of over ten floors, built bang on the beach, the last witness of a blind policy.

In those days, a group of citizens, teachers, doctors, journalists and community workers deeply committed to their town, got wind of this.

They were well known because of their involvement with housing rights and two of them had already been elected onto the city council. They mounted a successful campaign against the development plans.

"We knew people didn't want that kind of tourism. We argued for a tranquil tourism, that was about nature, culture and human relationships, not consumerism", said Massimo Rossi, the first Lord Mayor of this new era. Those ideas touched a nerve. The people of Grottammare chose to change course.

In 1994 "Participation and Solidarity" a coalition of untried, but also uncorrupted men and women won the municipal elections and started to recreate their own town.

The coalition's first task was to develop a new urban plan for a town that was becoming cluttered and which was losing its magnetism for tranquillity.

The new government combined professional efficiency with democratic participation, calling open assemblies in every neighbourhood.

In Grottammare the rule is that all the ideas that come up in the neighbourhood assemblies are put together by the committees who bring them to the Council where they also make sure that these ideas are addressed according to the citizens' will.

Some projects

In the Southern district of Grottammare, where I live, there have been a lot of projects of which I am very proud, concerning the integration of tourism with the life of the town.

The new sea promenade was redesigned deleting one carriageway for cars and one line of parking spaces. In their place a bike path and a wider sidewalk were built.

The citizens chose to limit parking and traffic along the seafront despite the many hotels and restaurants, in order to recover space for recreation and for people to meet and spend time together.

This choice is consistent with a different idea of the city. An idea that combines the need for space and relationships expressed by the weakest and the most sensitive population such as the children and the elderly. An idea of tourism centered on the environment, culture, cleanliness, tranquillity and the possibility of socialization.

Grottammare's commitment to the south of the world

It could seem strange for a small city as Grottammare to promote public assemblies (Council of Foreigners and Brotherhood among Nations) to listen to the needs of foreigners living, studying and working in to the city.

It could seem anachronistic in a time of economic crisis, to undertake and allocate public money in order to promote projects for building wells for drinkable water against desertification in the South of the world.

But these projects are critical in the government of the city because the citizens know that their future is closely linked to the future of all nations of the Earth.

Of course, all the inhabitants are involved in the planning and approval of the municipal budget.

Piceno Marine Park

Now, I would like to draw your attention to a project that the citizens and the administrators of Grottammare have worked on for years by demonstrating a sense of belonging, of pride and responsibility towards not only the city but the whole region: the establishment of the Piceno Marine Park (Piceno is the ancient Latin name of the area in the south of the Marche Region).

The Adriatic Sea, which is part of the Mediterranean Sea, is rich in history. On its shores ancient civilizations from the Phoenicians to the Greeks, from the Roman Empire to Venice were born.

In modern times, the Adriatic Sea has witnessed various historical events. The Adriatic Sea was the political border between East and West and a source of wealth for our community thanks to fishing and tourism.

Sometimes, when I talk about the Piceno Marine Park, it happens that my interlocutors give me a questioning look. Then I ask them: "What baffles you? The limits to motorized boats, the more stringent rules governing fishing or the restrictions to building on the coast?" "None of this, at all. Indeed, we welcome these measures", they readily answer.

"So what is the matter?", I insist. With some reluctance, they finally air their one doubt: what is there to protect in our sea? After all, we are not speaking of the Red Sea, or the Maldives with their beautiful coral reefs. There are no species to be protected in our sea.

The establishment of a Marine Park has become necessary and urgent, and I believe that this need concerns not only the sea, but the whole planet because the protected areas remind us that there are places that need to be preserved from the use or rather from the abuse of Nature.

Men have the arrogant belief that they can use nature mainly by heeding their own needs and forgetting that an organism - and Nature is as a great organism - when attacked, exploited, and injured, gets sick and shows it by symptoms through which, as time goes by, become irrefutable messengers of disease.

We all know the importance of protecting tropical forests, considered the "lungs" for the production of oxygen due to the capture of carbon dioxide by photosynthesis, but in reality most oxygen production occurs due to the phytoplankton present in oceans, which is made from single-celled plants able to implement photosynthesis, through which these organisms absorb solar energy to convert carbon dioxide and water into carbohydrates and oxygen.

To protect some areas means paying attention not only to limited areas, where there are rules to follow, but to allow the whole ecosystem to have the opportunity to rebalance and rejuvenate.

For all these reasons, a marine park is not only a geographical location: it is, above all, a way of rethinking the relationship with the environment, but also the relationship of man with himself and man with other men.

The project, which was started twenty years ago by the Mayor of Grottammare, has been on the Environment Minister's table since 2010, and it is still there blocked by red tape, which is typical of Italian politics. The desire of the citizens of Grottammare and, I am sure, the majority of citizens of the Piceno Area, is to take the last step to finalize the Marine Park, a result that crowns a collective effort and could be an important added value to the outlook of the territory at a time of such a severe crisis.

Conclusions

The experience of democratic participation of the City of Grottammare still continues today.

Mr. Luigi Merli, elected Mayor after the two-terms of Mr. Massimo Rossi, walked the line drawn by the citizens, carrying out a lot of projects including a charming garden terrace overlooking the sea, a place at once loved and frequented by tourists and locals, a symbol of excellent policy.

Last year, in the municipal elections, the citizens of Grottammare once again gave their full support to the project of "Solidarity and Participation" and they elected in the first round Mr. Enrico Piergallini, a young teacher who had been Councillor for Culture.

After twenty years, from 1994, the city has really changed the course of its history and showed that at the local level people can have a dream and create a better world for themselves and their children.

Not only that, using sensible policies in a small territory is essential in order to produce "global answers". It can ensure a future for humanity in every respect, social, economic, environmental, so the prospects for a better world, can be developed in a workshop of ideas and projects spread all over the world.

Antonella Roncarolo
IW club president, 2006
IW Editor District 209, 2012-2013

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Oluyemisi Alatisé

RENEWABLE ENERGY – MAKING SOLAR PANEL AVAILABLE AND AFFORDABLE FOR NIGERIA MARKET

Electricity has been a tool for development. Since its invention, mankind has relied on it for virtually everything. The very big factories for heavy production of various types of gadgets to household equipment are all dependent on electricity. Inadequate generation of it means lacking behind developments as a nation or as an individual. I will narrow my point of view to the lower middle class and low class reliance on this electricity. Nigeria is a growing nation; development is required in every facet of the commercial activities and quality of life. Entrepreneurial activities are very common amongst these classes of people, arising from inadequate western education that will ensure steady income from employment.

Our system of education encourages learning in technical colleges and secondary school level. Education is free from primary and partially free in secondary school. These members of the community are usually of large numbers with many wives and plenty of children. Getting their children beyond secondary school level is usually a challenge. The children ended up learning a vocation or trade. (e.g. Iron Bending and Welding, Carpentry, Sewing, Hair dressing, Plumbing, Bricklaying, Butchering, Farming, Animal husbandry etc). Some of the skilled labours require little or no electricity, whilst some depend on electricity. The use of electricity for most skilled labours makes its importance imperative for sustainable growth in personal or national growth.

The provision of electricity has always been the prerogative of the Federal Government until about 4 weeks, when Government interest has been sold to international and local companies. The production of energy, distributions and marketing are now independent of the Government interference. Time will tell if this is a better option. The Corporation was riddled with corruption, which the private company will not encourage. It will take time for us to the improvement in the sector. The demand is far higher and supply. We experience rationing often to as little as 6 hours a week. In order to be gainfully employed mentally or physically, different kinds of renewable energy have been introduced into market. Generators in many capacities fuelled by petrol or diesel, rechargeable lamps, Solar panel, inverters, lanterns are imported into the country. The generators can be as high as 3000kw to 3.00kw power generating.

The option of Solar power comes readily to mind, because of our temperate climate. Solar can be harvested for conversion to electricity. The inverter option still requires the use of electricity to recharge and battery. A minimal energy is needed for its optimal production. Both options mentioned above are not affordable to the lower middle and low class of members of the community.



Their need for personal consumption is light at night, a fan, television, and charging point for handset. These needs do not warrant the huge capital to provide personal energy for their use. There is the paraffin lantern and the local palm oil lantern.

The use of solar energy in Reunion Island for hot water serves of subsidy for energy generated for bigger kilowatts equipment's consumption. Hot water is provided for us naturally. This may not work for us. The lower class does need air-conditioners, or water heater to take bath, or even refrigerator can be optional.

The need to satisfy the energy requirement of the people, different kinds and sizes of generators are imported to suite everyone pocket. There have been records of death from inhaling of CO₂ emitted for these generators. The 1.250kw is found almost in front of every room on the corridor of multi-rooms apartments on the walkway of small shop area shopping centre. Carbon is emitted and inhaled. Even though Solar energy is free of these problems, in long term it is more economical, but the initial cost is not affordable. The use of kerosene lantern for light at night or candle has proved to be dangerous, as fire incidents destroying life and



property made the use of small size generator as option coupled with incidents of kerosene explosion in an enclosed room.

The use of small size generator has been known to be proof of better life. Family save money to purchase as Christmas present for the children. Whose requirement is just light, watch television, charge handset and a ceiling fan. This little energy can easily be provided by solar, if they come in affordable packages.

Even to the middle class, who can afford to purchase solar energy, their annual budget based on their expected annual income cannot accommodate it. There are other more pressing things that require the money. Spending a little on energy every day is budget friendly. Technology to produce these appliances and make them available and affordable will go a long way to sustain our climate and leave a healthier for our children.

The big size generator that can power, air-conditioners, freezers, refrigerators, can be found in duplex, single family house occupation and service apartments. The maintenance and operation cost is shared serviced apartment as a communal service. These sizes are found in high class area with large space to house and allow for free emission of carbon.

The middle class that lives in flats or duplex have the 8 – 10kva generator, that will power at least one air-conditioner, fridge freezer, lights fan. There will be a minimal space to keep and operate.

Idemba Health Centre has been picked by District 914. There is no electricity in the village. A complete set of equipment will be required. Solar panel, batteries and inverters will be required. This will make the health centre energy self-sufficient for the barest energy need. The revised estimate came to about N1.2m and N1.5m. The District of about 120 members raised N500,000.00. Our Consultant Mr. Livinus is ready to help with credit loan,

hopefully at the commissioning ceremony, we shall be able to raise the balance of the cost of the project.

The project was introduced to me by my good friend, Mrs. Hanelle Karhunen. The topic came up in our Seminar Women for Africa under Renewable Energy. I wanted to try a pilot project with my country home of two bedroom chalet. I could not afford the cost when I saw the estimate. I was not ready to put down such huge amount of money at once for electricity, when I can just budget a little everyday for the same purpose. I encouraged the District to try it. I am committed to see the actualisation of the project. I decided to sacrifice the cost of my registration, hotel and tour trip to St. Petersburg, I have donated the sum of Euro 1,060 towards the project.

In conclusion, there is need and great market for a cheaper option of Solar Panel, if they are available and affordable. There is huge market for it in Nigeria. It will be a practical advertisement for the production company to support a pilot project like the Idemba Health Centre in other parts of the country. There is plenty of sunshine energy for harvest and conversion to electricity. Its functionality and long term advantage can be seen by the people. This will encourage its use in large number, as long as it can be made pocket friendly. The people that can afford its cost will rather buy generator that can power many air-conditioners, freezers with the same amount for Solar product, which will only give a minimal energy requirement. Provision of simple lights and fans for comfort required by larger number of member of the society, is not affordable. To leave a healthier planet for our children requires for sacrifice from us.

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Annalise Larsen

A CO²-NEUTRAL FUTURE FOR THE SØNDERBORG AREA ESPECIALLY A GREEN LINE IN EDUCATION

Introduction

Project Zero Master plan for a CO₂ neutral Sønderborg area is the result of 80 leading national energy experts and local experts analysis and strategy work for one year.

The Master plan 2029, experts give their views on how vision becomes reality. Roadmap 2010-2015, an action plan with a focus on the smartest initiatives until 2015, when CO₂ emissions must be 25% lower than the baseline in 2007.

In 2029 the Sønderborg area will be self-sufficient in renewable energy. Significant energy efficiency means that energy consumption is 38% lower than today, and climate solutions is driving new growth companies.

With the vision being fulfilled Sønderborg area will become a role model for other areas who want to create a sustainable and CO₂-neutral future.

Project ZERO has been going on since 2007. The Project is working on making our planet especially Sønderborg Community CO₂ - neutral in 2029. The project is a work in cooperation with the community, private companies and educational institutes. The goal is to make Sønderborg to reduce the CO₂-emissions with 50 % in 2020 compared with the % in 2007.

This project wants to tell the story about being energetic in cooperation by networking in different industries and by developing attitudes and a green DNA.

This is specially mended on children and young people by infect them with enthusiasm about being aware of our Earth and about a sustainable environment.

The children and young people will be educated in sustainable behavior from the Kindergarten till the universities.

The Project ZERO has a strong cooperation as well in the whole Denmark as in the rest of the world. They are informing about the project, about results until now and what is planned to be developed in the future.

Learning - House of Science

Sønderborg area's major reconversion requires knowledge and understanding of the solutions for both individuals and businesses. Therefore, green learning and education necessary tools

in both the school and education, in -service training of craftsmen and leisure services offered to citizens.

House of Science ensures forward the green line in the Sønderborg area's education system from nursery to university-grades, where the focus is climate, innovation and sustainability. Sønderborg City Council has initiated a green curriculum and House of Science has engaged thousands of children and youth in reconversion.

Both the students at the Business Academy Southwest as the University is engaged in the Sønderborg area's major reconversion and contribute through case studies and project work in collaboration with craftsmen and industrial companies.

Sønderborg - area's craftsmen strengthen their energy guidance and 65% of the area's handcrafted companies have participated in the training and guidance programs developed by EUC Syd (Vocational college) and Technological Institute.

Green curriculum for pupils

The school year 2013/14 has started green. An ambitious green curriculum came into effect and is now part of science education in Sønderborg.

House of Science, in collaboration with the Municipality of Sønderborg and public schools produced a green curriculum for the entire school area. The plan has just come into effect when the school year began in August 2013. The goal of the curriculum is to promote students' science competencies with particular focus on climate, Innovation and Sustainability.

The new green curriculum is within the natural sciences and ensures that all pupils from primary schools to the end of school, learn about climate and environment on green solutions and good environmental conduct.

Rasmus Andreassen, head of the House of Science, said: "The purpose of the curriculum is that children and young people are introduced to green and sustainable solutions globally, but especially locally. With the green curriculum we have a unique opportunity to create a more cohesive compared to the many initiatives that already exist locally in the municipality. Partnership behind the House of Science welcomes therefore very pleased to have succeeded in getting into the curriculum as it is a vital tool in the reconversion to a greener and more sustainable city."

The municipality's green initiatives in focus

The curriculum includes, in addition to learning about recycling, waste and CO₂-neutral supply areas, also innovation. Thus students are well prepared to succeed in a globalized world where professional skills rarely stand alone.

With the curriculum, many of the local green initiatives will be set in focus. All students will be required to be familiar with the area's Project Zero vision, and all must during primary school visit the local nature centers, waste sorting facilities, and different parts of the energy supply systems so as a local solar system.

These visits are part of the curriculum, which also ensures a greater focus on teaching on climate and the environment through innovative ways of working. Furthermore there is a focus on visibility and parental involvement so in many ways this

is an example of a curriculum that would help to ensure activity outside the school walls.

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The paper's information is downloaded partly from
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Alsion 2, DK 6400 Soenderborg.
www.projectzero.dk

Ayfer Carkoglu

SUSTAINABLE USE OF NATURE PRODUCTS



Gum Tree as a bush



Full grown gum tree

It is believed that sustaining forests is investing in our future, because forests are vital for clean air and in the fight against climate changes due to their potential carbon dioxide intake.

But, forests are being diminished by people all over the world since human beings came to life. Unfortunately, some endemic habitat are in danger of extinction.

After the First World War, Ottoman Empire lost all her land in Europe, South Africa and Middle East. Moslems living in those areas started immigrating to Anatolia. When the Republic of Turkey was founded by Mustafa Kemal Atatürk, an agreement was signed by Greece and Turkey to exchange the Moslems living in Greece with the Non Moslems living in Anatolia. Moslems in Greece were tobacco growing people and they needed farming land.

They were settled around Izmir at the Aegen District, so they dug out the endemic trees namely gum trees and almond trees around Izmir and vineyards, to open lots for cultivation of tobacco. A gum tree is like a bush when it is young so they were the first to go, and unfortunately the

others died because of lack of cultivation and then dug out.

Cheshme and Chios island which is Greek land now, were the supplier of gum for the whole empire. The name of the island in Turkish is SAKIZ which means chewing gum. Gum drops and almonds are used in perfumes, food and in medicine industry for their aroma.

And so was the destiny of pine trees, so our club has also planted around 2000 pine trees at the Aegean district, but more are being planted by Ministry of Forestry every year for a long time, but still more are needed for pine kernel.

Whereas now there are very few gum and almond trees around this area. So our club, Izmir Inner Wheel together with Izmir Rotary Club planted 500 gum trees and 1500 almond trees in Cheshme. The Ministry of Forestry took the responsibility of irrigating them and taking care of the trees for five years and after that this land will be given to the cooperative of the village near by and they will be thought how to take care of these trees and how to pick up the gum and fruit from the trees.



Unripe almonds on the tree



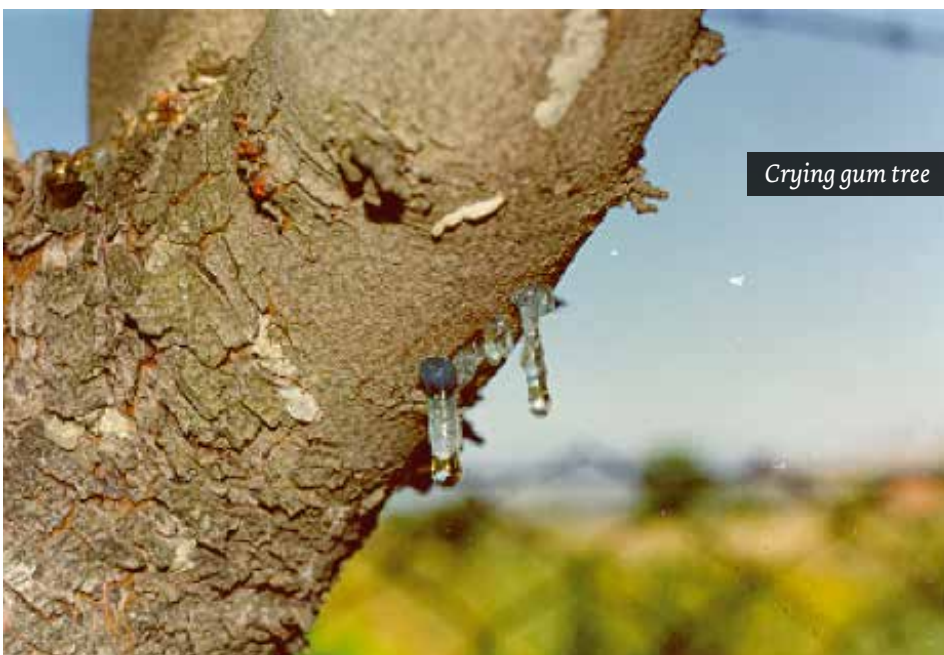
Ripe almonds

Almonds are easy to pick up. They are also eatable when they are unripe, before the pip of the fruit hardens, but when the green cover dries out, the pip hardens. It has to be crushed to take the almonds out. The gum drops come out from the trunk of the tree, and it is said that the tree is crying. When it is the crying time of the trees, clean clothes are laid under the trees and drops of gum are collected on them.

The almond trees are always one of the first trees to blossom in spring, and sometimes when the weather becomes cold again, the blossoms die without giving fruit, and this has inspired one of our poets to write a poem. And I would like to end my speech with the poem called, the Almond Tree:

THE ALMOND TREE.

*You are the most foolish among trees
I am the most foolish among humans
Weather fools you, Love fools me.
When it is warm, without thinking that spring is not settled yet, you blossom.
And me, I always believe the pink side of dreams, and open my heart.
Before having your fruit, the cold wind strikes you,
Just like the one sided love striking me.
Knowing that we have been fooled, We repeat the same scenario again and again,
People call us fools, but let them.
Even though no love ends in happiness, Let us blossom.
I am with you my friend, when you find the warm weather, blossom.
Just like myself opening my heart
May be the cold wind won't come this time,
May be my love will not become a dream.
Enjoy the warm weather, Just like myself enjoying my latest love.*



Crying gum tree

Luisa Vinciguerra

FEEDING THE PLANET, ENERGY FOR LIFE - THE ROLE OF INNER WHEEL

The paper «FEEDING THE PLANET, ENERGY FOR LIFE - The Role of Inner Wheel» is part of the section devoted to the *Sustainable Use of Nature Resources* and is linked to the important event worldwide «EXPO MILANO 2015¹». We consider the theme of the paper as vital and complementary to all those will be developed in the Conference WfE5 in Hanasaari, Espoo, Finland - 29th-30th March, 2014 - «LET'S LEAVE OUR CHILDREN A SUSTAINABLE PLANET».

In accordance with **the United Nations Millennium Development Goals²**; in continuation of the Programme **Europe 2020: A European Strategy for Smart, Sustainable, and Inclusive Growth** (addressed and developed in Turin during the International Colloquium «women for europe⁴ - the role of inner wheel, towards europe 2020», November 2011;

in accordance with the Theme Statement of EU participation on the Expo 2015, that is **Growing Europe's future together for a better world³**; in accordance with the new *vision⁴* of Inner Wheel, we would like to involve the Inner Wheel members in an interesting and innovative project reserved for women in the EXPO context.

One important challenge that Expo Milano 2015 has inserted in its Theme is that of gender, seeking to highlight the role of women in relation to such crucial aspects of the Expo Theme as nutrition and food safety/security, food production and preparation. In most countries, it is women who manage the household and are employed in the agro-foods sector, and when breastfeeding their children, women provide the initial source of nutrition for.

1. Expo Milano 2015 is a World or Universal exposition. World Expos take place every 5 years and have duration of 6 months. Participants include countries, international organizations, NGOs (as Inner Wheel and Rotary), corporations and other institutions such as the European Union. The size of the site is unlimited and participants build their own pavilions.

2. The Expo Milano 2015 Theme is linked to certain objectives of the United Nations Millennium Development Goals, including:

- The first: eradicate extreme poverty and hunger, and reduce by 50%, the proportion of people throughout the world who suffer from hunger;
- The fourth: reduce by two thirds the mortality rate for children under the age of five years;
- The fifth: improve maternal health and, in particular, reduce the maternal mortality rate by three quarters;

- The seventh: ensure environmental sustainability, in particular by supporting sustainable development policies and programmes in order to reverse the loss of environmental resources and reduce biodiversity loss;
- The eighth: develop a global partnership for development.

3. "Growing" connects with the agricultural theme of the Expo. "Growing Europe's future" sets the EU's goal: making the EU more successful and better, in particular at addressing future challenges to the environment and the food supply chain.

4. The new vision has inspired Projects dedicated as *Women for Europe - the Role of Inner Wheel*, now at the 5th Edition; *Inner Wheel Women for the World*; *Women for Africa - Role of Inner Wheel*; and the Theme of IIW President 2013|2014 Gabriella Adami *We, for Women*.

WE-WOMEN FOR EXPO IS A PROJECT IN COLLABORATION WITH THE ITALIAN MINISTRY OF FOREIGN AFFAIRS AND THE ARNOLDO AND ALBERTO MONDADORI FOUNDATION.

The we-woman for expo project seeks to create a network of women reaching across the entire world: working all together on the issues of nutrition, they can become leaders of change for the food's right.

WE, Women For Expo – We, The Future:

We would like to involve our Inner Wheel Members and see Inner Wheel represented in all or some stages of this Project, that are:

1. Women of the world: from every country and culture, occupation, social and family condition, are invited to take an active role in the project, each proposing her own Recipe for Life.
2. The WE ambassadors: women writers, artists, actors, singers and scientists from Italy and the rest of the world, leaders in civil society, members of NGOs and associations (as Inner Wheel), involved in the theme of food and nutrition will promote and encourage the participation of as many women as possible, regardless of their sphere of action, working together with them to valorize their stories, their testimony, their recipes.
3. International Women leaders: a network of women experts who fill leadership positions in the international scientific community, in the business community, in institutions and culture, coordinated by Women in Diplomacy (WID) Committee of Ministry of Foreign Affairs. They will organize a series of conferences on the issues of nutrition responsibility, in contributing to the diffusion, awareness and production of ideas for a more sustainable future.
4. Women writers from Expo 2015 participant countries will be engaged to compose "The World Novel", a mosaic

of voices of leadership and excellence, written by many hands. It will be a veritable journey around the world on the theme of food, its history, tradition and cultures, taking the form of a series of short stories by selected women authors who are representative of each country.

5. Women artists and creative minds from all over the world will be called upon to create a collective visual itinerary on the theme of nutriment, a bona fide artistic narrative titled "Global Creative Thinking".

We would like to involve our Inner Wheel Members in the future, where the Women have a important role, because their creative and effective cooperation of thought and action and their commitment can change the world.

We would like to see our Inner Wheel as signer of the women's charter will be a manifesto of values drafted, acted upon and collectively experienced by all WE Women, and bequeathed by Expo Milan 2015 to United Nations, as a contribute to the fulfilment of development's goals for post-2015.

Luisa Vinciguerra
IW Board Director 2013\2014





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* Puhelut 8,35 snt/puh. + 7,02 snt/ minuutti, matkapuhelimesta 8,35 snt/puh. + 17,17 snt/ minuutti.



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