

3rd INTERNATIONAL WATER SYMPOSIUM

REPORT

**WATER RETENTION LANDSCAPES –
A SUSTAINABLE PATH TO REGIONAL SOVEREIGNTY**



TAMERA, PORTUGAL • JUNE 6TH - 9TH 2013



WATER RETENTION LANDSCAPES

A SUSTAINABLE PATH TOWARDS REGIONAL SOVEREIGNTY

A résumé of the third international Water Symposium in Tamera, by Leila Dregger

From June 6-9th experts, activists and global visionaries met in Tamera about the issue of water and discussed ways to protect and, where destroyed, regenerate the big water cycles of the earth. They worked together on the different aspects of a global strategy: to build regional model projects in various locations on Earth, which would combine ecological regeneration, food production, economic and social sustainability. In addition to the key factor of natural water management to stop the climate crisis, new related concepts for animal husbandry, agriculture and human habitation were also discussed. There are several training courses planned set up for applying this overall strategy at a regional level.

Some facts and figures about water which show the urgency of the issue:

Approximately 1 billion people do not have access to clean drinking water.

About 1.8 million children die each year from diseases that are caused by a lack of clean water.

In 71% of cases in sub-Saharan areas, it is the female family members who are responsible for obtaining water. Due to increasing salination of groundwater, girls and women are forced to walk very long distances to find drinking water.

28,000 rivers worldwide were blocked to form large dams.

Countless people have become water refugees, because they have no water rights or large dams projects have been built in their area.

These figures show that the blue planet has become a thirsty planet. The powerful natural cycles that originally carried the water all by itself in any place, to every living being, has been severely disrupted. Desertification, forest fires, and floods are not natural phenomena but often can be consequences of false human intervention - through monocultures, improper grazing, intensive irrigated agriculture, large dams and deforestation – often by centralized and profit-oriented organization.

Water has become a commodity. Modern capitalism has realized that where there is water, there will be investors. Only where there is such a disparity of water-richness can one speculate for profit. With the world increasingly divided into water-rich and water-poor countries, wars over water seem inevitable. Around the world there is increasingly popular support in opposition to the destruction and ignorance around water. Frequently this has involved opposition to the construction of large dams and against water privatization.

Worldwide people take a stand against the destruction and ignorance. They occupy building sites of



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the large dams and protest against water privatization. Many people are working and researching for alternatives that if put into practice would reactivate the water cycles, which will bring the water back to the trees, springs, rivers and human habitation. The Ecology Institute of Tamera invites to an annual Water Symposium focusing on positive actions and solutions naturally regenerating areas which are prone to water shortages or are threatened by causes associated with poor land or water management.

The example of Tamera shows how a landscape, which is threatened by desertification, can be regenerated by a combination of rainwater retention and reforestation using mixed fruit trees, maintained and supported by a community that is not motivated by profit, but from a sense of responsibility for the resources and the common good.

Bernd Müller says, "It is important to also look into a dry landscape and see that it is not necessarily intended to be a desert. It is important to recognize the dream of the landscape again - and learn how it can be manifested."

The Portuguese region typically receives rainfall for six months every year. With incorrect management, the majority of this rainfall runs off the land taking topsoil with it into the river systems, leaving the land with inadequate levels of subterranean groundwater and an increased probability of desertification.

The Water Retention Landscape of Tamera was established in 2007 in collaboration with the ecological visionary Sepp Holzer.

A complete Water Retention Landscape is a landscape that receives all rainwater and stores it - in the soils, in ponds, lakes, ditches and in vegetation - slowly, evenly releasing it again throughout the year as matured, clean spring water. Water retained in such a manner may evaporate to fall again in other areas. In this way, the full water cycle starts up again and the landscape can regenerate and produce sufficient food for humans and animals. The gardens and mixed forests on the banks of the lakes and ponds, maintained by the community, bring so many sustainable benefits that residents have a huge interest in protecting them.

More and more areas of the world face dropping groundwater tables or groundwater salinization. It becomes clear that the healing of the water cycles is not primarily about technical upgrading and centralized mega-projects. It needs in fact a rethinking in all areas, a real system change.

Bernd Müller says, "If we want to restore natural cycles, it is not enough to just look at our own property. We also have to cooperate in a region, resolve conflicts, share resources and build communities."

The comprehensive model solution of combining water, food, energy, economics, and community, already convinced many participants in the first two water symposia, especially those from countries in the Global South.



SOME TOPICS

The contributors of the Water Symposium discussed various topics that need to be considered when one is dealing with the water issue: climate change, global food security, animal husbandry, regional development, agriculture and the social question. In the following we summarize some of the posts.

Sally Silverstone, a participant of "Biosphere 2", shared about the great socio-ecological experiment that took place from 1991-93 in the desert of Arizona: 8 people had been locked up in a materially closed ecosystem in large greenhouses with oceans, savannas, rainforests. With this artificial biosphere on a small scale, they showed how to cooperate with the big lasting cycles. They showed how many alleged necessities of our civilization are not only unnecessary, but also harmful.

"We were incredibly healthy because we lived protected from the effects of globalization" said Sally. As the person responsible for food production and water supply she was familiar with the material cycles. As a preparation she was locked up for several days in a closed greenhouse. The first day she looked in the water tank and found it empty. She was alarmed and thought that the system must have a leak. Calling her predecessor in the greenhouse, she was assured, "The water is still there, but it is distributed everywhere - in the air, in plants, in yourself."

And it was so. The next morning the tank was filled again. It is such experiences that show us firsthand how water systems work and that it is never a solution to try to control and lock up water.

Sally Silverstone has pledged her support and guidance for the development of the socio-ecological project Tamera wants to start in the next years.

Elizabeth Peredo, a publisher from Bolivia, was an activist during the Cochabamba Water War. She talked about the social importance of the water issue, particularly for women. Triggered by the water war, Bolivia is the first country actually trying to force out the water companies and multinational corporations and give sovereignty over their resources back to the people. However, for the indigenous government that provided the Rights of Mother Earth in its constitution, it is almost impossible to diverge from the interdependence with the capitalist system. Elizabeth Peredo experienced firsthand how even the most well-meaning politicians gradually lost their ability to act. She looks for decentralized solutions and model projects for Bolivia to demonstrate how an alternative system as a whole might look.

CLIMATE CHANGE

Dr. Millán from Spain, a meteorologist, proved with decades of measurements, that climate change is not solely dependent on the concentration of CO₂ - but that the rain water patterns in Europe are influenced to a large extent by the land use of the coastal regions of the Mediterranean. The drying up of wetlands,



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and deforestation in particular, triggers the emergence of regional hot air streams, which prevents the rain from the clouds coming inland from the Mediterranean, and turns them back. Thus, the whole rain cycle of Central Europe, which starts off here, cannot develop. Instead, the water level in the Mediterranean rises, the sea heats up, causing a detectable ocean current in the Atlantic up to France and England. Millán pointed the chain of events to the current floods in Germany and the heat waves in France.

He suggests to implement a solution with the help of the European Union, consisting of reforestation projects in trigger regions. So far, he still could not solve the problem of irrigation - where would the water come from in such dry areas? With the Water Retention Landscape of Tamera, he has recognized the possibility of combining reforestation, water retention and sustainable economic use, and will include it in his proposed solution.

GRAZING MANAGEMENT

Nicholas Sharpe introduced the concept of Holistic Planned Grazing. The topic of animals, over- and undergrazing and soil depletion has been a central concern of this year's Water Symposium. Wrong grazing practices had been considered an essential factor in the destruction of the water cycle. However, this assumption might not be accurate, as the inventor of Holistic Planned Grazing, Alan Savory, shows. He could observe naturally grazing herds from an early age in his home country Zimbabwe, and discovered grasslands are sustainable and self-renewing, even when a huge herd passes intensively and then moves on. Then the grasses are bent over or trodden on, the animals leave their droppings, the grass rots, and thereby regenerates itself when the animals have left the area. Wild animals do not stay in the same area but continually move looking for better pastures.

Where that does not happen - because the grazing livestock stay on the same pasture throughout the year under wrong management - classic overgrazing happens: impoverished vegetation, loss of biodiversity, grass becomes sparser, the soils become hot and loses its water-holding power, erosion. Over time deserts will form. Grassland need great herds of wild animals - or a proper grazing management which allows sporadic grazing.

This knowledge can be crucial for averting climate catastrophe. 40% of the earth's land mass consists of grasslands. If they turn into desert, we would have a global disaster. By correct grazing this can be averted.

Along with Nicholas Sharpe, who introduced this method in Spain and teaches farmers and unemployed youth in it, and with fellow farmers and landowners in Portugal, Tamera wants to examine how it is possible to combine and complete Water Retention Landscape with the holistic grazing management in regional cooperation. Again, a promising alliance has begun.



REGIONAL MODEL

André Vizinho, founder of the project Centro de Convergencia in a village neighboring Tamera, presented projects on the Transition Town movement in Portugal as a path to implement joint projects for social and environmental sustainability.

Joss Brooks from Auroville, India convincingly showed the challenges a community faces and its effects. Auroville has been growing for forty years and embedding itself socially and environmentally in the region. There are many issues that cannot be solved when you act as an island, but rather in regional cooperation. Auroville has started to re-install the traditional decentralized water systems - but still in the area the pressure of globalization is high and farmers use low energy costs to dig ever deeper wells, which causes salinization of wells. Meanwhile, the Indian government has asked Auroville to develop solutions to social and environmental sustainability for the entire region with over 30 villages.

In the nearby city of Chennai Joss Brooks and his team transformed the estuary - an eyesore where waste was dumped for decades - into a conservation area with high biodiversity and recreational character.

NATURAL WASTEWATER TREATMENT

Paulo Mellett, permaculture teacher and representative of the company Lush Fresh Handmade Cosmetics, which very efficiently supports worldwide projects for sustainability, presented decentralized solutions for the purification of waste water. Especially in poor regions of the world, in uncontrolled settlements and slums, improper sanitation leads to masses of untreated domestic sewage flowing into rivers and groundwater. The risk of contaminated drinking water affects a billion people.

Worldwide, 1.8 million children die each year from diseases that are caused by unsafe water. The solutions that Permaculture teaches - compost toilets for water-free disposal of human excrement and artificial wetlands for water purification - are decentralized and inexpensive and can be built by the people themselves without any major investment.

COMMUNITY AND PEACE BUILDING

Sabine Lichtenfels, founder of the Global Love School and co-founder of Tamera, spoke on the topic of community building and love, "When we see the hope that the Water Retention Landscape of Tamera raises in people, we realize that the same intensity with which we solve the ecological and technological problems must also be used to find solutions for love and community building - avoiding the risk that the precious projects would break due to interpersonal conflicts."



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She also pointed out how much about love can be learned from the water itself. "Just as water wants to move freely, it is so with love. It must not be blocked or concentrated in too narrow vessels; the water retention, as well as love, needs spaces where they can relax and go deep."

Aida Shibli, Palestinian peace activist, presented her dream of a region of abundance, wealth and peace in the Holy Land. "Water scarcity is still a trigger for wars and bitter conflicts. It appears that the wall built by Israel on the west Bank was deliberately built so that the aquifers previously used by Palestinian farmers and cities now have restricted access. Yet water can be an element of reconciliation when we work together selflessly to be aware of and maintain this treasure. Women especially can play a central role in this effort."

Rami Harubi, environmental consultant from Israel, presented the ancient water management system of the early civilization of the Nabataea people in the Negev desert. Even today you can find underground water basins, which once made it possible to maintain agriculture in a desert. Together with the group, the Peace Research Village Middle East, Rami wants to ensure that, in the Negev community, pilot projects for conservation, decentralized water management and re-vegetation arise - also as reconciliation projects between Bedouins and Jews.

Tamera gives thanks to all the contributors who were willing to share their knowledge, their courage to unconventional action and their willingness to cooperate. As a conclusion of the third International Water Symposium, the vision and plan to build holistic model communities in some selected regions that connect the social, environmental and economic aspects has become ever more clear. To implement this, we need cooperation and knowledge on every level. Since last year, Tamera offers professional training courses for the construction of Water Retention Landscapes. The knowledge that is collected in the water symposia, enriches and expands the training and make it more comprehensive. This year for the first time, a significant number of people from the Global South took part.

Bernd Müller says, "So many places on Earth suffer from false water management, so many could benefit from Water Retention Landscapes. We cannot go to all the places and help. Tamera's offer is the training. Participating in a course is a possibility to find out which solution would be the first step for ecological healing in their own regions. This way a global alliance around the water will gradually arise."

Please notice:

THE 4TH INTERNATIONAL WATERSYMPOSIUM WILL BE HELD IN TAMERA FROM 6TH TO 9TH JUNE 2014!

HOLISTIC LAND MANAGEMENT

NICHOLAS SHARP

Condensed speech from the third Water Symposium in Tamera



The title is holistic planned grazing but it's actually known as holistic management on a world basis. The initial models that were created 40 years ago by Allan Savory were highly complex and very difficult to work with. Over time individual farmers and other people have been slowly picking and taking what they want from it and changing it into something that is more applicable, easy to use and easy to understand.

The earth has five billion hectares of grasslands which is 40% of its land surface. A healthy grassland will have an extreme rate of turnover. Within six months all the nutrients can go through a complete cycle of turnover whereas in forests this can take decades. So it's actually easy to have a quick impact and see results on a very short time period.

The grasslands are deteriorating at a very rapid rate especially from use of fire. The traditional way of cleaning grasslands is to burn them, something that has been happening even here in Spain and Portugal just a short time ago.

I think it's very important to distinguish between a man-made desert and a natural desert. Natural deserts are alive, they are vibrant, bio-diverse and they are resilient. Man-made deserts are none of these. They are simply empty spaces of land where nothing can grow and nothing can survive. The Babylon area – the Tigris and Euphrates rivers – was once a very very productive area, in fact they even think it was the original Garden of Eden. Through irrigation and use of land by humans over time, with the salty water that was coming down from these rivers, we have eventually salted the earth which is why we have having many problems in this part of the world now.

These environments are also losing the ability to store water. We talk a lot about organic material behaving as a sponge. When you begin to look at the soil dynamics you will see that organic matter has negative and positive receptors and that nutrients are also either negative or positive so they react like magnets. So water, which has two positive ions and one negative, attaches itself to the organic material; this later can be taken out by the plant. But if it's only sand, if there's nothing to hold the water, it eventually drains through or evaporates. This is the way that organic material acts like a sponge.

Another reason grasslands are so important is the vast amounts of people that depend on them for their livelihood, for their cultures, for their food supplies. These lands cannot be used for cereals, they cannot be put under the plough; they will collapse. So the only reasonable solutions we have for these grasslands is to breed animals or to let wild animals stay on them

Why is this working? I think this is where Allan Savory had a revolution, a transition, of thought. We are going to take as an example a tree that has fallen in this environment (this is in New South Wales, Australia) where it rains maybe about 300 – 400 mm a year; a very dry environment. We also take this second tree, here in this forest. The difference is the temperature and the humidity, right? This tree could take 20 – 40 years to break down. This tree will be gone within six months. The difference is in the humidity level; there is enough water in this environment to allow the micro-organisms to break this down and complete the cycle. On the other hand this will not; this will oxidise so these nutrients will be lost to the air. The same thing happens with our grasses. If these grasses are not eaten and not trampled down and not

taken care of or passed through an animal's system, the nutrients will oxidise. The grasses will ... remain there until they oxidise and just disappear through wind action or other types of action. The complete opposite will happen here.

So how did nature solve this problem? Basically what it did is it looked for this system in this one. And where is that found? This system is found in this system within the animals; within the embodiment of the animals. So basically animals are moving, roaming migratory jungles, you could say. So Allan Savory put to us a system which he calls the brittleness scale. Brittleness means fragile; very easy to break. A good example of a brittle system would be Western Australia. They may have 400 mm of rain a year but that rain could fall within two weeks every five years. Then we have another place like Ireland. Ireland is not a brittle situation at all. It will continue raining and there is enough moisture within the air for all the biomass, all these plants and animals to break down, for the micro-organisms to work on them, for them to decay and for the nutrients to return to the cycle.

Total rest, over time, will basically oxidise and remove all the nutrients from this system which Mother Nature has taken a very long time to accumulate. Over time it will also lead to the removal of the top soil, the loss of carbon and the inability of the land to hold moisture as I explained, because the organic material has disappeared.

It's kind of interesting that I am here talking about land needing the animals and the animals needing the land. I think we have gotten to the point of absurdity in human thought that this is not quickly understood by us. If they evolved for so long, if they really need each other so much do we really need to remember all of this? Is it not just clear?

So using these ideas we begin to strategically place and use the animals within the landscapes. This can be done by strategic feeding so if I have animals and I want them to concentrate in an area for that week I will start feeding them every day in that area. And when they see me coming they will move towards that area, they will feed, they will walk around, they will spend time, they will defecate and probably go back to what they were doing before. Corralling is another very interesting technique. Most animals will release or defecate, during the night ... if my animals are grazing in a low area and I move them up at night to a high pasture, most of the nutrients will begin to be transferred and I can start a conveyor belt without having to move any human resource. This is basically management. Another question I often get is, 'How do I move the animals?' Believe me, the animals will move themselves. When they see you going towards a gate and there's fresh pasture on the other side, get out of the way!

It's not only moving animals around. Holistic management is actually quite a science. It's based on a system. Probably the most important thing to remember is your primary objective; what are you trying to get or receive from these animals? That will be the basis of everything you do from there on. From this objective you move to strategies; from strategies we move to systems. Then we have monitoring and then our results. If our results aren't what we previously thought we have a feedback loop and we begin to look at the process again; where are my strategies? What is going wrong? How can I fix this system? They say holistic management can never fail because if something goes wrong you go back to the beginning and start working through it again.

I also want to take this opportunity ... Alan Savory and the Alan Savory institute are opening new hubs around the world. There will be an Iberian hub ... we would love to collaborate with Tamera or any other farmers or groups in this area who are interested in using holistic management to introduce changes on their land and maybe heal lots of the damage that we've done.

<http://www.savoryinstitute.com/>

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Photos:

Cover: Tamera south valley • Back: Pego das pias, near Odemira

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The symposium will be hosted by:
Global Ecology Institute Tamera
global.ecology@tamera.org • www.tamera.org

RENEWING WATER CYCLES, HEALING LANDSCAPES, LEARNING FROM THE WATER

Most of the so-called “natural disasters” that we experience all over the world today are human-made disasters caused by an incorrect handling of the elements and beings of nature. If humankind wants to survive on this planet, we must learn to think differently and to cooperate with the forces of nature. This is where water could be our best teacher.

We have convened this symposium to introduce a concept – through the example of the water retention landscape of Tamera – of how desertification can be reversed and the water cycle cured in all climate zones of the Earth within a short period of time. This concept was developed with the ecological visionary Sepp Holzer. Water experts, politicians, scientists, media representatives and specialists from around the world are invited to this conference to share their knowledge, exchange ideas and present their work publicly.

Water is more than a chemical formula, it is a central organ of the biosphere, in which almost all the secrets of the universe are included. The proper handling of water shows us how we can change destroyed landscapes back into blossoming gardens again. It shows us how we can live on a planet that is able to provide all living beings with enough water, food and energy. And it shows us how to connect the cosmic and earthly realities in a way that a global culture of peace emerges from it.

In the name of a future worth living,
Welcome!



Leila Dregger and Cornelia Scheidl,
coordinators of the water symposium
Global Ecology Institute, Tamera



WHAT IS TAMERA?

The Tamera Peace Research Centre was founded in 1995 by Dr Dieter Duhm (psychoanalyst and PhD sociology) Sabine Lichtenfels (theologian) and Charly Rainer Ehrenpreis (physicist) to develop a new model for comprehensive answers to the urgent human and environmental crisis of our times. Today Tamera has about 170 co-workers, students, youths and children who are living and working here. In the first years the work was strongly focused on building a resilient community. Over time, various projects have developed in ecology (Water Retention Landscapes, permaculture, peace gardens), technology (the Solar Village), the Animal Project, the Children's Republic, the Youth Place, the Guest House, the Education Program, the Art Department, the Love School, the Political Ashram, the Institute for Global Peacework and more. The Global Campus was established with cooperation partners in Israel-Palestine, Colombia, Mexico, Brazil and India. An international network links Tamera with projects and individuals in Europe, North America, Russia, Australia, and most recently also in Kenya and Bolivia.

Just as any new prototype is first developed in a laboratory, the idea behind Tamera is to first build the desired non-violent and peaceful society in a model before it can be applied on a large scale. We call these models "Healing Biotopes" or "Model Universities". The "Planetary Theory" by Dieter Duhm outlines why only a few such centers worldwide will have a strong impact on changing the existing "informational field" of war and violence towards peace, cooperation and trust. In a future culture of peace, the global problems which lead today to war all over the world are solved or are in a process of solution. Healing Biotopes are therefore places where these solutions are prepared. The results must be generalizable and available to everyone who looks for them. Healing Biotopes are organized so that the various solutions can be linked to each other until the image of the overall solution becomes visible. The overall solution can be divided into different aspects:

1. The material basis of life • 2. The social basis of life • 3. The mental-spiritual basis of life

Humankind needs new responses in all three of these areas to be able to initiate a non-violent future.

The problem of the **material basis of life** is expressed in the global lack of water, food and energy and in their inequitable distribution. Desertification, famine and peak oil are just some aspects of this lack, which arise as a result of the fundamentally wrong way in which the human being deals with the earth, water and nature. The necessary correction consists of creating human-made systems compatible with the inexhaustible systems and energy sources of nature and Creation. Specifically, the solution lies in the implementation of decentralized, regionally self-sufficient, water-rich and sustainable centres where up to several thousand people can live. With the help of Water Retention Landscapes, permaculture and peace



gardens, and new energy technologies working according to the laws of life, in appropriate numbers these centres will be able within a few decades to supply all of humanity with sufficient food, energy and fresh drinking water. At the same time they heal all of nature's ecosystems and living beings. The contradiction between economic growth and the protection of nature is overcome. The new energy technologies are no longer based on breaking resistances, but follow a 'line of tension'. They connect the new centres with the everlasting energy sources of the sun and the universe. The fight for resources is over.

The **social basis of life** in all societies has been destroyed. Human beings have lost the ability to live together in peace. Fear, alienation and mistrust lead to irresolvable conflicts in all systems, from the smallest systems of marriage and family all the way to the global crisis areas and wars. The latent readiness for violence can break out at any time and be used for wars and the cruellest clashes. Healing Biotopes show how cooperation and trust can be permanently and structurally developed by creating new living environments. The change does not happen (only) through individual therapy or admonitions. It is the social being that determines consciousness. A new type of socialization is the higher level of order at which previously unsolvable conflicts can be solved. The human beings in these new communities support and help each other and their fellow creatures not because they follow an external moral commandment, but because they have recognized that all that lives is part of the great family of life, to which they themselves also belong. Central to building trust is the reconciliation of the sexes. There can be no peace on Earth as long as there is war in love. The patriarchal society dominated by men must be transformed into a form of life in which women and men reconnect with their sensual knowledge and apply it for a future culture of partnership between men and women.

The fight against the **mental-spiritual basis of life** proceeds today in such a subtle and encompassing way that it is hardly perceived. We only notice its consequences, such as religious wars, structures of domination and subordination, psychological deprivation and blocked anger reaching all the way to self-destruction. Humanity has lost its authentic religious and ethical anchor. To return from this "exile" requires a new worldview and the studying of a theory of primal trust that is able to open the human heart again. Autonomous, independently thinking human beings will evolve out of this learning process – people who no longer submit themselves to punishing authorities. Such people have developed a strong humane core and are therefore incorruptible. They make life itself their sacred authority and protect it, wherever they are. Healing Biotopes are spiritual training centres for this kind of human being, for "Adam Kadmon", the "Christ nature" or "Marian nature".



TAMERA SPEAKERS



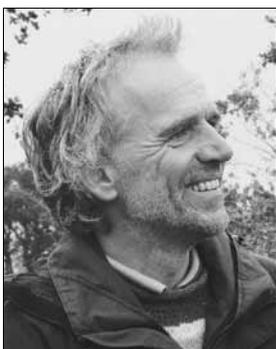
DR. DIETER DUHM • GERMANY/PORTUGAL

PhD in sociology, art historian, psychoanalyst, co-founder of Tamera. From 1967 he was one of the leading characters in the students' movement. From 1975 he took distance from the leftist dogmatism and shifted to a more thorough human alternative. In 1978 he established the project "Bauhütte" ('Construction Cabin') as a Peace University from which later Tamera developed. Dieter Duhm has dedicated his life to create an effective forum for a global peace-initiative which is a match for the destructive forces of the capitalistic globalization. **His speech is titled: Terra Nova – working for a new earth**



SABINE LICHTENFELS • GERMANY/PORTUGAL

Co-founder of the Tamera, author, free-lance theologian and medium, one of the "1000 Women for Peace". For years she has been engaged in international peace work, especially in Israel and Palestine. Initiator of the GRACE peace pilgrimages in the Middle East, Colombia and Portugal with up to several hundred participants. Founder of the GRACE Foundation for the humanization of money. She has a profound knowledge of community development, conflict resolution, spiritual life practice and the reconciliation of the genders. With her political compassion and her feminine insight she is a leading ambassador for a global peace perspective. **Her speech is titled: Healing water, healing love**



BERND WALTER MUELLER • GERMANY/PORTUGAL

Director of the Ecology Department of Tamera, permaculturist, dowser. In 1986 he abandoned his engineering studies in the traditional university system because he did not find the answers he sought. He emigrated to Spain and managed an organic farm. There he studied natural processes through intense observation. He discovered a new, more subtle possibility of cooperation between man and nature. From 2007, he has lived in Tamera working in the landscape design and building water retention landscapes. Today he transfers the insights from this process of self-education into the practical development of ecological models for landscape healing and the restoration of the Earth.

His speech is titled: The water retention landscape of Tamera



VERA KLEINHAMMES • GERMANY/PORTUGAL

Coordinator of the Global Campus, an peace education initiative with bases in different continents. She has been involved in peace work in the Middle East since she was 17, when she gave her first speech at a peace demonstration in Jerusalem, speaking for the youth movement. She was born and raised in Tamera's preliminary projects.

Her speech is titled: What is Tamera?



CHRISTOPH ULBIG • GERMANY/PORTUGAL

Christoph Ulbig, graduate engineer of International Forest Ecosystem Management, has worked in research and development projects in Fidji, Albania, Romania and Kenya. He is a leading member of the Ecology Team of Tamera with the focus on research, education and reforestation of the Tamera property with mixed fruit forests.

His speech is titled: Water retention landscapes and community



MARTIN WINIECKI • GERMANY/PORTUGAL

Co-worker of Tamera, student of the Monte Cerro Peace Education, coordinator of the Institute of Global Peace Work (IGP). He participated in several pilgrimages through Israel-Palestine (2007), Portugal (2009) and Colombia (2010) and is committed to build an international network for peace.

MODERATORS

„ Behind the global massacre of our times stand wrong systems of economy, wrong concepts of love and religion, wrong systems of thought, and the endless abuse of natural resources. The new planetary community is making a fundamental system-change from the matrix of fear to the matrix of trust. It is doing so in all areas – from personal relationship issues to the political and ecological issues of the healing of the planet. This system-change is a change of power. The new power no longer consists of domination over others but of reunification with the sacred laws of life. “

Dieter Duhm, The Tamera Manifesto



JULIETTE BAIGLER • UNITED KINGDOM

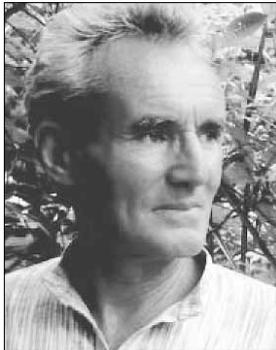
Juliette was born in 1974 in London. She has a lifelong fascination for the experience of being human and for exploring how we can heal and flourish together. Juliette's professional practice as a coach, facilitator and learning consultant, using community-building methodologies, began in 1999 when she worked with young people in areas of urban deprivation. In 2001 she became a founder-member of Mango Communities CIC; a consultancy which offers participatory capacity-building interventions to NGOs, businesses and multi-agency partnerships, in the UK and internationally. Juliette also work as a coach to leaders in schools, NGOs and businesses and is a presiding chief of the council at Embercombe, a social enterprise which inspires people to committed action towards the emergence of a socially just, environmentally sustainable and spiritually fulfilling human presence on earth. She holds an undergraduate degree in Religion with Literature and a Masters in Change Agent Skills and Strategies. She is an accredited leadership coach, a qi gong practitioner and a painter.



BENJAMIN VON MENDELSSOHN • GERMANY/PORTUGAL

Born 1973, a successor of the Jewish Berlin artists and bankers family “von Mendelssohn”, in whose humane tradition he is standing. At the age of 19 he worked in the Peace University in Potsdam, Germany. Engaged in many peace groups he came to the conclusion that political work, in order to be really successful, must be connected to the development of non-violent alternatives. For some years he has been doing reconciliation work between Jews and Germans as well as between Jews and Palestinians. He visited the Middle East many times, directed peace camps and pilgrimages and is weaving a worldwide network of peace workers with the goal to found international Peace Research Villages. He is the director of the “Peace Research Village Association”, Germany, and a graduate of the peace training in Tamera.

CONTRIBUTORS



JOSS BROOKS • INDIA

Joss Brooks grew up in Tasmania, a place full of wild natural beauty and wide open empty spaces. After living in Europe and Africa he came to Auroville near Pondicherry in 1970 to participate in its early pioneering work. In 1973 he established Pitchandikulam dedicated to restoring the eroded 60 acres of Auroville Green Belt land to its former green cover. Now it is a vibrant forest with more than 600 species of plants, many with medicinal value and a nursery that grows the endangered species of the almost extinct Tropical Dry Evergreen Forest found along the Coromandel Coast. In 1993, associating with the Foundation for Revitalization of Local Health Traditions (FRLHT), he developed the medicinal plant conservation Park at Pitchandikulam which served as a base for work with the village communities and traditional healers living around the Kaluveli wetland, north of Auroville. In 2002, the Nadukuppam Environment Education Center was founded at a Government High School near the wetland from where a team of environmental education teachers from the local villages began to work with school children, women's groups and farmers to implement eco-restoration initiatives. In 2004, Pitchandikulam Forest Consultants was created to implement restoration work in other areas of Tamil Nadu including the city of Chennai. A 12 acre garbage dump at Otteri in North Chennai has been transformed into a green lung of indigenous vegetation. In 2005, the Pitchandikulam team began work on a master plan for a 350 acre controversial wetland site at the Adyar estuary. Over the following years, the typical urban wasteland environment of debris, garbage and sewage has changed into an example of species regeneration, practical environmental education and citizen/ government collaboration. The Adyar Poonga wetland restoration project is still very much underway, yet evolving into a crucial larger initiative to cleanse and transform the other polluted waterways of Chennai.

Through all the hard work, he was guided by the "Mother" Mira Alfassa. "She told us that the spirit of the forest and wilderness were there to help if we could connect with it. Mother encouraged us to imagine the possibility of what could be."



PATRICK DE BUCK • BELGIUM/THE GAMBIA

Project coordinator in a dambuilding project in Burkina Faso, developer of a network for food security in Burkina Faso, Senegal, Mali, Gambia and Guinée Bissau. From 2002 - 2008 he was setting up a network for direct trade (farmer-consumer) in the Province of East and West Flanders (Belgium) in order to stop the destructing influence from industrial processed food on the survival of farmers in Belgium. From 2009 - 2012 he retired and volunteered for organizational strengthening of two Gambian organizations. He is today involved in a thinktank with Gambian colleagues to work out a new concept for development aid intervention with the aim to fully erase poverty.



NADI FARRAJ • PALESTINE

The conflict in the Middle East is also a conflict on water. Water in the Westbank - aquifers as well as access to the Jordan river - are controlled by the occupying force, Israel. This has led to an extremely harsh and unjust situation not only for farmers but for everybody who has to rely on free access to water. Decentralized water solutions and methods of rain water harvesting which could provide the dry country with an abundance of water will be elements of peace. For many years Nadi Faraj and his organization YMCA East Jerusalem have helped farmers and Bedouines in the Westbank to get access to water.



RAMI HARUVI • ISRAEL

writer and editor of training programs and environmental education. He leads initiatives for regional and international cooperation in order to promote peace in the Middle East.

He initiated and promotes the project “Spice Route” as a bridge and a link between cultures. Rami acts as a coordinator and mediator between development and conservation bodies in the Negev (the Israeli desert) in order to create balance between preservation and development. He is a poet who lives, loves and works in the Negev.



JOHN LIU • USA/CHINA

John D. Liu is an American who has lived in China for more than 30 years. He worked for CBS News for 10 years until 1990 and also for RAI Italian Television and ZDF German Television. John Liu has concentrated on ecological film making since the mid-1990's, and has written, produced and directed films on grasslands, deserts, wetlands, oceans, rivers, urban development, atmosphere, forests, endangered animals and poverty reduction. His work has taken him to over 70 countries. Many of his films have appeared on BBC World and other networks. Since 1997, John Liu has directed the Environmental Education Media Project (EEMP), which uses television to deliver ecological, sustainable development and public health messages in China and other countries. For many years he has studied and worked to promote the potential of ecological restoration including presenting the recent films “Hope in a Changing Climate” and “Rwanda – Forests of Hope”. From 2003 to 2006, John Liu was a visiting fellow in the Faculty of Applied Sciences and Faculty of the Built Environment at the University of the West of England (UWE). In 2006, he was named the Rothamsted International Fellow for the Communication of Science. In 2009 – 2010, he was appointed Assistant Research Professor at George Mason University. Currently John Liu is a Senior Research Fellow, IUCN.

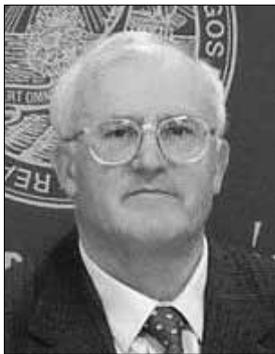


PAULO MELLETT • BRAZIL/UNITED KINGDOM

BSc Honours Development Studies, MSc Sustainable Architecture and Energy Studies, focus on Permaculture, wrote his thesis on integrated agroforestry and aquaculture systems in the Redpal permaculture project in Peruvian Amazon, where he worked for several months. He has worked on PC projects in the UK, Spain, Portugal and Peru, and has taught permaculture and ecovillage design courses in the UK, Cuba, Germany and South Africa.

Paulo is an independent permaculture consultant. For the past 3 years he has been connecting Lush, a UK based ethical company, with permaculture, agro-ecology and ecovillage projects in Africa and Latin America. Funding and support is mobilised from Lush and fair trade links and direct marketing opportunities are developed for projects to supply raw materials to Lush for a long term income.

He is one of the board of directors for the Ghana Permaculture Institute, and is currently coordinating several pilot projects of a new model of ethical business directly supporting and investing in permaculture training centers.



DR. ING. MILLÁN MILLÁN • SPAIN

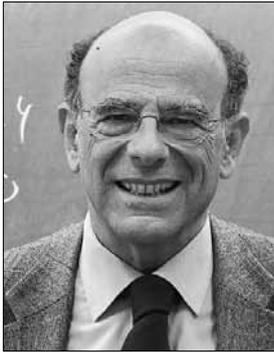
In the 60s and 70s Dr. Millán Millán has worked in Toronto, Canada, where he designed the system currently used as a metal detector in the airport security gates as well as the COSPEC (Correlation SPECTrometer) for the remote measurement of gases in the atmosphere.

Since 1991 he is the head of CEAM (Center for Environmental Studies in the Mediterranean Foundation), a lead institution in more than 50 EC projects related to atmospheric dynamic, climate, air pollution chemistry, and reclamation of Mediterranean ecosystems affected by wildfires. His most important scientific contribution has been to discover the Mediterranean Accumulation Mode of water vapor and pollutants which links the high levels of ozone in the Western Mediterranean basin in summer, the loss of summer storms in the regions surrounding the Mediterranean, the intense summer rains in Eastern Central Europe and the increase in torrential rains in the Mediterranean in autumn-winter. The result of this work also suggest that for climate change mitigation and adaptation in Southern Europe it is urgently required to rethink the watershed concept. He will speak about the relationship between forests and precipitation in southern Europe.



ELIZABETH PEREDO BELTRAN • BOLIVIA

Social Psychologist, Bolivian researcher, writer and activist. She focuses her work on water as a common, environmental and cultural good. Peredo co-founded TAHIPAMU (The Women's Participation in History Workshop) in the nineties, based in La Paz, she was the Coordinator of the National Committee for Domestic Workers Rights and from 1999 has researched, published and campaigned for the rights of domestic workers, getting their proposed law passed in 2003. From 2000 on she became involved in the water struggles and produced reports, books, articles and video scripts on economic justice, new paradigms and climate justice. Since some years she promotes the Blue October Campaign in Bolivia, a social mobilization for water as a common. She belongs to the Board of Directors of Food and Water Watch in WDC and is part of the Council of Advisors of the International Net for Justice in Global Investments. Since 2006 she is the Executive Director of Solon Foundation based in La Paz and works on water, economy, culture and feminist issues. She will speak about the role of women and water in Bolivia.



DR. FILIPE DUARTE SANTOS • PORTUGAL

Professor Filipe Duarte Santos has a degree in Geophysics from the University of Lisbon, Ph.D. in Nuclear Physics from the University of London and since 1979 he is professor of physics at the University of Lisbon, conducting courses in the areas of Physics, Environment and Global Change.

He was vice president of the Institute of Meteorology of Portugal between 1987 and 1988 and later coordinated the drafting of the first and only White Paper on the State of the Environment in Portugal, published in 1991. In 1998, he joined the National Council for the Environment and Sustainable Development and was elected full member of the Academy of Sciences of Lisboa in 1999.

Over the years he has coordinated several national and international projects in the areas of environment and global change, among which are his role as a research coordinator of the SIAM Project - Climate Change in Portugal. Scenarios, Impacts and Adaptation Measures, Faculty of Science, University of Lisbon (UL-FC) (1999-2006) and his participation in CIRCLE2, a European ERA-NET program for climate change adaptation in Europe. He is the current director of the research center SIM - Laboratory for Systems, Instrumentation and Modeling in Science and Technology for Space and the Environment (www.sim.ul.pt) of the University of Lisbon, and in 2008 he was awarded with the University of Lisbon Prize. Presently he is vice-president of the United Nations Committee on the Peaceful Uses of Outer Space and Review Editor of the 5th Assessment Report of the IPCC - Intergovernmental Panel on Climate Change. He will speak about climate change adaptation and water management in bottom-up initiatives.



DR. LUÍSA SCHMIDT • PORTUGAL

Principal Researcher at the Institute of Social Sciences – University of Lisbon. She particularly runs studies on Sociology of the Media and Environmental Sociology and she is a member of the scientific council of an interdisciplinary PhD Program on Climate Change and Sustainable Development Policies. At the ICS-UL she leads the Research Line on “Sustainability: Environment, Risk and Spaces” and the OBSERVA – Observatório de Ambiente e Sociedade, an observatory on environment and society, founded in 1996, where she has run and published many studies, namely, nationwide surveys on environmental values and public policy issues; environment and the media; environmental and sustainable development education; local agenda 21 and participative processes.

Currently she is responsible for a research project «CHANGE - Changing Climate, Changing Coasts, Changing Communities – global erosions, risk conceptions and sustainable solutions in Portugal». She also leads the sociological team of the interdisciplinary project «Net Zero Energy School - Reaching the community» (MIT-Portugal Program). She is also member of the National Council for the Environment and the Sustainable Development, an independent agency of the administration in charge of monitoring environmental policy initiatives and legislation. Member of the APREN consultive council (Association for Renewable Energies).



NICHOLAS SHARPE • SPAIN

Nicholas is an ecologist who specializes in sustainable agriculture. He also serves as president of the Asociación Paisaje, Ecología y Género (Association of Landscapes, Ecology and Gender Equality) as well as being a member of other social activist groups which seek to better the environment through sustainable agricultural practice. He has participated in, directed and evaluated numerous projects around the globe and in 2008 became a partner in the company Red Calea where he is a project manager and director of international relations of the consulting company. He has taught a wide range of subjects and is a common speaker for universities, NGOs and government administrations. Nicholas

also owns a sustainably managed farm in the Extremadura region of Spain. His agricultural theories are tested on his own trees and livestock. Keeping a close association with the land helps him understand the challenges of farmers seeking to transition to sustainable practices. Nicholas earned a degree in land management (ecological agriculture) from the University of Sydney and was author of the project "Ecos de Tajo: Organic Agriculture as a means of restoring ecosystem health to the Tagus River Catchment in Spain and Portugal."



AIDA SHIBLI • PALESTINE-ISRAEL

A'ida Shibli, born in Palestine, political networker and peace educator, holder of the vision peace research village in the Middle East. GEN - Global Eco villages Network - ambassador and founder of GEN - Palestine. A'ida builds bridges between Palestinians and Israelis around earth healing, she is a mother and a carrier of hope .



SALLY SILVERSTONE • UNITED KINGDOM

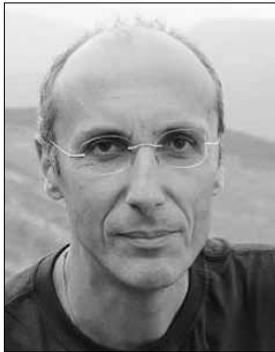
Sally Silverstone has researched scientifically and practically on developing integrated systems of drought relief and agricultural production for a desertified tropical area, including orchard and garden plantations, nutrition, irrigation, drinking water systems and sanitation programs, seed banks and crop storage facilities, working in India, Kenya and other countries. From 1991 - 1993 she was Co-Captain of Biosphere 2 Crew, that spent 2 years in a close greenhouse in the desert of Arizona. The aim of "Biosphere 2" was to find out if the productivity of the natural systems can be installed artificially - to be exported to another planet.



HORST WAGNER • GERMANY

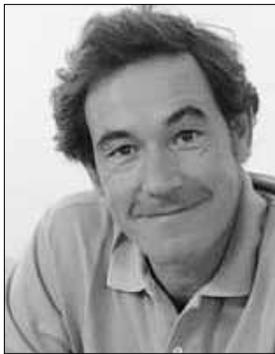
Horst Wagner, theologian, remedial teacher and inventor, has worked on energy processes with concentrated oxygen and is the head of a centre for underprivileged children in Würzburg, Germany. Jürgen Kleinwächter and Horst Wagner have a close cooperation to develop decentralized energy supply systems that return autonomy and abundance to the people.

COOPERATION PARTNERS



PAULO BORGES • PORTUGAL

Paulo Borges, Lisbon, is a professor, essayist, philosopher, poet and writer. He is co-founder and board member of the Institute of Philosophy Luso-Brazilian, corresponding member of the Brazilian Academy of Philosophy, founding member of Aperel - Association for the Study of Religions, and director of the culture magazine BETWEEN Cultures, president of Portuguese Buddhist Union and the Association Agostinho da Silva and President of the Party for Animals and Nature (PAN).



ALFREDO CUNHAL • PORTUGAL

Alfredo Cunhal runs the largest organic farm in Portugal: Herdade Freixo do Meio, close to Montemor-o-Novo in the Alentejo. Since 1990 he has developed the farm of his family to a model for organic farming, rich diversity and nature protection, reinforcing traditional techniques like Montado, the extensive growing of cork oaks and pigs. He is aware that in a region like the Alentejo being a farmer means also to work on a proper water management.



SEPP HOLZER • AUSTRIA

Sepp Holzer, born in 1942 in Austria to a hill-farming family, is today a visionary for landscape healing and permaculture farming and acknowledged worldwide. On his family farm, the Krameterhof – today comprising forty-five hectares of land, at an altitude of between 1100 to 1500 meters above sea level - he implemented the knowledge that he had gained by observing nature, supported by his wife Veronika.

Today, the Krameterhof attracts thousands of visitors each year. Since Sepp Holzer has passed his farm on to his son, he gives advice to landowners and projects worldwide, in varied climate zones, and educates many people in permaculture according to his principles. Since 2007 he has advised Tamera in the construction of the water landscape.



JÜRGEN KLEINWÄCHTER • GERMANY

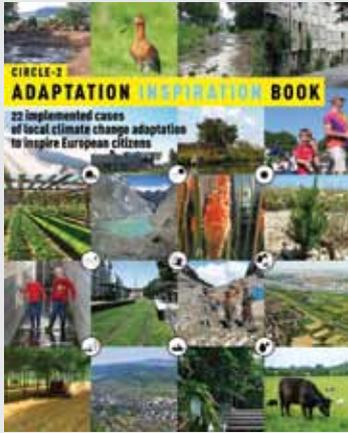
Technological cooperation partner of Tamera, physicist and inventor, visionary. He developed the idea of the „Solar Power Village“, the technological core of the first model of a Solarvillage planned to be built in Tamera. He grew up in France, Germany and Egypt, studied physics and astrophysics in Grenoble and founded with his father Hans Kleinwächter the KLERA-Institute: “Kleinwächters Entwicklung und Forschung, Raumfahrt und Atomtechnik” [Kleinwächter’s Space and Atomic Energy Research and Development]. They investigated light-weight optics, thermo-dynamics and concentrator photo-voltaic systems and their applications. Wishing to develop a peaceful technology which really helps people to improve their living conditions, he has dedicated himself to the research and application of solar technology for 30 years. In cooperation with the Max-Planck-Institute and the IHK (Chamber of Commerce and Trade) of Stuttgart he has developed decentralised solar energy systems.



ANDRÉ VIZINHO • PORTUGAL

André Vizinho has been working for the creation of a sustainable village in Aldeia das Amoreiras since 2006 with the group of which he is a member and co-founder, Centro de Convergência. He is now working as an action-researcher in bottom-up adaptation strategies to climate change, namely adaptation to drought in the Alentejo Region, in the project BASE. He is also a member of the Transition Network of Portugal and one of the trainers of the Transition Course. He is also a Permaculture designer and has been studying, implementing and teaching Permaculture design and solutions since 2005.

REFERENCES



ADAPTION INSPIRATION BOOK

2013: Tamera was mentioned as one of 22 implemented cases of local climate change adaption to inspire European citizens

Tamera Water Retention Landscape



The water cycle in Portugal is affected by deforestation, overgrazing, deteriorated topsoil layers and a long history of unsustainable agricultural practices in the area. In springtime Portugal heavy rainfalls cause water damages and flooding. Fertile top layers are washed away and the land is further eroded. Comes summer drought and forest fires bring harm to the land.

Although Portugal has a water density similar to that of some large European cities, it is not possible to sustain the water resources

because change is expected to be greater than straight remedy present in Portugal. The process of landscape in the south of Portugal is one of the areas that face serious water retention problems. It is also the frame of Tamera, an international learning and experimental site founded by Inês Coimbra in the late 90s. The site focuses a community of about 300 people who have work all of city there referring to the philosophy being globally and locally. Tamera also works on solutions for the distributed water resources in the region by

creating water retention landscape. These landscapes consist lakes that will provide a solution for drought, reduce water usage by flooding and avoid the groundwater.

Retention lakes are created by building earth dams, behind which water is collected. In the case of lakes, the water is held in place. The lakes gradually are not used, so the water can seep into and saturate the surrounding earth layer. In addition, the lakes are built with deep and shallow basins, thereby increasing



What is a retention landscape?
Water retention landscapes are permanent artificial lakes that serve to manage storm water runoff, prevent flooding and erosion, improve the water quality and support the restoration of the water cycle by retaining the water in the areas where it falls in rain. In addition, they improve the quality of these environments and allow for groundwater recharge. Water retention basins are sometimes also referred to as wet ponds. A water retention landscape consists of a series of interconnected retention spaces, from pond-sized up to lake-sized, in which the rainwater can collect behind a dam, constructed from natural materials. The retention spaces themselves are not sealed with concrete or any artificial layer, so the water can slowly but steadily diffuse into the earth body.

the lakes to the groundwater. The existing landscape shows that the water is not only being retained, but also being purified. The lakes and retention are built around them to store the organic substance of nutrients, vegetation and other issues. Water retention landscape is established in the lakes. With construction Lake Design, from the Tamera Water Retention Landscape, built that local Mark Wang's first water retention landscape, the surrounding areas leading to the lakes in Tamera. The preliminary results are positive.

Natural landscape has been improved, about 100 trees have been planted, and water retention landscape has been improved. Around the lakes and retention are built around them to store the organic substance of nutrients, vegetation and other issues. Water retention landscape is established in the lakes. With construction Lake Design, from the Tamera Water Retention Landscape, built that local Mark Wang's first water retention landscape, the surrounding areas leading to the lakes in Tamera. The preliminary results are positive.



BUCKMINSTER FULLER CHALLENGE 2012: HONORABLE MENTIONED

BFI Assessment Summary

Tamera Peace Research Center, a well-established “intentional community” and cutting-edge eco-village with some 250 inhabitants on roughly 370 acres founded in 1995 that also has an extensive international network, submitted a “Solar Power Villages” proposal in 2011 that was a semifinalist. The Tamera team combines a profound spiritual connection to the land with scientific rigor and a high degree of creativity and innovation in many areas of sustainable technology.

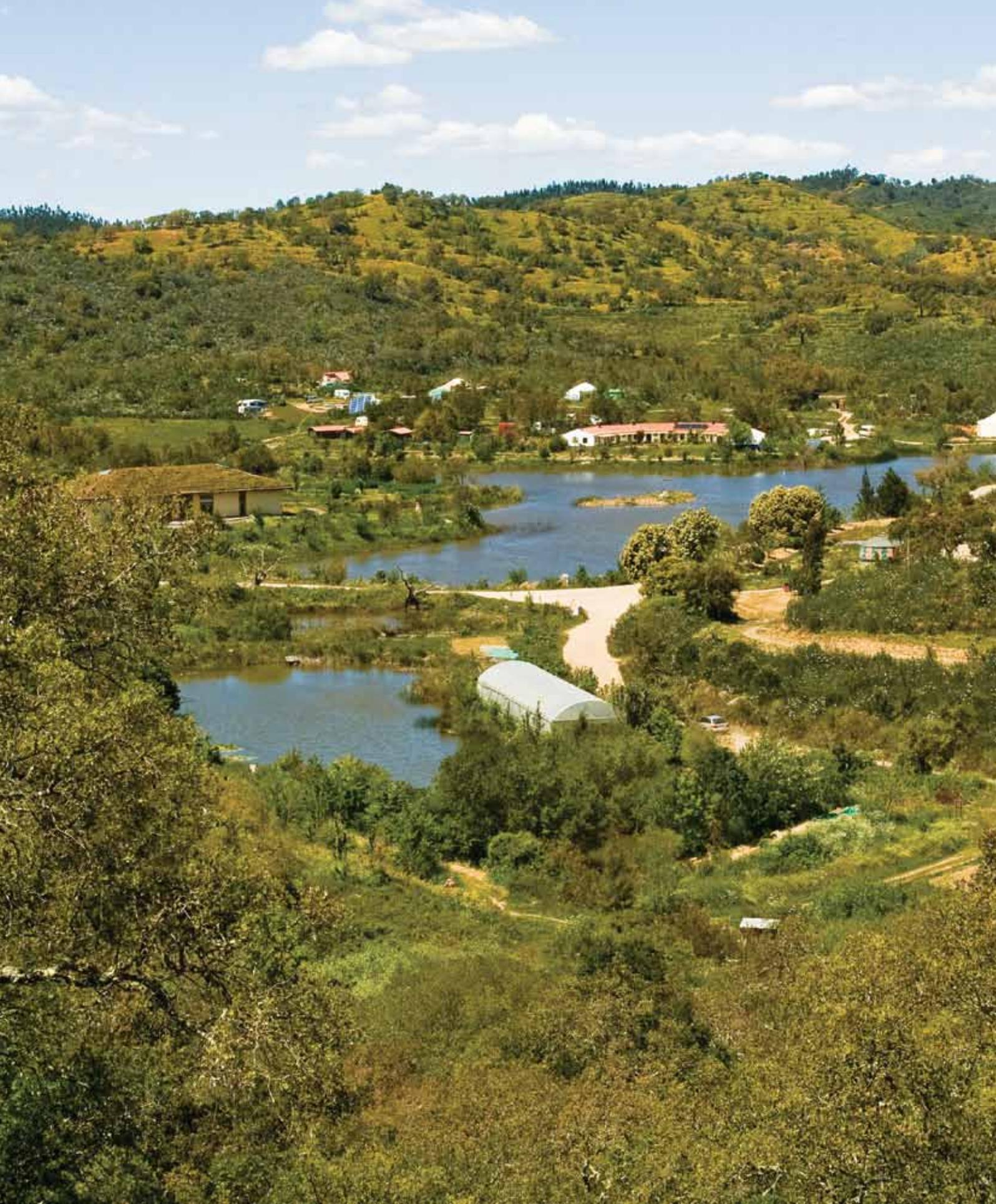
This large-scale project involves shaping a landscape to maximize the retention of rainwater and circulate it in such a way that biodiversity, food production and human wellbeing are all harmoniously enhanced. The central component is the construction of 15 connected retention lakes (5 already built; 10 more in the planning stage) designed with a tremendous sensitivity to local conditions, including prevailing winds, soil composition, water tables, plant and animal communities, etc.

This is most likely the largest scale decentralized, community-based permaculture water management project yet attempted, and it seems to be a highly promising, widely replicable, scalable model, especially for arid, semi-arid and eroded lands, but adaptable to nearly any climatic conditions. Their results so far indicate that initial restoration of an eroded landscape can be achieved within 5-7 years or less depending on specific conditions. Their monitoring methods are sound, credible and well integrated into their long-term plans for the project.

The team is an impressive group that includes landscape architects, organic farmers, and a forest ecosystem manager. Their mentor is the legendary Sepp Holzer, whose work around the world is well documented. The group is well poised to present their work this spring at international conferences on water management and is currently networking with a number of governmental and academic institutions. They are also working on ways to widely disseminate educational materials on their methods that can be used by government agencies, academic institutions and communities across the globe. They feel this model could spread to their entire region of Portugal and then be emulated globally.

The Tamera community has served for years as a living laboratory and learning institution for holistic approaches to sustainability, visited by students and teachers from a number of European and Portuguese universities and local schools as well as many interns from around the globe, including from Tamera’s partners in Africa, the Middle East and South America, who are starting to replicate the work being done at Tamera in their home regions. They are also increasingly sharing their knowledge with government officials, including from Portugal, Brazil, and Bolivia. This is an impressive project with tremendous potential.

THE WATER RETENTION LANDSCAPE OF TAMERA IN PICTURES





Tamera before building "Lake 1" in 2007



"Lake 1" in 2009



During the construction of a dam utilizing natural materials in 2011



"Sepp Holzer – main advisor for Tamera for the building of the Water Retention Landscape".



above: Many visitors and students from around the world have learned about this model

left: The Water Retention Landscape of Tamera today

REVERSING TRIGGER COMPONENTS FOR CLIMATE CHANGE BY DECENTRALIZED WATER RETENTION

LOCAL BOTTOM-UP EXAMPLES SHOWCASE HOW TO BALANCE EXTREME WEATHER CONDITIONS IN EUROPE – BY LEILA DREGGER

Heat waves in France, droughts in Southern Europe, floods in England: In terms of weather and rain patterns, extremes are becoming the norm. Climate change is affecting increasingly greater areas of our lives and rendering many fields of business unpredictable. We have been told repeatedly that climate regeneration is impossible, and the world will feel the effects of greenhouse gas emissions for more than 30 years, even if they were to be stopped now.

But, is this really true? There is strong evidence that another factor is as crucial to climate change as greenhouse gas, particularly in terms of rain pattern changes in Europe. Specifically, this is the interruption of the natural rainwater cycle by inappropriate land use. Insights that were put forth by the outstanding Austrian water researcher Viktor Schaubert one hundred years ago are now being proven by modern meteorologists. In particular, the Mediterranean coastal areas demonstrate a trigger effect; when those regions are deforested, overgrazed, or urbanized, they prevent the development of the continental rainwater cycle.

Dr Millán M. Millán, engineer and professor from Valencia/Spain states, "This effect causes us to lose not only the first rainfall over the coastal regions, but also the reuse of the same water which would evaporate and fall over and over again, up to twenty times, and nourish half of Europe." Instead, the hot air over the barren land pushes the clouds back over the sea where the rain eventually falls instead of on the land. The warm rain falls heat it up, and new warm streams in the Mediterranean and Atlantic Oceans influence the rain patterns in Middle Europe. Millán adds, "There is strong evidence that this effect has created heat waves in France and the recent disastrous floods in England."

The good news is that there are solutions. Improper land use can be reversed. Bottom-up initiatives from places as diverse as Australia, Rajasthan (India), Slovakia and Portugal show what solutions could look like: As a first step for reforestation, decentralized and natural rainwater retention at as many places as possible will lead to a positive domino effect, especially when applied locally in regions that work as a trigger for the rainwater cycle,.

Rajendra Singh's spectacular work in Rajasthan has inspired thousands of people to build water retention spaces in the Thar Desert. Using tools not much more sophisticated than spades, they have created dams and ponds in hundreds of places and planted millions of trees. As a result, five dried rivers are once again flowing, and villages have come back to life. The Guardian has named Rajendra Singh as one of 50 people worldwide who have contributed the most significant changes to the planet.

Southern Portugal is also threatened by desertification. Thousands of square miles in the Alentejo region are a sad reminder of how deforested and eroded soils repel rainwater. The winter and spring rains cannot be absorbed. Instead, they form big, brown streams carrying precious topsoil into the sea, leaving behind

bleak land that is hopelessly dry in the summer. More and more farmers are giving up, devoting their land to irrigated monocultures, which intensifies the destruction of the land even more.

The Tamera Peace Research Centre has found a solution for ending this vicious cycle, a decentralized water retention landscape. Bernd Müller, team coordinator, states, "Floods and droughts have the same origin, a destroyed hydrological balance. In order to restore it, we have to help rainwater infiltrate the soil. Instead of rainwater, fresh spring water should fill the creeks and rivers."

Today, Tamera's valleys, which had been dusty and dry five years ago, are filled with eight lakes and ponds, looking as if they had always been here. The rainwater gathers behind naturally shaped earth dams, built without concrete or plastic, and has time to soak into the ground. Rainwater recharges aquifers, the groundwater table rises, new springs pop up and the overall rainwater cycle is allowed to recover. In addition, fruit forests and gardens have been planted on the shore terraces, and Tamera is a green oasis during the summer months. Wildlife is returning, and biodiversity is visibly increasing. Moreover, the water is enabling the economic growth and resilience of the region.

Bernd Müller states, "Water, food and energy are freely available for all of humankind when we follow the logic of nature and not the laws of capitalism."

Sabine Lichtenfels, co-founder of Tamera adds, "Water is a connecting element. Channelled and dammed, it loses its vitality. Following the logic of water brings about a different lifestyle and economy. A water retention landscape cannot be maintained by people who are fighting each other for their own profit. It takes communities who know how to share, to communicate and to act in a responsible way. True sustainability will only be achieved in human systems that are embedded in the universal system."

Dr. Dieter Duhm, Tamera's founder, adds: "If we succeed in ending the water catastrophe, the catastrophe of hunger will also come to an end, because natural water management is the basis of food supply worldwide. The misery of hunger is not caused by nature, but is man made through exploitative land management and catastrophic water management in the name of economic interests. These are system errors, which can be overcome by an all-encompassing system change. This is the reason for our work: to create models for this global system change."

Tamera is to become a comprehensive post-capitalistic model, a research village for social and ecological sustainability as an answer to the destructive powers of globalization. Knowledge about decentralized water retention, food and energy autonomy, social skills including child raising, partnership, love, and spirituality, are disciplines that are taught in the Tamera peace education.

Dr Millan states, "Water retention landscapes like those in Tamera are a perfect way to regenerate a healthy rainwater cycle all over Europe. It is a win-win-solution, because all components are addressed: water, reforestation and the sustainable economic growth of a region."

After 20 years of trying, Dr Millan has been able to convince the European commission to follow his suggestions. Now, the European programme, JPI Water, is looking for regions in Europe where restoration is still possible and which, by their geographical conditions, would develop the trigger effect. If politicians, communities and land owners at only some hundred places recognise the opportunity and cooperate to build water retention landscapes, we might see climate recovery all over Europe.

HOLISTIC PLANNED GRAZING

OR: CAN ANIMALS BE HELPERS IN WATER RETENTION LANDSCAPES? – BY LEILA DREGGER

As environmentalists, we all have learnt much about the negative effects of large livestock herds: overgrazing, destruction of forests, hardening of soils, loss of biodiversity, erosion. But it is possible that we have to relearn. The problem is not so much that we have too many animals, but an incorrect approach to grazing management. The concept of Holistic planned grazing shows how big herds of livestock can be a major healing factor in times of climate change.

Alan Savory, farmer and biologist from Zimbabwe, has observed the development of the savanna in his home country for a long time. Most days, the grassland is quiet, but once or twice a year large herds of more than 10,000 animals, pass through. But in places where the herds have diminished and eventually disappeared, the savanna has lost its resilience and turned slowly into desert.

Grassland, which covers a large part of the planet, seems to form a symbiosis with large herds passing through. Without them, the prairies, tundras, and savannas of the world turn into deserts. The reason for this is simple: In seasonal dry climate zones, these amounts of grass need to be processed in the stomachs of animals for the decomposition process. The biomass of the grassland does not rot in the air, it would just dry after letting go of its seed, sink down and cover the land with thick layers, hindering the growth of new grass, and often bursting into large prairie fires. This is what happens worldwide: What we call climate change is more than just too much CO₂ in the air. It is a lack of biomass transformed into earth. Without rotting biomass, the land turns hot and hard, unable to let water infiltrate into the ground, leading to erosion and desertification.

In nature, a herd runs or walks through a landscape, eats grass, and tramples down the rest, bringing it into contact with the soils. It leaves behind manure mixed with seeds and perfect conditions for the next season's grass to grow.

If the herds stood on the grassland for the whole year, eating, trampling, and selecting, the grassland would not be able to grow. It would lead to the negative effects of overgrazing which we face in so many areas.

Allan Savory has shaped these principles into a sophisticated grazing concept for livestock, including all natural factors and conditions of a site, using modern technology for the grazing management. His conclusion: it is not about the number of animals that graze, but about the time that they spend on the land. In other words: there is no overgrazing, only inappropriate grazing, and even more, grazing by many animals can heal landscapes and water cycles. It can turn semi-deserts into fertile landscapes again, as Alan Savory and his teams have shown in many regions of the world.

Alan Savory states that Holistic Planned Grazing might be the last and only way to heal the earth from the effects of climate change and to stop desertification. Especially for the huge grassland regions in Africa, Asia, Southern America, it seems too much effort to work on site after site with machines and reforestation. Animals are on these sites anyway, and cooperating with them is more appropriate in many regions.

We want to find out if and how this method can be integrated into the different methods for the creation of Water Retention Landscapes and if it can be applied in the Alentejo where we see ongoing desertification year after year.

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Thank you!

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Reduced Prices for youth and participants from Portugal: 95 Euro symposium fee and 55Euro for three nights (vegan full board)

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“Water, energy and food are freely available for all of humankind, if we don’t follow the laws of capital but the logic of nature.” Dieter Duhm

