



Gaiaeducation

Ecovillage Design Education

A four-week comprehensive course in the fundamentals of Sustainability Design

Curriculum conceived and designed by the GEESE—Global Ecovillage Educators for a Sustainable Earth

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Foreword

A Brief History of Gaia Education

In 1998, 55 ecovillage educators, members of the Global Ecovillage Network with academic and professional backgrounds in a wide range of disciplines, were invited by Gaia Trust to Denmark to discuss new transdisciplinary approaches of sustainability education, building upon the experiences of the ecovillage movement.

Gaia Education was created over a series of meetings among these international ecovillage educators. The group decided to call itself the GEESE - Global Ecovillage Educators for a Sustainable Earth - to acknowledge the importance of collaboration and roving leadership as it is exhibited by the migration behaviour of a flock of geese. The GEESE were united in the effort to make the knowledge and skills developed in ecovillages accessible to a wide audience

Major achievement and milestones of Gaia Education to date have been:

First, the development of the groundbreaking Ecovillage Design Education (EDE) curriculum, which draws from the experience and expertise of a network of some of the most successful ecovillages and community projects across the Earth. The EDE was officially launched during the 10th anniversary of the Global Ecovillage Network at the Findhorn Ecovillage in October 2005. The curriculum has a wide range of practical application and is full of innovative materials, ideas and tools that have been developed and tested in communities acting as laboratories of sustainable living.

Second, the development of the Gaia Education Design for Sustainability- GEDS virtual programme in partnership with UOC - Open University of Catalonia- in October 2008.

Third, the launch of the post-graduate programme Gaia Education Design for Sustainability, also in partnership with UOC, in October 2011. GEDS will be expanded into a two year accredited Master's Degree by fall of 2014.

Gaia Education is developing additional educational programmes to be offered on its website, including an on-line variant of GEDS with a focus on sustainability design, and a special version of the EDE curriculum for Youth.

The EDE curriculum is a free resource for anyone wishing to learn about sustainability principles, and especially for those who might like to teach the EDE in their local area. Additional supporting materials include:

Guidelines for Organising an EDE - available to certified host sites.

Teachers Manual - a more detailed resource for teachers and organisers who wish to delve into greater detail on various topics in the curriculum for inspiration and guidance.

Four Keys to Sustainability Everywhere on the Planet - Along with the above-materials, Gaia Education, in cooperation with Permanent Publications, UK, has published four supplementary anthologies,

edited by and including articles by ecovillage educators from all corners of the globe. The “Four Keys” refers to the four divisions under which the EDE is organized: the worldview, social, economic, and ecological dimensions. Each book thus covers one dimension of the EDE as inspiration for faculty and student alike with articles from the best of EDE teachers and others to supplement the curriculum. These too can be downloaded for free from the Gaia Education website or ordered in hard copy from Permanent Publications for a fee. The Four Keys are:

Social Key: *Beyond You and Me Inspiration and Wisdom for Building Community*

Economics Key: *Gaian Economics Living well within planetary limits*

Ecological Key: *Designing Ecological Habitats Creating a Sense of Place*

Worldview Key: *The Song of the Earth The Emerging Synthesis of the Scientific and Spiritual World-views*

A fifth book is in the planning stages, entitled *Living and Learning Pedagogy*.

It is assumed that course facilitators will do their own research and preparation on the topics presented here. Programme directors should design the course schedule in accordance to the “Guidelines for Certification” described by Gaia Education and utilize available local resources to cover the full intent of the curriculum.

The EDE is consistent with, and representative of, key values in the greater ecovillage movement, values that include: **honouring unity through diversity; celebrating diverse cultures and creeds; practicing racial, cultural, and gender equality; promoting social justice and environmental awareness; striving for peace and local self-determination; empowering individuals and local actors; raising consciousness and human potential; and, generally, respecting the living Earth as our planetary home.**



This map shows locations where the EDE has been offered as of January 2012

The EDE was introduced to the world to complement, correspond with, and assist in setting a standard for the United Nations' "Decade of Education for Sustainable Development UN-DESD - 2005-2014."

While the EDE materials are available for anyone to use non-commercially, most EDE courses are certified by Gaia Education's Certification Committee, which evaluates the quality of the site, the content of the courses, and the proposed faculty.

Gaia Education has been, and continues to be, supported financially by Gaia Trust, Denmark. The original project was a pilot program under the auspices of GEN, the Global Ecovillage Network. Since 2009, Gaia Education has been legally incorporated in Scotland as a Company Limited by Guarantee with charitable purposes. An increasing portion of revenue stems from the GEDS program. The EU through the Grundtvig program has been providing substantial funding for GEDS participants for the last few years. The Ecovillages and course facilitators have been providing most of the support through their dedicated and special efforts. To continue expanding and growing, especially in the global south, Gaia Education will need substantial funding. It is our intention that Gaia Education eventually will become financially self-sustaining.

May this Ecovillage Design Education help to restore broken communities, create new communities that are working models of sustainable viability, regenerate damaged ecosystems, rejuvenate cities, renew a sense of optimistic purpose, and, generally, revitalize Life on Earth for ours and the many generations to come.

In solidarity,
The GEESE

The Sustainability Wheel

Navigating Through the Dimensions

The EDE is organized as a mandala that we call the sustainability wheel, encompassing what we perceive to be the **four primary dimensions of human experience - Worldview, Ecological, Social, and Economic aspects. Each of these four dimensions contains five modules - twenty subject areas in total.** We expect that the four dimensions will remain constant, while the actual titles and contents of the individual modules may evolve over time. The curriculum is thus a roadmap, **designed to be inherently flexible and adaptable to unique local needs and circumstances.**



The time frame of four weeks is a recommended minimum but not fixed. The material can be condensed into smaller workshops, spread out over a longer period, or distributed in blocks at different times and locations. This inherent flexibility makes the EDE applicable in intentional communities, both rural and urban, as well as in traditional villages, academia, professional circles, and beyond.

The EDE curriculum can be described as 'holistic'—meaning that it endeavours to cover the many-faceted, diverse spectrum of ecovillage design as a comprehensive, interdependent whole. The EDE can also be described as 'integrative' - meaning that all components are given equal attention and representation, especially as they exist in relationship with one another and to the whole. Finally, the EDE can be described as 'holographic' - meaning that the essence of the curriculum is distributed throughout and can be reconstituted from any of the parts; thus, an understanding of the whole curriculum can be attained from any partial participation or exposure.

Learning Outcomes

Each dimension has five learning outcomes based on feedback from EDE participants up to date. These are framed in terms of learner's awareness of the issues, knowledge and understanding of the concepts presented, and performance skills related to the module under each dimension. Course organisers are encouraged to start at any point in the curriculum, and to mix the course schedule so that it is presented as an integral concept of sustainability, instead of separate components disassociated from each other.

A certified course indicates that the organisers will follow the spirit of this curriculum by formulating similar learning outcomes, linking them with the core content of the curriculum, and designing experiential activities and evaluation methods that lead to similar goals and certification standards set by the board of Gaia Education. Organisers are free to use the curriculum as it is, or to adjust its contents to local and specific cultural realities of the site where the course is taking place.

Why is Gaia Education Necessary?

"We are not a collection of objects but a communion of subjects...we must reinvent ourselves at a species level"

Thomas Berry

It is widely known that humanity faces an unprecedented crisis of global proportions that threatens our viability and future sustainability on this planet. In many parts of the planet we are suffering from the consequences of using up the natural resources at a far higher rate than they can be replenished. The production of many essential biological and physical resources has already peaked. Forests, fisheries, and coral reefs are damaged and disappearing, soils are impoverished by over-cropping and the use of chemicals; diversity is reduced by genetic manipulation. The reserves of fresh water are diminishing and today more than half the world's population faces water shortages.

Over and above, climate change threatens to make a large extension of the planet unsuited for food production and habitation. Already, changing weather patterns are creating drought, devastating storms, widespread harvest failures, and rising sea levels that flood coastal cities and lands. And now, looming on the horizon is "peak oil," with its coming adjustments and retrofits, including the probability of ongoing conflict over access to the remaining fossil energy reserves.

All these problems are well documented but gaining awareness of the extent of the problems is only half the task of becoming educated these days. The other half is acquiring the practical skills, analytic abilities and philosophical depth to remake our human presence in the world. Without appropriate skills and training we may not be able to deal in time with the complex interwoven, trans-disciplinary issues involved in the redesign of our lifestyles and in the transition of our communities and societies.

Our view is that all the above problems originate from a worldview of separation, fragmentation and reductionism, and that only systemic approaches are likely to address the new generation of global survival problems; carried out in a true spirit of global solidarity and connectivity that recognizes that a culture of peace, localization and sustainability is the only viable path forward.

Within this crisis a unique opportunity is also to be found. For if the challenge is so complex, the possibilities are equally comprehensive. A comprehensive change of consciousness is emerging within the human community, that may free us from the reductionist and materialistic worldview that has dominated the last few centuries. We are beginning to recognize the social virtues of frugality, simplicity and a sense of oneness.

Remembering Einstein, we cannot solve problems with the same mindset that created them. In the language of spiral dynamics, we need to move from the first to the second tier. We need to raise our consciousness several rounds in the evolutionary spiral. In short we need a worldview, vision and values that are aligned with collaborative action.

The World Wisdom Council convened by the Club of Budapest affirms: "Neither breakdown in chaos nor breakthrough to a new civilization is fated. The future is not to be foretold, it is to be created.

Every human being endowed with consciousness can decisively form it. There are workable alternatives to the way we do things in the world today that could help us deflect the trends that move us toward crisis and pave the way toward a more sustainable and peaceful new civilization." Is it possible, therefore to create a lifestyle that builds on a worldview of oneness among all life forms and reduces energy consumption by 80-90% in the Global North? Is it possible to keep the global temperature increase below the critical 2 degrees Celsius and still make room for improving living conditions in the Global South? Is it possible to find a path to globally change the social, economic and political structures at the same time as we transform people and reduce our numbers? The task is of unprecedented magnitude.

The Ecovillage Movement

Aspiring ecovillagers around the world perceived these problems years back and initiated a strategy of reform by example. They built small sustainable communities based on a holistic worldview with the vision of transformation of self and society. They promoted a new, modest yet fulfilling lifestyle as a response to the systemic challenges facing us today. It is from this vision that the EDE has sprung.

Since the early 1990s, ecovillagers have been building networks like GEN (Global Ecovillage Network) all over the world to exchange information and learn from each other. Gaia Education, an organisation of educators from sustainable communities on six continents, has now collected and systematized all these experiences in a common curriculum for the whole world. Two major paths have been developed to spread this curriculum; one face to face, the other on-line.

The EDE, Ecovillage Design Education, is a 120 hour course, which has been carried out over 100 times in dozens of countries on six continents since 2005.

GEDS, Gaia Education Design for Sustainability, is an 8-month virtual education offered by UOC, The Open University of Catalonia in Barcelona, in partnership with Gaia Education. The course has been carried out every year since 2008/09 in English and Spanish and became a postgraduate university course starting in 2011/12.

To have one single curriculum for the whole world has by now proven its feasibility and justification. Sustainable communities from all cultures and geographic locations share a common worldview, vision and values. How it is taught will, of course, vary in details depending on the cultural setting and where it is taught, e.g. a rural community, an urban setting, an indigenous village, a university course, etc.

A Vision to Unite Worldview and Values

The worldview is the foundation of our vision and represents the values of sustainability, interdependence and global justice. Communities all over the world need to be transformed along with their inhabitants. A move toward "localization" (including local democracy, local energy, and local control of wealth creation) is a major goal of a new lifeway. We want to keep the positive elements of globaliza-

tion (global communication and cultural exchange) but we do not accept the negative economic, ecological and social aspects—exploitation and global injustice. All local communities need to become sustainable. Division of work will in the future need to be an expression of a wish of a group and of a natural sharing based in differences in climate and raw materials. We at Gaia Education cherish a diversity of cultures based on climate, beliefs, environment and history.

Settlements will be holistic reflections of the whole. This new worldview is home to the “Cultural Creatives” as they grow steadily in numbers—now about one third of the population in the United States and Europe. In the global South, an impressive model has been implemented in Sri Lanka, built on Buddhist philosophy under the leadership of Ari Ariyaratne, who developed Sarvodaya and received the Gandhi Peace Prize for his groundbreaking work. Similar principles are taught by the Spirit of Education Movement (SEM) in several Asian countries by Sulak Sivaraksa and colleagues.

- **Worldview values** include demands for a new social structure. Sovereign states should themselves decide how they want to live with each other and nature in a responsible, socially just way. The goal is diversity rather than homogeneity; and sustainability, rather than depletion caused by the violent raping of the Earth.
- **Social values** include participation by all, expressing that we are a “communion of subjects.” And the right to define how we want to live with nature and each other, as human and environmental rights.
- **Ecological values** include clean soil, air and water, shelter and fresh local food in abundance while living in a diverse ecosystem, within a permissible “ecological footprint.”
- **Economic values** include local economies under control of local democracy; and the subservience of economics to ecology rather than the reverse.

Transformation of Consciousness

We see this heritage as a positive vision for the future and not a step backward. Meditation and personal development is spreading like wildfire in the global North as a way of experiencing oneness. Eckhart Tolle - a well-known Western spiritual teacher - asks us to let go of greed, fear and anger and to leave behind the “pain-body”, which is not really us anyway, while other Western teachers recommend living a simple life, and letting go of fear and greed. This will eventually lead to experience oneness and happiness. Similar teachings are common in eastern thought.

Teaching the EDE in different environments

Ever since the industrial revolution, communities have been very diverse, depending on their placement in the global hierarchy of megalopolises, suburbs, smaller cities, rural villages and natural habitats. They all came into being as part of the needs for technology and an economy of competition. They

are linear systems not respecting the circular nature of matter. How we plan and teach will thus depend on where we live and an appreciation of the local culture. We have so far taught the EDE to many and varied participants, including:

- People who want to build and live in sustainable communities or ecovillages.
- Urban people in big cities such as Sao Paulo, Mexico City and Los Angeles
- City planners and local authorities wanting to create positive local change
- University faculty who want to teach holistic thinking to their students
- University students searching for ways to change global destructive trends
- Indigenous people and people in the South wanting to circumvent Western-style “development” and fast forward into a localized future.

How we teach is different for each of these groups as their present realities are different, but the goal is the same: localization, Earth Democracy and sustainable abundance in the local area. We choose the words sustainable abundance as we firmly believe that this simple local life will be rich in social contacts, creativity, spiritual awareness, fresh local food and simple joys, but with a low ecological footprint.

The EDE often takes place in sustainable communities where local citizens live what they learn. We call this concept “Living and Learning” - teaching theoretical material illustrated by local fieldwork, exercises, games and a concrete projects. What is special is the ecovillage culture, which has developed over many decades and includes a creative lifestyle full of art, music, celebrations and rituals.

Many of the early EDEs were held in Brazil in urban settings. The focus here was on consciousness raising, as well as the social and economic aspects and an attempt to develop green spaces in the big cities.

Gaia Education cooperates with the Transition Network in creating joint educational offerings using the EDE curriculum and the Transition Training. Transition Towns represent a new citizen-based social movement in cities and towns aiming to reduce the local ecological footprint and prepare for energy descent.

The EDE in indigenous cultures or mixed cultures such as Senegal, South Africa, Argentina, Brazil, Sri Lanka, Thailand, India and China has taught us that concepts like “development” and “urbanization” need considerable adaptation and individualized treatment. In Africa, local food production, renewable energy independent of the grid, and local economies are important topics, especially in rural areas where 80% of the population resides. There, the social structure is often intact. They need to learn to appreciate what they have and take it from there.

The EDE teaching material includes a variety of concepts, ideas, references, and games that can be adapted to local needs while staying within the overall EDE framework.

THE WORLDVIEW DIMENSION



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design for sustainability

Learning Outcomes

Participants will learn to...

- ✓ benefit from a regular spiritual practice (meditation, yoga, prayer...)
- ✓ keep a daily journal of their dreams, insights, and observations
- ✓ deepen their connection with Nature
- ✓ creatively draft clear paths to personal health
- ✓ be a change agent, a contributor to a new world

"There is enough for everyone's need but not for everyone's greed."

Mahatma Gandhi

Overview

It has become conventional to describe sustainable development in terms of three over-arching themes: economic, social, and ecological (sometimes called environmental). These are considered to be the fundamental areas of human experience that need to be addressed in any sustainable development scenario. The EDE recognizes and adds one other dimension to these fundamental areas of concern - a dimension we've chosen to call "Worldview." This is in recognition that there are always underlying, often unspoken, and sometimes hidden patterns to culture that strongly influence and may, in fact, predetermine economic, social, and ecological relationships.

Each culture, each sub-group, each wave of history seems to be guided, informed, and directed by particular interpretations about the nature of reality. Although originally reserved for the scientific establishment, the term 'paradigm' is now commonly used to describe this interpenetrating mix of beliefs, philosophies, and myths that together comprise the widely accepted cultural 'lens' through which one perceives the world. Paradigms, of course, are subject to change as new knowledge is discovered or created, and as human beings grow and become ready for deeper and fuller realizations.

By all indications, according to the writing and thinking of so many, those of us in the West are in the midst of a paradigm shift today. A new worldview is indeed emerging, a worldview that is complementing and merging with long-held philosophies of the world's wisdom traditions. This new worldview, this evolution in consciousness, will prove to be of unprecedented and unparalleled proportions because of the unifying effects of cultural globalization. We can now experience humanity as one big family, one people, an earthly unity; and similarly, we can experience our planetary home, as revealed from photos taken by astronauts, as a living, breathing super-organism - Gaia. The new worldview is being defined as an evolution from mechanistic to holistic, or from material to spiritual, interpretations about the nature of reality: Consciousness precedes physicality; ideas create form. An often-used word describing this underlying unity is Oneness. The purpose of the Worldview dimension of the EDE, therefore, is to articulate the parameters of this evolution as it pertains to the design and implementation of sustainable community models.

The Worldview dimension of the EDE addresses vital aspects to human existence in the following five modules:

- ✓ **Module 1 - Holistic Worldview** is an articulation of the nature of the transition we are currently living through, re-integrating science and spirituality, as a new worldview is emerging
- ✓ **Module 2 - Reconnecting with Nature** is a guide for reconnecting human beings with the natural world, as a spiritual practice
- ✓ **Module 3 - Transformation of Consciousness** is a poetic account of the consequences of a commitment to the spiritual journey
- ✓ **Module 4 - Personal and Planetary Health** reminds us of the unity in the close link between planetary and personal health
- ✓ **Module 5 - Socially Engaged Spirituality** expounds on the view that a spiritual life well-lived is a life of active social service, and in these times the two cannot be separated

Worldview Resource: *The Song of the Earth*

The Song of the Earth: The Emerging Synthesis of the Scientific and Spiritual Worldviews is the Worldview Key of Gaia Education's series *Four Keys to Sustainable Communities Everywhere on the Planet*. Download gratis from www.gaiaeducation.org

Module 1: Holistic Worldview

Learning Goals

- Introducing a new vocabulary to describe a holistic worldview
- Developing habits of meditation, reflection, and awareness of the self and the environment.
- Identifying discoveries in the 'new science' that point to a definite spiritual basis underlying nature and reality
- Helping to heal the divisions between spirituality and science, and simultaneously between modern and traditional cultural paradigms
- Developing an deepening personal awareness that the interconnectedness of life is not mere metaphor, but a living truth for which we humans must take responsibility

Content

Traditional education has conditioned us to believe that the world and the cosmos are comprised of distinct, isolated, material objects - all separated from one another and collectively operating according to rational, deterministic, mechanistic laws. Yet this worldview is now being uprooted, supported by remarkable discoveries in science. As Thomas Berry summarizes this shift in understanding, "The universe is not a collection of objects, but rather a communion of subjects." A new paradigm is emerging in which the universe is experienced as a unified pattern of living systems, all fundamentally interconnected in a complex network of relationships. This new paradigm ushers in a new 'holistic' or 'integral' worldview.

Evidence for this integral worldview is mounting in many scientific disciplines simultaneously. In physics, biology, psychology, systems theory, physiology, and complexity theory - a common theme has emerged: beyond the observable physical realm, there exist invisible patterns or principles that somehow organize or influence the world we observe and experience. Science is learning that something transpires behind that which appears.

These discoveries are rapidly shifting our understanding of reality. Science is uncovering profound new levels of interconnection between matter and consciousness. Physical reality is now understood to be based on a web of dynamic relationships - not atomistic parts. The new science demonstrates that what appears to our senses as concrete, stable and inert is, on the contrary, comprised of interrelationships of a myriad of elements in motion: energies, particles, and charges animated by powerful internal dynamism. The lesson becomes very simple: Human society and its relationship to the natural world must reflect this dynamic interconnected Web of Life if we are to thrive.

Exciting new discoveries are also revealing that consciousness definitely influences matter; the physical world and our mental human world are interlinked and overlapping in profound ways we don't yet fully understand. Discoveries in physics and the life sciences are leading us to a remarkable convergence between the new scientific understanding and spiritual teachings through the ages. Nonlinear

dynamics and complexity theory are revealing that the cosmos is constructed something like a huge hologram. The resulting structure, sometimes called a fractal or holarchy, entails a vast and intricate tapestry of interpenetrating matter and consciousness, in which each fundamental part (or “holon”) contains the essence of the whole: “As above, so below.”

Despite the exquisite grandeur and intrinsic appeal of this Holistic Worldview, it can easily remain vacuous intellectual abstraction unless grounded in palpable real-life applications. This is where ecovillages come in as inspiring prototypes of the future: Just as an individual holon replicates a vast holarchy, so too, the ecovillage represents a concentrated, human-scale focal point for the auspicious possibilities of interconnected global society at large. Ecovillages not only treat the myriad symptoms of unsustainable civilization, they also foster systematic healing.

Ecovillages today provide the best living experimental laboratories for incubating new models of sustainable human culture. The ecovillage model promotes a ‘systems’ perspective, emphasizing the connections between activities, processes, and structures, and developing a broader, more comprehensive understanding of ‘sustainable community.’ In ecovillage living and ecovillage design, the interconnections and interrelationships are highlighted, and become more visible to all. For example, seeing how organic food production relates to complementary currencies, which in turn relates to sustainable modalities of economics, which in turn relates to inclusive decision making procedures, which in turn relates to integrity in human interaction, which relates to love, which relates to wilderness and nature, which relates to ecological building, and so on...

Lest the inspirations and aspirations outlined above be dismissed as fanciful notions of dreamy mystics or utopian ecologists, let us recall the words of Albert Einstein, who tells us quite unequivocally:

“Human beings are part of the Whole...We experience ourselves, our thoughts and feelings, as something separated from the rest...a kind of optical delusion of our consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures, and the whole of nature in its beauty.”

Albert Einstein

In other words, sustainability requires whole systems learning, in order to see the wider context in which we function, and the web of relationships upon which all life depends. Systems’ thinking creates understanding of the connections in the system. Everything is connected, and the connections express certain dynamics. Simply put, if we change one part of the system, another part is affected. The system within which we operate is very complex, and the basic principles are set for us by the Laws of Physics. The system, of course, is the global one, the Earth. The principle of matter conservation and the laws of thermodynamics are important here. All are universal. Which means, in practice, that they apply to the whole universe.

It is indisputable that neither productivity nor biodiversity must systematically diminish if we want a sustainable world: Biodiversity provides a vast array of direct and indirect resources to us; it is an es-

sential aspect of productivity, the complex web of species in cooperation providing the very cycles upon which our life depends; and it is an important defence strategy for nature in the face of change.

Resources for this module

Video

What the Bleep Do We Know!? - 2005, Fox

Internet

www.wisdomuniversity.org

www.duaneelgin.com (Duane Elgin)

www.integrallife.com (Ken Wilber)

www.instituteforsacredactivism.org (Andrew Harvey)

www.joannamacy.net (Joanna Macy)

www.sahtouris.com (Elisabet Sahtouris)

www.GPIW.org (Global Peace Initiative of Women)

www.giordanobrunouniversity.com

Sample Experiential Learning Activities

Do the following guided meditation exercises in the suggested order and debrief with the whole group afterwards. Devise a way to measure the results with the participants.

1. Visualize the ecovillage you are designing as a hologram. What are the elements of the larger society that you want embodied in your ecovillage? Which would you keep out? Follow with a small group discussion.
2. Visualize the body as a hologram: the ears, the hand, the foot, the iris of the eye, all contain the essence of the whole body.
3. Give and receive a foot massage and feeling where the various parts connect to the whole body.
4. Imagination Exercise 1: Sit quietly and visualize the body. Perceive the body as attuned to the centre of the Earth. The centre of our body and the centre of the Earth become as one in a flash of intuitive Gaian awareness.
5. Imagination Exercise 2: Now perceive the body as attuned to the galactic centre: The centre of our body and the centre of the galaxy become one as in a multi-dimensional connective cosmic awareness.
6. Imagination Exercise 3: Expanding atom visualizations. Perceive the body as a multitude of vibrating atoms. These atoms become energized and begin to expand until they cover the entire universe.

Write your thoughts and insights in a journal. Share with others what you feel is of interest to you and to others.

Module 2: Reconnecting with Nature

Learning Goals

- Developing the sensitivity to Nature required to do the work of competent and inspired ecovillage and sustainability designs
- Understanding that attending to the health of Nature is fundamental to any discussion about sustainability
- Listening to Nature and seeing Nature as a teacher and a guide
- Begin taking active steps now to honour and restore Nature, beginning with our own bodies
- Connecting with Nature through our mind, body, and spirit

Content

The perceived or imagined disconnection from Nature is at the root of the most serious problems we face in our present era. Civilization, the culture of cities, seems to have had as one of its goals replacing Nature with an entirely human-made environment - witness the dull, square, concrete blocks of the mega-cities, virtually devoid of non-human life, engineered abstractions completely burying the once living ecologies beneath them. After many generations of manufactured urban living, philosophies and religions began to appear speculating that human beings were somehow separate or distinct from Nature; and indeed, it got to the point where human beings were actually considered to be superior to Nature. How could this ever be? Human beings are, always have been, and always will be, an integral part of Nature, a rather recent appearance in the 3.5 billion year trajectory of evolutionary biology that is the saga of Life on Earth. This humanistic hubris of claiming to be superior, thus degrading Nature as exploitable and expendable, has set in motion unruly destructive forces that may (and this is no exaggeration) eventually terminate life on Earth as we know it.

Given the scope of this predicament, Reconnecting with Nature would appear to be a matter of the most vital importance; so what is the most effective way to go about teaching that?

Without intending to subscribe to the 'noble savage' myth, indigenous cultures living close to the land are generally recognized as being connected with Nature - this is because they develop intimate reciprocal relationships with the life-forces of the places wherein they dwell. Indigenous peoples living close to the land tend to co-evolve with their environments in mutually-beneficial and mutually-defining ways, over long periods of time. This is the key to sustainability - this intimate, perennial commitment to a particular life-place, where it's to the people's obvious advantage to maintain the health and integrity of their local Nature. Under these conditions, with survival at stake, the people are going to stay tuned and stay connected.

Ecovillages are in a unique position for teaching about the theme of Reconnecting with Nature. Whether urban, suburban, or rural, one of the defining characteristics of an ecovillage is that it is a settlement "in which human activities are harmlessly integrated into the natural world." While that may

sound a bit idealistic, it is a worthwhile starting point, for re-integration is what is necessary. Here are some principles and practices employed by ecovillages around the world to accomplish this re-integration:

- The use of ritual and ceremony to honour such natural functions as the cycling of the seasons, the phasing of the moon, and the four (or seven) directions.
- The use of Feng Shui, Vastu, Sacred Geometry, and other geomantic disciplines to auspiciously place constructions in the built environment - often in alignment with energy points or ley lines.
- Setting aside significant percentages of the land for natural functions.
- Identifying and preserving special places - such as groves, hilltops, promontories, water features - as sacred sites
- Creating meditation nodes and sanctuaries
- Constructing earth temples, shrines, and altars
- Using architectural and siting practices that blend buildings into the landscape
- Regenerating previously damaged tracts of land so they can thrive again
- Bringing Nature right into the ecovillage and making it highly visible wherever possible

With the use of these principles and practices, and more, ecovillages are healing that split between humanity and Nature, and creating conditions of optimum co-existence. In creating these conditions, listening to Nature becomes possible once more and reconnecting with Nature can be achieved simply by going about one's daily affairs.

This module interfaces the Spiritual and Ecological dimensions of the curriculum. With the expansion of consciousness and identity that comes from a sustained spiritual practice, it becomes easier, even obvious, to accept responsibility for healing the Earth. Reconnecting with Nature becomes part of the spiritual practice because Life can be perceived as an indivisible whole, a unity whose integrity depends on the health and vitality of all its parts. Untouched, undisturbed wilderness can become a source for spiritual renewal, where solace can be sought and deep questions answered. Planting and tending lush gardens, respecting and regenerating the life-force of a place, healing the wounds of separation in ourselves and others - these are all acts of a spiritual nature because planetary evolution and the living potential of all beings concerned, human or otherwise, is enhanced thereby. The human being as conscious regenerative agent in the biosphere...could this be the spiritual mission of the next species of humanity?

Three and a half billion years is a very long time; there is something inherently sustainable about the ways of Nature. When human beings can drop their hubris and approach Nature as a teacher and guide, then many important lessons will be revealed. The human body is a magnificent cellular orchestration, the product of this full evolutionary tenure; therefore, our own bodies are the most intimate context for reconnecting with Nature. Go and find a relatively undisturbed natural setting - it could be a park or your own backyard. Sit still and quiet for a moment. Open up all your senses. Does Nature have something to reveal to you?

A quote from David Holmgren, co-originator of Permaculture, a design system modelling human systems after systems found in Nature, echoes our sentiment:

“Part of the problem in the current psychology that prevails in our [Western] culture is that we are separate from Nature and not constrained by its limits. Clearly, energy peak and descent will smash once and for all that mistaken view. What is also necessary is to realize that we are not some contradiction of Nature, a destroyer of it, but that we have a place in Nature, and can reclaim that place.”

David Holmgren

Sample Experiential Learning Activities

There is room for much creativity and flexibility with this module. Devise, with participants, ways to measure the results. Do as many of the following as time allows:

1. Taking a mindful walk through Nature and talking about our experience
2. Include a poem or story and written personal reflection in your journal
3. Involve a “close encounter with a tree,” seeing it as more than a log and branches and perceiving its total function within the landscape
4. Creating a ritual or ceremony in honour of Nature or our-selves, either individually or in a group
5. Sitting still for a while at the forest edge and practicing observation skills. Then write down your observations, sensations, thoughts, feelings, and realizations
6. Taking on the voice of another living creature, say a frog or a river, and communicating from that other life form telling the group what the world looks like from that perspective
7. Doing a Feng Shui or Vastu analysis, or setting up an earth altar to the four (or seven) directions.
8. Vision Quest/Tree Ceremony: reconnecting to nature in order to find out more about who we are and why we are here

In all cases, an emphasis on fun and celebration, food and fire at the centre of the hearth, will help to consummate the experience.

Module 3: Transformation of Consciousness

Learning Goals

- Gaining perspectives and awareness that connect our planetary life to the cosmos
- Exploring our deeper mission and purpose in life
- Initiating or strengthening practices that can lead us to spiritual awareness and transformation of consciousness
- Reflecting on our place in the spiritual journey

Content

There comes a time in many people's lives when, through a 'peak experience' of some kind, they are exposed to a non-ordinary state of reality whose intensity shakes their very foundations. The feelings often accompanying this exposure can be: an incomparable bliss, a sense of being connected with the entire Universe, a sense of unrequiting peace and contentment, a kind of intuitive understanding about the nature of reality that doesn't require explanation, a sort of loving kindness that is freely given to all creatures. The tendency is to want to hold onto these feelings, to remain in that state forever; but alas, the feelings soon fade, and as the density returns the initiates are left with only the experiencing of a vision far vaster and more magnificent than the ones they have known. For some, this peak experience can be an 'awakening' that sets them firmly on a spiritual path.

The story is told of Lieh-Tzu, who wanted to know enlightenment, the 'goal' of the transformation of consciousness. So great was his desire that he travelled far and wide, searching for the greatest teachers with the wisest teachings. Lieh-Tzu was a sincere and committed student so he practiced diligently all that he learned. One day, after a couple of decades on his journey, Lieh-Tzu experienced that flash of insight, that spontaneous merging with the ineffable Infinite, that sudden immersion into the sea of the unconscious, that is known as enlightenment. And what did he do with his transformation of consciousness? He got right up off his cushion, said goodbye to his peers, and went straight back home to the family farm to help his wife with the chores - feeding the pigs, chopping wood, weeding the garden. And there he stayed for the rest of his noble life.

It turns out that the journey is not a continuous ascent but rather a spiral that seems to be sometimes going up and sometimes going down. The journey is the destination. There is nothing to strive for - only life to be lived. Trying to hold onto the bliss is likely to lead to disappointment; it is far more fruitful to create the conditions from which the bliss can emerge, continuously, spontaneously, of its own accord - for the benefit of all. This is the way of Nature; and this is one of the functions of the ecovillage.

But something has indeed changed. The centre of gravity is different. The thought of going back to the old, narrow, egocentric way of life seems thoroughly degenerative. The transformation of consciousness is an expansion of consciousness. My identity begins to include more and more of the world

around me. I am no longer an isolated 'unit' but rather an integral part of a community; and this human community is co-evolving with a natural community in an ecological niche; and this ecological niche is just one ecosystem among a multitude of others on our larger host Gaia; and Gaia is a member of a solar system - just one solar system among a multitude of others in our local galaxy. This galaxy has a well-defined galactic centre from which new worlds seem to emerge, spontaneously, of their own accord. As my identity becomes more inclusive, so my responsibility grows. My thoughts and actions do have consequences: they can influence the emergence of new worlds.

A common attribute of those who have been on the path for a while is a deep and genuine humility, a sincere and respectful awe for the unfathomable vastness and scintillating magnificence that is the Great Mystery. All spiritual and religious traditions seem to lead to service: this is service to the greater whole, service to alleviate some of the suffering of those who are less fortunate; this is service out of pure love and compassion, service for atonement and forgiveness; and finally, this is service because I have gazed into the eyes of the beloved, and what else can I do but try to help?

Resources for this Module

Videos

The Four Noble Truths - H.H. The XIV Dalai Lama, 1999, Mystic Fire Productions

Invitation from God, an Interview with Thomas Keating, Marie Louise Lefevre.

Sample Experiential Learning Activities

Make time in morning check-in circles to measure the outcomes of the following practices:

1. Set aside time each morning for optional silent meditation, using a variety of techniques known by those who come. This should occur in an appropriately suitable space reserved for such activity. There will also be guided meditations as part of the course material, experienced by all students during regular course times.
2. Practice positive visualization techniques familiar to the course facilitators.
3. Offer Hatha Yoga, Tai Chi, Chi Kung and other body movement disciplines as instructor's knowledge permits; these activities may also be student led.
4. Institute various reminders to be 'mindful' throughout the day.
5. Facilitate morning dream sharing during check-ins as a positive way to attend to personal and group processes.

Module 4: Personal and Planetary Health

Learning Goals

- Looking at the human being as a holistic being - a union of mind, body, and spirit
- Understanding that healing the Earth is a prerequisite to our own health, and acting on it
- Directing our attention towards the unmet needs of the entire person, including those on an inner level, in order to heal our selves
- Acknowledging the wisdom of traditional healing methods and balancing these with modern Eastern and Western medical knowledge
- Recognizing that every human being is unique, and for each one the path to wellness is specific and personal
- Practicing prevention as the best method of maintaining and restoring health

Content

In healing our relationship to the Earth, we heal ourselves. The old tribes used to show reverence for the dynamic interconnectedness of life on this planet. For too long now, Western civilization has treated the Earth as an exploitable reservoir of 'resources' and as a dumping ground for the poisonous residues of industrialization. The pollution of our air, water, earth and food is making us sick. The rich countries have consumed and are still consuming far above what is their sustainable share, and we know that this kind of gluttonous life-style is narrowing the chances for a prosperous, healthful future for all the world's children.

Restoring a respectful, honourable relationship with the Earth naturally invites us to re-connect with the wisdom of traditional healing methods. Beginning with the basics of eating healthy foods that grow around us, and collecting the herbs that smile at us on our walks, we maintain healthful bodies by assimilating the life forces of our life places. The modern health system, relying on synthetic manufactured pharmaceuticals, denies a living relationship with Nature. The techniques of modern medicine may be helpful in some more radical intervening cases; but the foundation of health rests squarely in a regimen of holistic prevention, the so-called 'soft' approaches. In the ecovillages, we see a partnership of complementary medicines and therapies. Each human being is unique and for each one the path to health and wellness is specific and personal, so all options should be explored.

The coupling of an individual's care provision to the global economic system is leading to an increasing dependency upon avaricious transnational corporations to meet local needs, which is completely contradictory. Capitalism is a system designed to exploit natural and cultural capital as quickly and as efficiently as possible - it has no business in the realm of care. In most countries, social solidarity has been systematically dismantled, especially at the community level, while the poor are becoming poorer. The ecovillage is a solution for reclaiming responsibility for care at the local level. In the coming years, we may see ecovillage design principles applied ubiquitously to retirement communities, as aging baby-boomers discover that government and corporations are not prepared to help.

Health is not simply avoiding sickness; health is a way of life. Optimum health involves not only the physical body, but also the mental, emotional, social, and spiritual planes of existence. In modern societies there is a tendency towards segregation of the different strands of life; for example, at our job it seems OK for us to push ourselves, build up tensions and burn out because on our vacations we can buy the 'wellness' time to make up for it; or it seems OK to be cool, detached, and impersonal in the world because relationship and intimacy belong to the 'private' realm. In ecovillages, all these aspects are re-integrated into a fully holistic (i.e., not compartmentalized) life, where wholeness is the conscious goal. Living within a net of meaningful relationships is fundamental to health and healing; feeling accepted, loved, and needed incites a hopeful joy in living and a welcome openness towards the new.

In these kinds of situations, illness can be seen as an indicator, a message bringing us information about the status of our surroundings - community, society and nature - as well as about our individual states of being. We can learn to understand, rectify and amend disease instead of hastily trying to get rid of the condition as quickly as possible. In the global system, people lose their economic value once they get sick or old and are not able to work and care for themselves anymore. In communities, we have an opportunity to create a new precedent of solidarity and caring for one another.

If my body is part of the social body, then healing my body will help to heal the social body. Sustainable health begins with reconnecting the mind-body split that has been the concomitant of industrial civilization. We do not merely have bodies, we are bodies; mind is not a separate 'substance' but rather the co-arising poetic interface between a body and its environment. Tending to the needs of the body - fresh air, pure water, nutritious food, regular exercise, touch and affection - is the foremost strategy for maintaining optimum individual health. How would you rate your relationship with your body? Could it be improved? There are numerous 'body awareness' exercises that have been designed to re-cover intimate knowledge about this relationship, and we'll experiment with some of those. There are also meditations whose purpose is to explore the body and its sensations; a result of regular practice is often the capacity to perceive the body as an energy field, noticing blocks or dense areas.

On this energetic level, it could be said that we are all created as spiritual beings, with the divine light radiating within - there is an ethereal spiritual body superimposed upon and progenitor to the material body. Emotional blockages such as judgment, resentment, or craving all dim our light, and these need to be transcended and cleared away. Ultimately, it is all about vibration and removing the hindrances and encumbrances to free vibratory circulation. From a chakra perspective, we need to restore the free movement of prana throughout all levels of our energy body-system; only then can we move with a dignified autonomic grace and reclaim our essential being as radiant of the divine effervescent light.

Sample Experiential Learning Activities

Do one or more of the following exercises in groups of four according to knowledge already present in the group and devise with participants a way of measuring the results:

1. Practice body awareness meditations through games
2. Practice healing techniques such as: chi gong, polarity therapy, acupressure, rebirthing, breathwork, releasing stress through prana, etc.
3. Start a massage circle
4. Prepare and sample herbal teas
5. Prepare tinctures and salves
6. Each participant lead a set of aerobic exercises
7. Play Frisbee and volleyball with others. Redefine the rules
8. Open inter-gender communication about sexuality; no practical application necessary!
9. Set up an ecovillage-scale model for a preventive health care system
10. Design an on-site health clinic for participants and visitors, addressing each other's health issues, and offering prescriptions for remediation
11. Design and construct a medicinal herb garden, after some research

Module 5: Socially Engaged Spirituality

Learning Goals

- Linking together the paths of “inner” spiritual transformation and “outer” social change
- Empowering new practitioners of socially engaged spirituality with potent examples from groundbreaking pioneers
- Including spiritual awakening and transformation of consciousness on the social change agenda, and social change activism on the spiritual agenda
- Facilitating creative collaboration between spiritual groups and social change groups, thereby synergistically furthering the goals of both

Content

For thousands of years there has been a time-honoured tradition that spiritual seekers and ascetics must go “up the mountain” or into the desert or forest to escape the bustle and clamour of society and the marketplace. Secluded in the pristine beauty of nature, seekers could find the requisite quiet to immerse themselves in spiritual reverie, free from the problems of the world. But in recent decades the noise and pollution from the world have followed them right up the mountainside! The pristine blue sky adorning the mountain monasteries is now tainted with acid rain and encroaching climate change, while the nearby lush forests are increasingly felled by the logger’s saw blade. The intractable problems of human society have expanded to touch every corner of the Earth.

The spiritual seeker is therefore compelled to come down from the mountaintop, and engage in the world as part of her spiritual discipline. The crisis of modern civilization has reached such extreme proportions that radical transformation is necessary for humans to survive, much less thrive, and a major part of the spiritual seeker’s task now is to take part in facilitating this transformation.

A parallel long-standing pattern in secular social change leadership has also long held sway: exclusive focus on social and economic reform while steering clear of the more subtle spiritual or philosophical dimensions of life. Prominent social change leaders and institutions have taken great pains to maintain their distance from any religious affiliation or spiritual association. Social change was deemed to be practical cultural innovation, fuelled by social necessity and grounded in legal, corporate, and scientific frameworks. Spirituality and transformation of consciousness were viewed as irrelevant because they entailed private values and practices that were presumed to have little impact on “real-world” pragmatism.

But social change leaders have discovered their task is impossible without a sea change in human consciousness and values. As an example: dedicated advocates of solar energy fought long and noble battles to support developing countries around the world to adopt clean, decentralized solar energy, rather than dangerous nuclear energy and polluting fossil fuels—only to discover that when their cherished solar policies were finally adopted by the World Bank or the IMF, they were used to install

solar-powered television sets in remote indigenous tribal societies for the purpose of beaming down Western corporate advertising, MTV, and soap operas. In the span of a few short years, the shock and awe of this technological invasion decimated the social fabric of these few remaining sustainable cultures on earth. The extreme irony was that the very ecological virtues of solar energy made it possible to foist Ronald McDonald on the African Bushman and for MTV smash hits to begin usurping the song lines of the Australian aborigine.

The lesson is simple and cuts two ways: spirituality without social change is lame, and social change without spirituality is blind. Spiritual transformation in the absence of fundamental social and ecological change is ultimately futile, “as if the soul could be saved while the biosphere crumbles” (Theodore Roszak). And social or ecological reform in the absence of a spiritual awakening is proving to be fatal, as if the biosphere could be protected while the soul of humanity perishes.

“Spiritual awakening” ultimately means inculcating love and wisdom in the hearts and minds of humanity. Without this transformation, even the most promising social and ecological innovations will be quickly outstripped by the spread of consumerism and rapid population growth across the globe. Transformation of consciousness and values is no longer a luxury reserved for the few, but has become an imperative for the masses.

Fortunately over the past decade, a groundswell of new initiatives has emerged for bridging the gulf between social change and spiritual practice. Innovative forms of “socially engaged spirituality” are springing up from many directions at once. Buddhist and Hindu groups that were previously devoted only to contemplative disciplines are taking to the streets, while social change leaders are taking to the meditation cushion in ever-greater numbers. Socially engaged spirituality is hardly new, though it is receiving fresh attention. The Isha Upanishad, an ancient Hindu scripture, warns of the perils of a life devoted solely to meditation, or solely to action, and extols the virtues of a life devoted to both action and meditation.

The roots of socially engaged spirituality are equally strong in Western traditions. The Jewish prophecies articulate perhaps the greatest cry for justice and human dignity in any scriptures. The Christian faith has a long tradition of spiritual service. The mission of Mother Teresa has been highly visible; and equally inspiring is Dorothy Day, who founded the Catholic Worker movement that created 185 “houses of hospitality” to provide for the poor and challenge social oppression. Thomas Merton and the Berrigan brothers were pioneers in opposing the war in Vietnam.

Sikh master Tara Singh once remarked: “Humanity has survived poverty, but I wonder if we can survive affluence.” Socially engaged spirituality holds great promise not only for humanity to survive, but to flourish. As we learn to replace material acquisition with spiritual treasures, we move away from incessant mining of finite outer resources, and turn to the infinite wellsprings within our own hearts. Thus can the curse of unbridled affluence be dissolved in the cure of unbounded love.

Sample Experiential Learning Activities

Try as many of the following activities as time will allow and devise a way to measure their impact on participants:

1. Lead a guided meditation on ways we are attached to material possessions, and social values of fame and reputation, and then suggest/practice/discuss ways to release these attachments
2. Introduce Satyana Institute's "Principles of Engaged Spirituality," and other principles of engaged spiritual, such as Findhorn's "Statement of Common Ground." Exploring how these specifically apply in our lives
3. Devise small group discussion exercises to experience class identity and conditioning based on degree of material affluence and spiritual rank (following the work of Jenny Ladd and Arnold Mindell)
4. Brainstorm practical group projects in socially engaged spiritual activism, where we commit to working on a particular social or ecological issue with the principles of socially engaged spirituality taken from the Satyana Institute
5. Try contemplative practices (meditation, prayer) as ways to bring transformative energy and insight to a specific conflict or social affliction
6. Explore the power of bearing witness to social or environmental injustice (e.g. Women in Black) through discussion, theatre or writing
7. Discuss ways your spiritual qualities can help you bring about social change

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THE SOCIAL DIMENSION



Gaiaeducation
design for sustainability

Learning Outcomes

Participants will learn to...

- ✓ create a common vision for a collective project
- ✓ improve our leadership skills and inclusive group membership processes
- ✓ make decisions that everyone can accept and support
- ✓ welcome conflict and diversity as an invitation to growth
- ✓ create spontaneous and intentional rituals and celebrations

"The next Buddha will not take the form of an individual. The next Buddha may take the form of a community; a community practising understanding and loving kindness, a community practising mindful living. This may be the most important thing we can do for the survival of the earth."

Thich Nhat Hanh

Overview

The archaeological evidence shows that the primordial social pattern for human beings is to gather together in relatively tightly knit, egalitarian, clan-sized 'bands' closely coupled with Nature. Today, we need to consciously reinvent cooperative and harmonious ways of living together. Therefore, seeding, growing, and rebuilding meaningful communities and networks of communities are vital steps towards a more liveable, sustainable future. As prototypical "living and learning centres," in which people from a variety of cultures, spiritual pathways and economic backgrounds explore and embrace diversity together, the ecovillages inspire a new global culture of peace and prosperity. Through stepping into an ever-widening field of personal growth, mutual understanding, respect, and loving kindness, with the right tools for learning these, we can set human potential and ingenuity free to work for the benefit of all. If we can create peace amongst ourselves, in our local communities and social group-

ings first, then benevolent qualities of courtesy, trust, and goodwill will have a chance to breed and multiply.

Industrialisation and the global economic system have brought with them over-consumption and a sense of independence, but these have also come with unpleasantly pernicious side-effects - such as predatory individualism, social alienation, rampant addiction, and family breakdown. The global South - where much of the traditional social fabric is still intact - will yet have lessons to teach the North. The social organisation of the traditional village, still alive in many parts of the world, may prove to be the most sustainable model to emulate. Perhaps much of the lesser-consuming segment of our world's population will skip past the industrialized, hyper-individualized stage of development and jump right into the post-industrial, knowledge-based, cooperative and interdependent ecovillage future. This is a good reason to emphasize education and global exchange as a strategy for resilience.

A life of expanded social opportunities is a big attraction to ecovillage living, and this may be the ecovillage's greatest asset. Within the context of community that the ecovillage provides, residents enjoy numerous benefits not available to the rugged individualist, benefits such as: a safe and protected place to raise their children, where a variety of adults may serve as role models; more time for family and friends and less time spent at stressful jobs or commuting to them; more opportunities for home-grown business or cottage industry, perhaps as a collaborative venture with friends in the community; parents find the possibility for integrating professional activities with childcare at home; opportunities exist for creative pursuits such as music and theatre with your neighbours; shared meals can become a regular feature; shared office, shop, and recreational space means less purchasing, reducing the need to earn; political associations are often centred in the ecovillage setting; through the fulfilment of our longing for meaningful relationships, consumerism, addiction and crime are dramatically decreased; ecovillages also provide the possibility for integrating the differently-abled, the elderly, and other challenged groups in a way that gives them a richer, fuller life.

No wonder our ancestors spontaneously organized themselves into small, manageable, accountable social groupings: basic human needs are met much easier and there's more leisure time. This is not to say that community living is without work; indeed, it requires a constant vigilance of behaviour - a heightened awareness of the needs and idiosyncrasies of others. Especially for people raised within the hyper-individualized paradigm, learning the subtleties of constructive, respectful, and mutually-beneficial interaction within a community setting may take a major self directed effort at first, until it becomes second nature; that is, until these qualities are recognized to be part of human heritage, part of the human condition.

Building socially healthy, harmonious, cooperative community in a non-traditional setting is an endeavour whose immense challenges should not be underestimated: Reconnecting with one another across barriers and borders of misunderstanding and miscommunication calls for clear, calm, firm, and courageous intention. One of the most cited common reasons for the break-up of ecovillage or other intentional community projects is conflict. And so, propagating successful community will necessarily entail a healing process in which we step out of the cycles of pain and violence that have run through human history and take responsibility for initiating new patterns; the fact is, this healing process is needed, and healthy, constructive social skills can be taught and learnt! Peaceful, productive relationships can be a conscious, deliberate choice rather than left to capricious, random chance.

And so, the Social dimension of the EDE introduces these vitally important issues and offers the tools and skills necessary to effectively manage them. Ecovillages, as quintessential models of sustainable community, offer unique opportunities for developing and implementing language and techniques for bringing the subtleties of human inter-action to the surface, where they can be examined, worked with, and elevated. Through this part of the curriculum, we want to share as much as possible of the body of wisdom that has been gathered, and is still growing, from all these experiences. Our goal is to facilitate the creation of new communities and the renewal of existing ones. Communities flourish as the people that live within them flourish!

The Social dimension of the EDE addresses vital aspects to human existence in the following five modules:

- ✓ **Module 1 - Building Community and Embracing Diversity** discusses the basics of building community, and teaches values and skills that help foster an atmosphere of trust.
- ✓ **Module 2 - Communication Skills and Decision Making** is a journey into learning the art of decision making, conflict management, and the effective facilitation of groups.
- ✓ **Module 3 - Leadership and Empowerment** offers lessons in distinguishing between ‘power from within’ and ‘power over,’ and developing leadership skills as an important part of taking responsibility.
- ✓ **Module 4 - Art, Ritual, and Social Transformation** describes how communities and individuals can awaken their creative powers of celebration.
- ✓ **Module 5 - Education, Personal Networks and Activism** Takes a Look at the dimensions of knowledge and awareness that connect us to past and future generations, as well as to communities all around the globe.

Social Dimension Resource: *Beyond You and Me*

Beyond You and Me: Social Tools for building Community is the Social Key of Gaia Education’s series *Four Keys to Sustainable Communities Everywhere on the Planet*. Download gratis from www.gaiaeducation.org

Module 1: Building Community & Embracing Diversity

Learning Goals

- Tapping into the immense power for social change that lies in the building of community
- Acquiring social interpersonal skills on how to start a community including: organising a core group, forging a common vision, creating community glue, and instilling an atmosphere of trust and goodwill
- Incorporating the issues of the human heart into everything we do
- Developing qualities of forgiveness, empathy, and reconciliation in our relationships with others
- Embracing diversity and being ready to witness the richness it brings to our lives

Content

“Never doubt that a small group of committed citizens can change the world; indeed it is the only thing that ever has.”

Margaret Mead

The Power of Building Community

Building community can make all the difference! There is a ‘group mind’ that is far wiser than any individual; there is a group potential far vaster than any solo effort. We live in community as part of the Web of Life anyway; so it is our conscious choice whether we acknowledge this fact and take responsibility for creating a well-knit, positively expressed form of community.

In essence, respecting Life means consciously caring for community on all levels. Although we concentrate on the building of community within the human world in this part of the curriculum, the qualities required to do this are basically the same for our relationships with all the natural worlds as well. Connective thinking and acting is needed in every realm. Developing an ever-finer capacity for sensitive observation and communication are the stepping-stones. Climbing out of a space of inner judgement, in which we feel that we already know it all, allows us to perceive freshly.

This will bring out the true individuality of everybody’s special gifts. Cooperating and sharing then become possible. Building a new global culture is the accumulated product of so much individual and collective work.

Starting: The Glue of Community

Strong communities grow from strong individuals. It is often easiest to start a new project with a small but dedicated core group. Communities find cohesive glue in a common vision that is simple, clear and authentic. Articulating and recording this common vision is one of the first goals to be accomplished when starting a community. Once the collective purpose and deepest values are delineated and embraced by all, this provides healthy soil for growing as a group. As Diane Leafe Christian says, the vision needs to express something each of the group can identify with, is inspired by and committed to. Different techniques can be used that make sure everyone contributes to the vision (e.g. Future Workshops).

Friendship, caring, mutual support: these are the qualities of human relationships that bind a community together. In an atmosphere of trust, communal processes flow with ease, laughter and lots of fun. But trust needs to be cultivated. Trust grows from deep heart-to-heart communication. If we allow ourselves to be seen by others authentically, with our weaknesses and strengths, if we speak our minds and our hearts, trust naturally arises. A sense of group well-being is created. It is a fascinating journey of discovery that we go on together. A community is much like a garden: if the field of human interaction is well tended and taken care of, it grows abundant fruits.

Incorporating the Issues of the Human Heart

In community, a social structure and even architecture is needed that mirrors the different aspects of human nature. We need to integrate our hearts, emotions, soul and spirit with our minds to find solutions that embrace Life. We need time and space for visionary work, for practical talk and decision making, for the creative expression of feelings in the larger group but also with intimate friends, for celebration and silence, and, last but not least, for working together. In many groups, the content (what is being said, the matter under discussion) is concentrated upon, while the process (the feelings that arise within the group depending on whether deeper needs are being met) is neglected. This tends to happen because people fear getting lost in unproductive emotional expression. However, feelings can undermine the efficient workings of a group if they become stagnant, or on the contrary, propel a group forward if they are expressed with beauty, dignity and power.

For this, different techniques have been developed, and it is important to find the “right fit” for the social and cultural contexts we find ourselves in. Story-telling and daily times for sharing and reflection are excellent ways to connect on a heart level. Dreams shared or acted out may illustrate the unconscious stirrings of collective issues. Non-violent Communication, Co-Counselling and the “Forum” are more methods that encourage a self-enquiring atmosphere of communication to arise. Music, games and laughter are invaluable in the process of allowing our hearts to open up and become playful once again amongst our fellow human beings.

The Qualities of Reconciliation and Forgiveness

In the building of community, growing together will be painful at times. There is a deep art to be learned in forgiving and asking for forgiveness. It is as if a continuous cleaning up process needs to be

happening, intertwined with our everyday life, so as not to end up in a state of bitterness. There is the small-scale pain of a harsh word, impatience or anger. It is linked to the big-scale pain of human history that comes from abuse, torture, rape, and murder... In many countries, communities and individuals that stand for peace are heavily threatened. Looking into the abyss of human evil can be horrifying, and we tend to shy away and deny it, keeping it hidden from view. In communities, we can create a space between us that is able to hold the expression of deep pain. Simply listening to the stories of victims and perpetrators alike allows tears to start flowing and healing to begin. The “truth and reconciliation process” that South Africa has gone through after the trauma of Apartheid shows the way to peaceful transformation.

“Forgiveness makes it possible to remember the past without being held hostage to it. Without forgiveness there is no progress, no linear history, only a return to conflict and cycles of conflict. This is a very old lesson.”

Desmond Tutu - from the introduction to “Forgiveness and Reconciliation”

Embracing Diversity

Ecovillages focus on the idea of ‘unity in diversity’, which combines the growth of strong individuals with the ability of synergizing their unique gifts, so that they may realise dreams together. In order to arrive at synergy (where the result is more than the sum of its parts), we need to bring out the best in one another. We need to be as curious about the needs, visions and talents of others as about our own. We need to practice the art of rejoicing in the beauty of others. In a community, every being has its unique place and task. Like in Nature, every part of a living organism is interconnected and communicating with all the other parts.

Throughout history, we have used our ethnic, religious, and cultural identities to separate ourselves from others. Today, as monoculture is narrowing down the diversity of our societies, we appreciate our differences as treasures of experience and wisdom to draw from. Sharing in circles, we symbolize the manifold rays of expression and viewpoints that can be held, while centring on the same goal. Everyone potentially holds a part of the greater truth.

Establishing a Community

After the core group has been established, attracting a larger group can be facilitated by the following process:

- Learning from the precedent of existing communities: Visiting, communicating with, and adopting the processes of existing communities can help to establish a clear, concrete vision and a tried-and-true methodology for success.
- Once land has been acquired, hosting an Ecovillage or Permaculture Design Course will produce multiple actual site plans, full of creative ideas. These Design Courses also help to infuse positive energy and celebration into the land. Some participants may stay over to help with the implementation.

- Courses in facilitation and conflict resolution will help to establish effective decision making structures.
- The next step seems to be the organisation of working groups and the delegating of tasks.
- Appointment of a secretariat and the commencement of regular meetings for all are next on the agenda.
- It may be important early on to set up a monthly 'dues,' to ensure that those participating are serious about a commitment.
- During this whole process, it is very important to maintain a sense of celebration, to continually re-energize the motivations of a group who may experience a long and time-consuming course of development that could take years.

Resources for this module

Directories

Communities Directory - Fellowship of Intentional Community, updated regularly
Eurotopia: Directory of Intentional Communities and Ecovillages in Europe

Videos

Visions of Utopia - Community Catalyst Project, 2002
The Future of Paradise - David Kanaley
Straight from the Heart - Findhorn Foundation, 1995
DVD's from many ecovillages see www.GEN

Sample Experiential Learning Activities

Deliberately practice community building at every opportunity using the following methods; and devise measurement tools for monitoring their usefulness and benefits.

1. Sharing and analyzing our observations of what is going on in the group.
2. Dream sharing and story-telling.
3. Sharing of personal histories.
4. Using a Talking Stick in group circle meetings.
5. The Forum (from ZEGG in Germany).
6. Co-counselling.
7. Searching for common values and a common vision.
8. Holding a "Futures Workshop," as developed by Robert Jungk (See Ecovillage Living).
9. Case Studies: Reading organisational documents of other communities.
10. Learn New Games (www.commonaction.org/gamesguide.pdf)

Module 2: Communication Skills & Decision Making

Learning Goals

- Expand the range of definitions of “decision rules” that can serve as alternatives to “unanimous consensus” decisions
- Experiencing directly the process of facilitated decisions
- Play the role of the facilitator in participatory processes and understanding how it differs from traditional, autocratic leadership
- Practicing the basics of compassionate nonviolent communication and how to deal with conflicts
- Activating cycles of planning, deciding, feedback, reflection and evaluation in community life

Content

All human settlements, including ecovillages, need to figure out how to govern themselves. Since ecovillages are explicitly trying to explore new ways of bringing people together that encourage the expression of their open creativity and natural leadership capacities (see Module 3), they require governance processes that support this intention. This Module will focus on the internal socio-political organisation of ecovillages, including some of the difficulties commonly encountered, and the skills that promote smooth processing. Participatory techniques give people a voice in the decisions that affect their lives. We need to learn the skills of effective communication in order to be effective members of any group.

Consensus Decision making Rules

Consensus decision making goes beyond the rule of majority in an attempt to reach a decision that all members of the group can support. The process rests on the fundamental belief that each person holds a piece of the truth. Therefore, each member of the group must be given space and time in which to be heard. Single individuals are not permitted to dominate the group, in consensus, as in ecosystems, each individual rules and is ruled by the larger community in a web of reciprocal relationships.

Consensus is a decision making rule, and as such it should be adapted to the group's needs and goals. Variations on consensus rules go from unanimity to super majority. The objective is to reach the best possible solution to move forward with important issues.

In order to invoke the power and magic of consensus, the following values and elements must be in place: a fundamental informed commitment to the consensus process, the willingness to share power, a common purpose and effective facilitation, including the use of agendas and ground rules. Groups

also need to create spaces for feedback, reflection and evaluation. (What went well? What could be improved? How will we improve it? How are we doing as individuals and as a group?)

In a consensus process, no votes are taken. Ideas or proposals are introduced, questions are asked, concerns are discussed, and eventually we arrive at the point of a decision. In making a decision, a participant in a consensus group has three options:

- To give consent: When everyone in the group (except those standing aside), say “yes” to a proposal, consensus is achieved.
- To stand aside: An individual stands aside when he or she cannot support a proposal, but feels it would be all right for the rest of the group to adopt it.
- To block: This prevents the decision from going forward, at least for the time being. To be done only when one truly believes that the pending proposal, if adopted, would violate the morals, ethics or safety of the whole group.

Alternatives to unanimous consensus can be: consensus-minus-one, super majority, 75% majority, or whatever feels appropriate for the situation.

Other methods of decision making

Recently, there has been some concern with using consensus as described above to make decisions in democratically organized groups of many levels. The ability of one person to block a decision can produce more dissatisfaction and conflict in the group than the democratic solutions it is meant to address, leading to deep demoralization or manipulation by individuals who have co-opted the process to control it. Two new methods that are being adopted by some groups to address this concern are Holocracy and Sociocracy, or Dynamic Governance, where decisions are made in double looping circles of empowered representation so as to separate decisions concerning narrower focused working groups from those concerning the whole organisation. These groups make their decisions based on what is called “consent,” which implies that the group can go forward with the best decision they can reach for the moment with the understanding that it can be changed at any time according to feedback measures that the group defines together. This process creates a recurring cycle of decision, action, measurement that leaves open the possibility to improve and fine-tune the results over time according to the needs of the group.

Facilitation

“To facilitate” means “to make easy.” The facilitator does whatever possible to make the group’s task easier. She/he is a “servant-leader,” serving the group by providing leadership regarding the group’s decision making process. The facilitator has the complete trust of the group, but no power. The responsibilities of a facilitator include:

- having an awareness of the needs and goals of the group as a whole
- preparing the meeting location; bringing necessary equipment (markers, etc.)
- creating an atmosphere of trust and safety

- equalizing participation
- ensuring that the agenda contract is honoured
- keeping the energy of the group focused and on task
- exposing conflict and suggesting processes for resolving it
- collecting agreements; testing for consensus
- bringing closure
- orchestrating appropriate follow-up activities

With some training most of us can learn to facilitate well. It's good to exchange roles within the group playfully. Qualities of a good facilitator include patience, emotional balance and physical stamina as well as the ability to listen well and to formulate and condense thoughts into concise, articulate speech. We need flexibility and the willingness to experiment, holding a positive attitude towards problem solving and people. Cultivating integrity, humour and personal warmth as well as our capacity to integrate criticism are important qualities in making sure that we grow in our ability to serve the group well.

Communication Skills

The skills described here are strongly related to non-violent communication (M. Rosenberg) but also inspired by Buddhist teachers like Thich Nhat Hanh and others. To communicate from the heart is essential in building community. The purpose here is to strengthen our ability to respond compassionately to others and to ourselves even, and especially in, situations of conflict. Our personal responsibility for how we act and respond to others is emphasized. Practicing deep listening fosters respect, attentiveness and empathy. Through using words mindfully, with loving kindness, we practice generosity and create trust amongst people.

In resolving conflict learning the art of expressing careful observations free of evaluation is a good starting point. Next, we need to become aware of our feelings and learn to read them as indicators that show whether our needs are being met or not. We can express our feelings without blaming or attacking others. This helps to minimize the likelihood of facing defensive reactions in others.

Through training to identify our own deeper needs and those of others we can clearly articulate what we wish for. This means making clear requests without demanding them to be met. All human beings have the same basic needs - this makes it possible to connect with each other and to find mutual understanding on a deep level. Focussing on the clarification of what is being observed, felt, and needed, rather than on diagnosing and judging, we discover the beauty of our own compassion. This is the key to creating a flow between ourselves and others based on a mutual giving from the heart.

Once we become able to receive critical and hostile messages without taking them personally, giving in, or losing self-esteem we know we're on the right track.

Dealing with Conflicts

Conflicts are inevitable. They belong to our life like storms to the variety of weather. In fact, in groups that are truly diverse, differences are both a sign of health and an invitation to creativity. The most important lesson is to change our attitude from avoiding conflicts to looking at them with interest and openness. This means stepping out of a “winner-loser” and into a “win-win” perspective. Win-Win solutions become possible after all involved parties of a conflict have been heard and understood.

Often, when we regard a situation as “conflictual”, this means that we have lost our sense of connectedness, of belonging, or of being understood. Before agreeing or disagreeing with anyone's opinions, try to tune in to what the person is feeling and needing. Instead of saying “No,” say “what need of yours prevents you from saying ‘Yes’?” If you are feeling upset or angry, become aware of the deeper need that is not being met and of what you could do to fulfil it, instead of thinking about what's wrong with others or yourself.

Obstacles to harmonious interaction include: emotional allergies, rank and privilege, cultural and structural roots of conflict, gossip, personal attacks and cynicism.

Resources for this module

Internet

Center for Nonviolent Communication - www.cnvc.org - Books, tapes, courses, etc.

Community at Work - www.communityatwork.com - Workshops on facilitation skills, organisational development, and more

Institute for Cultural Affairs - www.icaworld.org - Facilitation and group process trainings around the world

International Association of Facilitators - www.iaf-world.org - Sponsors an annual conference, group facilitation listserv, publications

International Association for Public Participation - www.iap2.org - Trainings and publications related to effective citizen involvement

International Institute for Facilitation and Consensus - www.iifac.org - Beatrice Briggs, director. Website, electronic monthly publication, courses

Process Work Institute - www.processwork.org - Trainings based on the work of Arnold Mindell

The Holocracy web site can be found at www.holocracy.org

The Sociocracy web site is www.sociocracy.net

Sample Experiential Learning Activities

Using the plan, act, measure, cycle, facilitation skills may be taught, modelled and practiced throughout the training. It is a good idea for the trainer to assign roles and tasks in the facilitation process throughout the course and to give working groups some fictitious scenarios to practice with. These role and tasks may include, as appropriate: agenda planning, meeting site preparation, creating process ground rules, decision-making rules, meeting evaluation, creating a co-operative environment, dealing with multiple facilitator roles, tools for building self-awareness, creating a “thinking” environment, group dynamics, and building facilitator skills. Every course will use a facilitator that will help guide the group in daily “check-ins” and “sharing” with and among participants. At some point the facilitator will let others take over this critical role and plan, act and measure their performance. Module instructors will also meet daily to monitor and integrate facilitation opportunities into the curriculum.

Module 3: Leadership & Empowerment

Learning Goals

- Understanding the differences between repressive power and creative power
- Developing the concept of self-empowerment and the empowerment of others
- Practice how a group of powerful individuals can work together in organic patterns with shared responsibility
- Uncover awareness and change around the issues of rank, power, and privilege
- Developing the ability to take leadership roles in groups by integrating new leadership skills

Content

The status quo of power relationships in our global system today has not led to peace or justice or wealth for most inhabitants of this planet. Human power has come to be associated with cruelty and alienation. However, power in itself is neither good nor bad. We humans are conscious beings, gifted with free will and free choice, and as such, to do away with our power would be to deny our responsibility. Power is here defined as our ability to create, sustain, change and influence people, groups, systems and life. It is our ability to consciously contribute to the process of evolution. To be able to take a positive stance towards self-empowerment, we need to distinguish between two types of power: repressive power, as domination over life; and creative power, as an integral part of the creative life force itself.

Repressive Power

Repressive Power suppresses the life force in individuals, society and nature. Repressive power has its roots in a worldview based on fear and distrust. There is a set of assumptions prevalent in global culture which makes opting for repressive power seem sensible:

- There is not enough for everybody on this planet
- The world is made up of separate entities
- In the Darwinian struggle for survival, only the strongest will win; therefore, human beings will always act for their own benefit
- Being sensible means doing things we do not wish to do
- Defences are needed for us to survive in this hostile environment; others will take advantage of any weakness we show

However, protecting ourselves against unwanted feedback from our environment on a large scale is making us miss out on vital information. We need to open up in order to become healthy parts of a healthy environment.

Creative Power

Creative Power implies a gift of our individual wisdom and beauty to enhance the process of life. Creative power is not a property we own, but rather processes that we open up to. Assumptions that benefit the growth of creative power are:

- Our planet is, in essence, a place of abundance and plenty if wisely managed
- Life is continuously offering us best opportunities for growth
- Viable solutions are those that satisfy the needs of all those involved, leading to win-win situations; Win-win solutions are always possible
- Viable solutions are necessarily based upon respect for the needs of all beings that live on our planet
- Humans have the same basic needs all around the world (food, shelter, meaningful work, love and respect)

Regaining our Power

The global system generates a feeling of hopelessness and despair in many. Many of us have “given up”, sometimes quite subtly so, on ourselves and our survival as a race on this planet. Mass Media are feeding us with misinformation and a cheap imitation of real life, and we are letting this happen. Yet, if we look at the state of affairs, it seems that the time is more than ripe to wake up and reclaim our personal power and our hope.

Receptivity combined with alertness to perceive reality will give us invaluable information on what we need to do. Creative power awakens when we then allow our natural talents to express through us as best we can. Community can play a key role in this process. Feed-back of those around us is vital. Where do others perceive our strengths and weaknesses to lie? Also, Ecovillages offer us ample opportunities for original self-expression in new and unknown areas of life. We feel strongly motivated when we trust that the gift we bring is being seen, appreciated and is generating well-being for all that we love.

Grassroots Power

There is more than enough responsibility for everyone to take on his or her share. Taking on leadership in any area primarily means taking on much needed work. Once we experience the challenge of leading a group ourselves, we become thankful for the leadership of others. Wild Geese present us with a powerful expression for this idea: always one goose flies up front, to wind-shelter all those behind and show the direction. Then, as soon as the leading goose tires, another takes its place. The lesson: as a group we are stronger. In community, all are invited to take on leadership roles in their natural fields of expertise.

In building community, the border between repressive and creative power remains a fine line, and one main cause for dispute. Leadership patterns need to change in tune with the needs of the group and situation as well as the evolving natural authority of its members. It is very important to create trans-

parency on rank and privilege issues. People with rank have to be especially able to integrate and work with criticism.

In many societies, authority does not grow naturally and with flexibility out of talent and individual wisdom; instead it is determined by factors of rank and privilege like language, sex, cultural upbringing, education, and the colour of our skin. We need to acknowledge and overcome these boundaries to reap the fullness of human potential! The real key to 'grassroots power' is the highest possible expression of compassion and friendship. It is to speak up against oppression, even when the victims cannot speak up for themselves.

Creative Leadership Qualities

- Serving our personal destiny as well as the destiny of the community
- Sharing our gifts of beauty and excellence
- Being clear about the intentions that we have
- Being in service, to offer ourselves without expecting return
- Self-knowledge, being transparent about our weaknesses and strengths
- Seeing the other as a teacher
- Being able to quickly see the larger picture
- Trying to find the truth in all points of view within the present framework
- Encouraging others to become leaders
- Knowing that change is continuous, let things be and study the moment
- Following the events of the natural flow of life
- Bringing awareness to all situations by accepting rather than judging

Sample Experiential Learning

Divide the group into smaller groups of three or four members each to discuss one of the following topics. After the discussion, debrief with the whole group. Device measurement tools to assess the effect of these activities on individuals and the group.

1. Sharing and analyzing our observations of what is going on in the group to chart an existing ranking system for the group. Ask: How would "society" rank this group? How does the group rank itself?
2. Arrange the group into a healthy organism of shared leadership. Ask: Who would take on leadership in which context? Adapt to the task at hand.
3. Using theatre techniques, take time to mirror the archetypal qualities that a person impersonates. First discuss what archetypes are present.
4. Exchanging 'Power-Stories' relating incidences of when we felt powerful and accomplished extraordinary feats. What, how, with whom, when, what was our role?
5. Create art pieces to express personal power. Ask: What does it feel like?
6. Practicing leadership roles within the group, what does leadership look like? And what does it mean in this group?

Module 4: Art, Ritual, & Social Transformation

Learning Goals

- Utilizing art as a wonderful medium for personal and group growth, healing, and transformation that can be used by people at all skill levels
- Reclaiming unbounded creativity as our true nature, as a flow from a universal source, as natural as the blossoming of a flower
- Creating beautiful and stimulating environments in which inspiration, intuition and creativity are enhanced and flow unencumbered, as a celebration of Life
- Designing and organising community celebrations as an expression of Group Art, learning from experience that living in community allows members to develop a culture of celebration
- Practicing the highest form of creativity, both individually and in community, for our lives to become works of Art

Content

Art is not only for artists: it's a way of adding beauty, grace, and festivity to everything we do. Practicing Art is a means for people to explore and tap into a universal source of creativity - the source of Life itself. As people become more comfortable expressing their dreams, hopes, wishes, and visions through artistic expression, then life becomes as a colourful celebration, issuing forth from an ever-renewing creative core. This active artful connection to the creative source of Life is a powerful way to effect personal growth, healing, and transformation.

In a community setting, creative opportunities exist for becoming immersed in a vision and purpose greater than the individual self, allowing one to dissolve personal, self-inflicted limitations. If the artist works in isolation, a wider movement will not result; the artist must know how to participate in and enjoy other people's art, becoming perceptive to elements arising from the collective unconscious - messages, information, or symbols for the group as a whole.

The notion of 'collective creativity' stands contrary to the practice of exalting singular creative talents, and thrives on the accumulated benefits of the synergy of all those who can contribute to the work. Given the right conditions, such synergy can reverberate throughout a community, uplifting all in a rising draft of collective creative outpourings. This is similar to the awareness that swelled in the rustic workshops of the first Renaissance, which were animated by the vigorous exchanges of many 'maestros.'

This uplifting phenomenon can also be intentionally seeded into the fertile creative ground of today's ecovillages. When Art is no longer just a part-time hobby but grows instead into a full-time attitude towards life, then the growth of crafts, cottage industries, guilds, and related studios, workshops, and classes of many different kinds of artistic expression can provide a source of material sustenance as well as spiritual sustenance. Ecovillage-based art will strive to embody evolved concepts of beauty,

harmony, and grace consistent with deep ecological and spiritual values, and expressions of cultural diversity that are unique celebrations of a particular place.

Celebrations are important social glue in any community. They are group-identity activities that we need to relearn, reshape, and revive in accord with the new worldview that is emerging. They are a group expression of art and creativity. Celebrating seasonal, cosmic and global events, and days or rites of passage are collective art forms facilitated by living in conscious community. Celebrating the joy being alive with music and dance doesn't need a special occasion; every ecovillage needs a stage! For years now, the ecovillages have been developing features of a common global culture that have much to offer as they weave ancient timeless ideas into modern new contexts.

Go to any ecovillage in the world and there you will see an array of artistic creative expression: singing, chanting, dancing, theatre and musical performance, and all forms of ritual, ceremony, and celebration. Art as therapy, art as personal transformation, art as collective symbolism, art in the environment, art as architecture, art as employment, and art as a means for giving expression to the creative life-force that flows within: there, the ecovillages are bringing forth a culture of celebrating life through creativity and art.

Each of the various aspects of creative artistry and celebration will be selectively integrated into every Ecovillage Design Course. Art will focus on individual as well as group expression. We want to emphasize that all people are inherently creative; for some, creating a dynamic and colourful life is their preferred art form. With its focus on innovative, progressive, self-reliant life-styles and life-ways, sustainability and creativity go hand-in-hand.

Honouring the Different Phases of Life

Life is constant change: a perennial flow of cycles, seasons, and stages of development. In traditional cultures, rites of passage were celebrated at the major transitions - birth, maturation, death - to empower individuals and to pass on accumulated group wisdom. There seems to be a close correlation between cultures that allow these deep junctures to be honoured and cultures of peace and sustainability. Many say that the loss of these rites in modern times is one major factor for the chaos our world finds itself in: there are not many adults and even less elders around to pass on this knowledge - thus, there is no longer any continuity. The sterile monoculture of consumerism wants us to long for and invest in an 'eternal summer,' a perpetual youth. In community, learning from timeless traditions and redesigning our own, we reinvent rites of celebration and mourning and commemorate the passages of life. As we witness and support each other through the alternating pain and joy of our lives, we find in ourselves a greater capacity for loving and giving than we ever knew existed, and this is very creative.

Resources for this module

Music

Taize - a booklet from Findhorn with wonderful circle songs

Videos

Sacred Dances - Findhorn Foundation

Experiential Learning Activities for Module Four

Either the facilitator leads one or more of the following activities or asks someone in the group with experience in any of these activities to do so. Devise measuring tools for evaluating the learning and effect of the exercises.

1. **Dances:** Circle dancing, free-form dancing, African dancing, and other modalities to loosen up the body and gain whole body awareness.
2. **Organize group celebrations:** Creating rituals around the cycles of the moon, the sun, the site, or whatever is brought to the course, to learn the process of designing and creating rituals and ceremonies as tools for celebration, healing and group bonding.
3. **Singing:** Prepare lyrics handouts for Taize songs, Native American songs, African-American songs, contemporary songs, Canons, songs of the heart, Earth songs, Rainbow songs, harmonizing rounds, and other group songs; a capella or accompanied by an instrument.
4. **Selected games and plays** that may enhance and complement the learning and allow the whole person to be present.
5. Lead an **Improvisational theatre** session and/or performance.
6. Provide time and materials for self-organized free-form drawing, painting, or sculpture.
7. Play the Game of Life (See Damanhur: The Real Dream for explanation)

Module 5: Education, Personal Networks and Activism

Learning Goals

- Gaining respect for the community of those that have lived before, those that live now and those that will live yet
- Building friendly relationships with our neighbours and visitors: unpacking the concept of “us,” and “them”
- Designing for human ecology, by balancing public and private spaces
- Uncovering ways of catalysing change towards sustainability in our bioregion
- Broadening our scope around networking, exchange, education, support and solidarity on a global level

Content

The strands of history run through the Web of Life. Wherever we start building community, delving into the history of that place can help us to understand more of the present. Landscapes have been repeatedly altered and transformed by human hands. There might be sublime wisdom and ancient local experience embodied in, say, the location of a road or the shape of a roof. Deeper meanings do not necessarily disclose themselves on first sight; but after some careful observation, profound patterns may begin to emerge. Becoming absorbed in the lines and curves of a cultivated landscape can be likened to the reading of a book: the information is there, if we can only learn the local dialect.

When we enter a certain territory, we enter a certain culture, a special way of seeing and being in the world, a distinct manner of expressing ourselves that might be very different from where we come from. All that people have experienced in this particular place: the wars, the hardships, the ethnic diffusions, as well as the times of simple peace and happiness, give rise to the present mood and mentality. It takes time to become accustomed and acculturated to a place - watching, listening, and immersing ourselves into the flow of local life.

We also live in times when cultures are changing rapidly and drastically as Neoliberal globalization continues to take its toll, melting the richness of diversity down to a dull, bland, uniform consumer monoculture. In many countries, due to the massive displacement of native customs and traditions, the overall life patterns befitting the place need to be rediscovered. In other countries, indigenous cultures desperately need support and assistance in order to survive.

Large bodies of knowledge are lost when cultures are wiped out, knowledge precisely adapted to the bio-geographical conditions of the region at hand. We can help revive and preserve this precious knowledge by listening to the stories of elders, delving into local myth and folklore, researching archaeological sources, and honouring local language and celebrations.

Living in cross-generational communities brings an age-old quality back to life. The young ones bring meaning into the life of the old ones and vice versa. Reintegrating the wisdom and experience that the elders carry, we benefit immensely; watching the children grow, we remember who we are doing all this work for. Our community is always one that embraces those that have lived, those that are living, and those who have yet to come - community is a space-time continuum.

Building Friendly Relationships with Neighbours and Others

Running vertically through time, the Web of Life spreads horizontally into the here and now. For our ecovillages to become sustainable, they need to be connected to both these dimensions. Nature works with permeable cell membranes and open systems; we need to initiate and maintain open communication and exchange with the larger community of which we are a part.

Sometimes it seems easier to communicate with a worldwide network of like-minded friends than with our very own neighbours. Classically, community builders wish to create change, to experiment with new models that address problems in the society at large. Many of these idealists have been in some way uprooted or displaced, which is partly why they have committed themselves to effecting transformation. The traditional surrounding population in this classic tableau are people who may have been rooted to their place over generations, are thus fixed in their ways, but who are nonetheless also living in the unsustainable present. It remains a challenge to balance future-oriented, progressive idealism with more conventional, conservative perspectives. The community-builders may be bringing inspiration for positive change, but they can only carry through with their vision if they release their insistence on knowing what's right. Humility, reciprocity, and humour are needed in the process of creating language that can be understood and welcomed. We find support for our visions as improvements become tangible and benefit all. This might be a slow process, but through it we can bring hope to a region while establishing a secure foundation for ourselves.

Hospitality

Generous hospitality is a central quality in all cultures of peace. As intentional communities, if we want to build friendly neighbourly relationships and become an inspiration to the world, we need to make ourselves transparent and easy to visit; we need to overcome exclusion and isolation tendencies. But how to receive guests with open care when they come streaming in week after week, eager to witness community lifestyles? Part of the answer lies in site design and architectural solutions. Thoughtful planning for the influx of visitors, respecting the privacy and well-being of residents, is an important criterion in the design process.

Collaboration and Co-Housing

Here is a fairly moderate way of introducing social idealism into an existing community. Co-Housing facilitates compact housing form, efficient land use, and reduces household consumption. It encourages human interaction and lends support to disadvantaged members of society. Co-Housing is a new type of cooperative housing, which integrates autonomous private dwellings with shared utilities and recreational facilities such as kitchens, dining halls, workshops, offices, and children's play facilities.

Co-Housing residents may comprise an intentional community. They choose to live together and to share property and resources. They develop a rich social life that includes regular shared meals. They aspire to meaningful social relations and a strong 'sense of community.' For many purists, Co-Housing is only a step in the right direction; but as a means for enabling ecovillage principles and practices to be grasped and accepted by more 'mainstream' proponents, this model holds a valuable place in the overall evolution to sustainable community. Full-featured ecovillages will incorporate Co-Housing clusters into their residential infra-structure.

Bioregionalism

Learning how to develop solutions at the level of the whole biosphere may be too far a reach for most people, but at least we can find out what needs to be done in the particular places where we live. Work to become compatible with local life systems - social and ecological - in a home place. Each person lives in a specific bioregion, a life-place that is an essential component in the planetary Web of Life. Even small outlays of effort to improve conditions locally can genuinely benefit some aspect of the mutual whole. These efforts result in tangible outcomes that are there to live with and watch while their impact on other social and natural features grows. These are both comprehensible and realistic goals.

We need to gain knowledge about our local life places with an emphasis on social and cultural implications. The following focal points can help identify the basic starting points for maintaining and restoring life where we live:

- Give priority to active projects - learning by doing essential work to achieve natural health in our life-places
- Restore and maintain natural features to whatever extent is possible - the health of the social fabric will be improved with this restoration
- Develop sustainable means to satisfy basic human needs - food, water, energy, shelter, materials, and information are essential
- Support living in place in the widest possible range of ways from economics and culture to politics and philosophy - this involves both proactive undertakings that create positive alternatives as well as protests against ecological devastation and disruption, and social injustice
- Heighten awareness of issues pertinent to the bioregion through public media, involvement in local politics, and education, both local and global

As the years pass, the intermingling will increase as local people become involved in the community and community members disperse throughout the region. As a result of the ecovillage's presence, innovative educational methods may be introduced into local schools; networks of local economy may be strengthened opening up new markets; ecological awareness and restoration programs may be instituted; sustainable technology solutions may be spread around; with the ecovillage as a nexus of global communication, the infusion of ideas and customs - as well as people - from around the world will interact with local culture. Many ecovillages receive a large amount of attention from local, national, and global press. The establishment of a healthy, functioning ecovillage will reverberate its sustainable influence throughout a bioregion. Involvement in local politics is once again emphasized as an important factor of sustainability.

International Networking

There is a definitely positive side to the globalization process. When the first cosmonauts visited the moon they reported back about the dramatic experience of seeing our beautiful blue planet as such a vulnerable home in the vast universe. As inhabitants of this Earth we breathe the same air, we watch the same starry skies and as humans we share the same basic needs. Every single one of us can choose to become a part of the solution instead of part of the problem; and we can support one another in opting for simple beauty and walking our talk. In working for a sustainable future, we can profit immensely from international exchange and support. Through the work of networks like GEN and many others, we can draw a map of our Earth before our minds eye that is slowly but surely filling up with nodes and points of light and hope, with people that are working together for a liveable and peaceful future. The work and accomplishments of many international networks and organisations working for social justice, solidarity and sustainability attest to that. And yet we need to learn to be respectful of the unique cultural and traditional practices and beliefs in each area of the planet.

Resources for this module

Internet

www.ecovillage.org

www.gen-europe.org

Sample Experiential Learning Activities

Allow participants to self-organize in order to carry out one or more of the following activities. Devise measuring tools for assessing the impact and outcomes from these:

- In sub-groups, create a 'local market,' trading products with each other from their places of origin. This can be done with index cards instead of products.
- Create a 'cultural festival' to demonstrate what was learned in this dimension during a sharing event with the local community, village or town.
- Go out to interview old-timers in the area, sharing local stories and learning the local lore.
- Visit ecovillages, Co-Housing projects or other intentional communities in the region, practicing local outreach.
- Compiling a resource list of international organisations working in a particular field of interest, thus gain a head start in forming new global networks.
- Within the group, ask participants to pair up and share small teaching moments: a language, dance, hand gestures...
- Organize observational walks in a nearby area to "read" the social landscape.
- Guide a meditation or visualisation on activism to create social change; focus on a common social problem, like poverty, homelessness, hunger...

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THE ECONOMIC DIMENSION



Gaiaeducation
design for sustainability

Learning Outcomes

Participants will learn to...

- ✓ recognize dominant patterns and activate leverage points for change
- ✓ design various elements of a resilient local economy
- ✓ design and utilize community currency systems suited to local contexts
- ✓ bring personal economic activities into alignment with ecological values
- ✓ identify socially responsible local legal structures and financial strategies

"We know that we know how to end this suffering, and we have the resources to do it. From sociology and anthropology to economics, from education and ecology to systems analysis... the evidence is in. We know what works."

Frances Moore Lappé

Overview

Today, economics rules supreme as the 'master discipline.' with all other subjects and values subordinated to it. Critically, the environment is seen as a sub-system of economy rather than vice versa. Consequently, the environment is seen primarily as a bank of resources for the undertaking of human activities. Our task as we move towards sustainability is to reverse this equation, with economy properly understood as a sub-system of ecology. Within this new paradigm, the scale and nature of economic activities will be limited by the carrying capacity of the Earth's ecosystem.

To begin to shift towards the new paradigm, however, we need to develop a clear understanding of how we managed to get into this mess in the first place. Only thus can we move beyond the fatalism of our leaders who insist that there is no alternative to neo-liberal globalisation and develop a mature understanding of the policy choices that have created this very unnatural and unsustainable system. In so doing, we can begin to see what alternatives we need - and are able - to take to create a more just and sustainable society.

- ✓ **Module 1 - Shifting the Global Economy to Sustainability** begins the Economic Dimension with an exploration of the forces and interests that shape the current global economy, and of the types of policies that are required to set it on a more sustainable course: this forms the basis of the first module - an analysis of global economics. While noting that structural changes are required at the global level, we also note that there is a need for the emergence of vibrant, locally based alternative economies - so that the shoots of the new burst forth, even as the old system crumbles in on itself. This is where ecovillages have a key role to play in researching, demonstrating and teaching new, alternative approaches to economic life.
- ✓ **Module 2 - Right Livelihood** looks at how current economic structures and incentives make it generally less profitable to produce on a small scale for local needs using local raw materials - exactly the kind of production systems required if we are to live within the Earth's carrying capacity. Until those structures and incentives begin to change, our economic behaviour needs to be strongly informed by values-based choices: how much is enough? What is the relationship between levels of material consumption and human well-being? Is our wealth dependent on the poverty of others? Is our wealth dependent on the degradation of the other-than-human world? In what cases might one choose to consume less or to pay more than strictly necessary? Such values-based questions form the subject of our second module.
- ✓ **Module 3 - Local Economies** looks in particular at social entrepreneurship in a local context, which has greatly grown in significance in recent years. Social enterprises, a growing feature of many ecovillages, are engaged in providing employment to the marginalised and disadvantaged, restoring degraded ecosystems and providing for community needs, including child-care, care for the elderly and the supply of healthy, organic food while also making a reasonable profit. This module explores both the theory and practice of social entrepreneurship and helping course participants understand how, in practical ways, they may become more involved in creating or supporting such enterprises in their own communities. We will also look at the range of goods and services that appear to be appropriate for ecovillage enterprises.
- ✓ **Module 4 - Community Banks and Currencies** explores another principal dimension of nurturing the local economy: the role of money and wealth. Community banks have enabled communities to channel the savings of members and supporters into local enterprises and initiatives, while local currency systems have helped to retain money within the local economy rather than haemorrhaging out into the wider speculative economy.
- ✓ **Module 5 - Legal and Financial Issues** looks at the legal and financial aspects of creating ecovillages and social enterprises. This includes how we can create a climate of abundance and distinguish between different types of finance. Emphasis is laid on the importance of aligning the ownership and legal structures chosen for ecovillages and social enterprises with the types of finance to be mobilised to create and grow them.

Economic Resource: *Gaian Economics*

Gaian Economics: Living well within Planetary Limits is the Economic Key of Gaia Education's series *Four Keys to Sustainable Communities Everywhere on the Planet*. Download gratis from www.gaiaeducation.org

Module 1: Shifting the Global Economy towards Sustainability

Learning Goals

Developing an understanding of:

- the way in which the global economy currently works.
- the consequences of the global economy for people, society, and ecosystems.
- why the global economy has developed in the way that it has?
- how the global economy could be more just, resilient and sustainable.
- the kinds of changes we can make to shift towards economic sustainability.

Content

The last 250 years has seen an unprecedented increase in the levels of economic activity, consumption, resource depletion, growth in human population and CO2 emissions. Over the last 50 years, these trends have increased exponentially: we have moved from a situation where for the majority of the world's population (even in the industrialised countries of the North), most production and consumption was locally-based to one in which goods are increasingly flown and shipped thousands of miles across the globe. Remarkably, this is true even of produce such as food, which is perishable and has distinctive cultural and geographical characteristics: many countries export and import near identical quantities of the same foods, including meat and dairy products.

The result has been a huge increase over the last century in the 'ecological footprint' that humans leave on the Earth. That is, as consumption has increased and as we have shifted to more resource - and energy-intensive means of production and distribution of goods, so the ecological impact of our economic activities has increased dramatically. It has been estimated that since the mid-70s, we as a species have been eating into the Earth's natural capital rather than, as previously, consuming the annual self-regenerating interest. Moreover, if everyone on Earth were to consume at the level of the typical North American (the logical - if generally unspoken - aim of the dominant 'development' paradigm) we would need the resources of more than three planet Earths to make this possible.

In this module we ask: why has this happened? What economic, political, cultural and spiritual factors underlie the abuse of our natural capital? What specific decisions have created an economic system that works against the interests of the great majority as well as the environment? What can we do about it?

The principal topics to be covered here include the following:

What is globalisation?

A discussion of the various different dimensions of globalisation. Often, these discussions will help the students to distinguish between 'cultural' globalisation (which can often be considered to be a broadly positive development if local cultures are respected) and 'economic' globalisation (which has been accompanied by more troubling social, economic and ecological consequences).

Why has the shift towards globalisation happened?

How and why has economic globalisation emerged? Participants are encouraged to see the process not as being in some sense inevitable, but rather as the result of specific (and reversible) policy choices. Key subjects include:

- coming to terms with the limits to growth on a finite planet.
- the coming period of energy descent after oil production peaks globally.
- the consequences of the Newtonian reductionist paradigm.
- de-regulation and liberalisation of product, service and financial markets.
- substantial subsidies offered to large-scale concerns.
- a taxation system that encourages capital-intensity at the expense of labour-intensity.
- externalisation of many social and environmental costs.
- the workings of the principal international economic organisations - World Trade Organisation, World Bank and International Monetary Fund.

Consequences

When exploring the consequences of economic globalisation, participants are encouraged to think systematically - with use of mind-maps to record new ideas and insights - through all the various impacts, in terms, for example, of:

- concentrations of political and economic power.
- global equity and workers' rights.
- health of the habitats for other species.
- Biodiversity.
- measures of well-being to replace economic growth (GDP).
- resource depletion.
- health of soils and of the atmosphere.
- the creation and management of wastes.
- community coherence and integrity.
- quality of life, mental health, etc..

Having each of the groups speak to the others about conditions and impacts in their own cultural/geographic contexts is an important mutual learning.

What can we do?

What would a more just, equitable, resilient and sustainable global economy look like? What kinds of policy changes would be required to bring this about? Among the most interesting of these to have been suggested in recent years are the following:

- Paradigm shift to a holistic worldview of connectedness
- Restructure taxation away from people (taxes on income, employment, profits, value added and capital) towards resource use and pollution (energy taxes, water charges, traffic congestion charges, taxes on the creation of waste, CO2 emissions, etc.).
- End subsidies of environmentally wasteful and unsustainable activities (subsidies on large-scale energy generation, large-scale chemical agriculture, fossil fuel use, research and development for the benefit of large corporations, tax incentives for large corporations, etc.).
- Introduce subsidies to promote environmentally favourable and sustainable activities (small-scale and organic agriculture, small-scale energy generation, energy conservation, public and low energy-using transport, etc.).
- Introduce a tax on land.
- Create a citizen's income.
- Form networks of sustainable communities.
- Write off "odious" international debt.
- Promote fair trade.
- Reform, abolish or replace key international economic bodies - the World Bank, the International Monetary Fund and the World Trade Organisation.
- Introduce a global tax (payable as rent payments, to all countries) on
 - activities that pollute
 - activities that use the "global commons", i.e. flight lanes, sea lanes,
 - ocean fishing areas, sea-bed mining
 - military expenditures and the arms trade
 - world trade
 - international currency transactions

Resources for this module

Videos

Ancient Futures: Learning From Ladakh - International Society for Ecology and Culture
www.localfutures.org

Peak Oil: Imposed by Nature - Tropos Dokumentar, troposdoc@hotmail.com

The End of Suburbia: Oil Depletion and the End of the American Dream – The Electric Wallpaper Co.,
www.endofsuburbia.com

The Battle for Seattle - Independent Media, www.seattle.indymedia.org

Internet

World Development Movement - www.wdm.org.uk

Third World Network - www.twinside.org.sg

Global Ecovillage Network - www.ecovillage.org

George, Susan (2007) Of capitalism, crisis, conversion & collapse: The Keynesian alternative.
http://www.tni.org/detail_page.phtml?act_id=17306

Sample Experiential Learning Activities

The following activities can be done with the entire group, or individually. Devise together a way to measure the impact, and results of each exercise.

Ecological Footprint Analysis (EFA)

Have members of the group from different parts of the world hold hands to create circles outside (on the grass, perhaps) representing the size of the ecological footprint of their country (North Americans would have a very large circle; Europeans a comfortably large circle; people from middle-income countries would be a little cramped; those from the poorest countries would be tightly cramped.) A slow drum-beat can be played through this exercise. The groups should spend time to watch each other. This exercise is NOT aimed at generating guilt among those in the large circles. This is a meditative observation exercise - just watch outside and inside in a non-judgmental manner. Then, return to large and/or small groups and discuss what participants felt. (There will be time later to discuss potential solutions: the facilitator is to ensure that discussions and reactions at this stage remain at the level of feelings.)

Following on immediately from the previous exercise (i.e. before group discussions), prepare beforehand a large circle to represent the Earth. Have the people from the poorest countries enter this circle and have time to enjoy walking around in the spaciousness. Eventually, the other members of the group will join them until there is not so much space within the circle. The drum-beat continues uninterrupted. While they are walking, read the following passage (a number of times) from Oren Lyons, Faithkeeper of the Onondaga Nation (1993 Earth Day pledge):

“In our way of life.....with every decision we make, we always keep in mind the Seventh Generation of children to come.....When we walk upon Mother Earth, we always plant our feet carefully because we know that the faces of future generations are looking up at us from beneath the ground. We never forget them.”

Product biographies

The teacher/facilitator should provide some case study material and examples that illustrate the long distances, and often multiple sources, that most of the foods and products we consume have come from. (Newspapers, magazines and educational materials have many such examples). The students are then invited to develop their curiosity about the biographies of the items that surround them. The researching and presentation of a product life cycle can be set as a homework exercise.

Transition visualization

In self-facilitated small groups, encourage the students to envisage their own home places as they currently are. Have them note the various ways in which the lives people lead are dependent on cheap and easy access to fossil fuels. Encourage them to imagine how things might be different if we were to live within our ecological footprint. Have them brainstorm how the food would be produced, where and how people would travel, what the buildings and settlements would look like, how power would be generated, how entertainment would be provided, etc. Then, have them reflect on what changes might need to come into force to set the transition in motion.

Module 2: Right Livelihood

Learning Goals

- Aligning our values with our economic and lifestyle choices
- Developing a greater connection with our life purpose
- Promoting livelihood choices that contribute to, rather than detract from, planetary health and well-being

Content

“Today’s luxuries become tomorrow’s necessities.” This ancient maxim has perhaps never been truer than it is today. As recently as 50 years ago, the proportion of a family’s income in the industrialised world spent on food was around 22 per cent; today it is half that amount. Yet, the idea of spending more on good-quality, locally-grown food - in order to promote human and ecological health - is hard to imagine for most, as many of their other expenditures now seem essential - foreign holidays, entertainment, televisions, out of season fruit and vegetables and all manner of material ‘things.’

Yet, there is much research to suggest that beyond a certain level of material prosperity (a level that we have long passed in the industrialised world), greater material wealth, far from adding to the sum of human happiness, may well erode it. This seems to be a difficult lesson for us to learn; levels of consumption in the West continue to grow from year to year.

Accordingly, this module will introduce the concept of ‘sustainable abundance.’ This implies that there is much wealth that is not material in nature (but that tends to be under-valued in a market economy). This includes social capital (built up through service to and deep connection with one’s community) and ecological capital (living as part of a healthy and self-sustaining eco-system). This links in with the recent emergence of ‘alternative’ indicators of well-being (‘alternative’ to the conventional use of purely monetary-based systems such as gross domestic product, or GDP).

Values will have a key place in the transition to a more just, sustainable and fulfilling world. This is because: i) structural changes have never been enough to effect transformation - inner, values-based transformation is always also required; and ii) no amount of technological innovation can possibly bring us back into sustainable balance with the carrying capacity of the Earth - in the industrialised world, we will need to find a way towards a redefinition of quality of life de-linked from levels of material consumption.

At the heart of this module is exposure to communities, initiatives and individuals within the ecovillage context that have succeeded in effecting such a redefinition in their own lives:

- People who have chosen to downsize and simplify their lives in order to gain more creative or family time.

- The community farmer who works longer hours for less remuneration than would be considered acceptable for many.
- The helpers and caregivers working on a voluntary basis for the pure pleasure of serving their community.
- Community artists creating acts of reckless and enlivening beauty for their own sake.
- The consumer who pays more for locally-produced or fairly-traded goods because of the social and environmental benefits to his/her community and/or those of communities on the other side of the world.
- Networks of villages in the developing countries, such as Sarvodaya in Sri Lanka.

This will inevitably be a highly experiential module that will be very difficult to teach outside of the ecovillage context. It is more addressed to the heart and the imagination than to the intellect. The aim is to seek to effect a transformation in the heart and mind of the participants based on a thorough-going calling into question of the assumed link between material consumption and happiness.

Participants will be encouraged to engage their heads, hearts, hands and souls in growing and preparing food, creating their own entertainment and art, caring for others, developing a greater understanding of the many gifts they have to offer and defining their life's purpose in ways that fulfil their whole being.

On a more conceptual level, participants will be introduced to some of the recent attempts to develop alternative indicators for measuring economic and social progress that try to move beyond conventional measures of money flows and growth to broader-based indicators based on access to services, quality of life, happiness and ecological well-being.

Truly, growing food for the community and caring for the young and elderly are the most honourable and vitally necessary of occupations; yet, in the distorted rationale of capitalist economics, these occupations are marginalised. Local, small-scale agriculture, in particular, has always been the basis of community economic life; and we expect that in the reduced carbon future, this manner of 'right livelihood' will once again assume its pre-eminence.

Resources for this module

Videos

Ancient Futures: Learning From Ladakh - International Society for Ecology and Culture
www.localfutures.org

Internet

E.F. Schumacher Society - www.schumachersociety.org

International Society for Ecology and Culture - www.isec.org

Sample Experiential Learning Activities

Divide the group into smaller subgroups to have them do as many of the following activities as possible. Report back to the whole group. Remember to devise measuring tools to assess the results and effect of these activities.

What is Wealth?

Invite the students to compile a list of the 10 things (including material 'things' and less tangible attributes, such as 'love') that most contribute to their quality of life and feelings of well-being. When they have finished, they can read out their lists - followed by a group discussion on how many and which of the things listed constitute material as opposed to other forms of wealth.

The Indicators Game

In recent years, communities around the world seeking alternatives to GDP have defined more bio-centric and playful indicators for measuring the well-being of their communities and eco-systems. These have included the number of breeding salmon or hawks, the incidence of asthma among their children, how many trips to school are on foot or by bicycle...Ask the students to consider, and then discuss, indicators that they would like to see introduced in their own communities.

Right Livelihood Inventory

Invite the participants to conduct an inventory of skills and resources that could be developed or converted into a means of right livelihood. (This could be on the level of either the individual or the community to which s/he belongs, or indeed of the group taking this module - whichever feels most useful).

Right Livelihood Visualisation

Have the participants drop into a deeply relaxed, meditative state. Then ask them to envisage the following three scenarios, giving them plenty of time for each:

1. Picture in your mind's eye your community/campus/family/city/etc (whichever situation feels most relevant). Look in detail - are there people in the landscape? Are they happy? What are people eating? Where is that food coming from? What kinds of building do you see? What modes of transportation? What entertainment venues? Etc.
2. Now picture this scene as you would most like it to be - once again, the facilitator provides prompts to look at each of the areas examined previously.
3. What is your role (big or small; single or multiple) in helping promote transformation from the first to the second scenarios?

Commitments

Following immediately on from the previous exercise, have a round of commitments, with each participant explaining some change or action s/he will under-take, asking for the group's witness and support in this.

Module 3: Local Economies

Learning Goals

- Understanding the concept and the experience of social enterprises
- Mentoring participants to explore social enterprise activities that they could be involved in launching or supporting
- Generating ideas on what kinds of businesses are best suited to the scale and characteristics of ecovillages and local neighbourhoods
- Identifying those types of social enterprise activities that tend to flourish in the ecovillage setting

Content

Currently, economic incentives are weighted heavily in favour of mass production and distribution and against locally based production and consumption using locally sourced raw materials. Nonetheless, there is much that ecovillages and other communities can do, even under current conditions, to nurture and develop their own local economies.

The first step often taken by communities seeking to wrest back some control of their economic destiny is to undertake a study of money and resource—flows into and out of the local economy. This reveals all of the many products and services that are brought into the community from the outside (thus causing money wealth to leave the local economy). The community can then explore which of these products and services it may be able to provide for itself. This exercise is called ‘Plugging the Leaks’ (see below in the ‘Experiential Learning Activities’ section for more details).

The ‘social enterprise’ model lends itself especially well to local communities seeking to develop their economies in ways that also satisfy ecological and social goals. Social enterprises are a key element of the growing ‘third economy,’ lying somewhere between the private and public sectors and seeking to combine the best aspects of both. They cover a broad range of ownership structures and activities and can best be summarised as enterprises whose primary aim is to provide a social or environmental benefit, with the secondary aim of making a profit or generating a fair return to investors.

The social enterprise model is ideally suited to the emerging holistic paradigm and to the ecovillage context as it permits the achievement of what have often been competing goals:

- The delivery of social (employment, child-caring, caring for the elderly, etc.) and environmental (reforestation, restoration projects) goals while making a profit.
- Serving the local community and investors (in the ecovillage context, often the same people).
- Combining paid staff and volunteers.
- Creating goods and services while teaching others how to follow their lead, and dealing in both conventional and alternative currencies.

Moreover, because of primacy of their social and environmental concerns and their generally communal ownership structures, social enterprises often have access to external funding that is not available to more conventional, private enterprises.

Some examples of social enterprises are provided - both within the host ecovillage and outside. In Findhorn, the Phoenix Shop was bought out in a community share issue; in Denmark, the Folk Centre for Renewable Energy was instrumental in promoting local citizen groups and farmers to finance the building of windmills; in Damanhur, Italy, over 30 local businesses were financed by a local currency system; in Hungary, Galgafarm financed the development of their ecovillage internally with an organic farm and local hotel project.

A visualisation exercise seeks to align participants with roles they could potentially play in helping to create or to support an enterprise within their own community (intentional or otherwise). They are invited to reflect on goods or services that could bring nourishment to their communities and on what contribution they could make to help ensure that these are provided.

Finally, we look at social auditing as a tool for ensuring that social enterprises remain in the service of their home communities. This tool comprises a 'triple-bottom line' analysis of enterprise performance, looking beyond the conventional measure of financial profit-ability to include also its social performance (how is the business seen by its clients, its staff and volunteers, its suppliers, its neighbours, etc?) and its environmental performance.

Resources for this module

Videos

Creating Prosperous Communities: Small-Scale Cooperative Enterprise in Maleny - Alister Multimedia, 2002

The Economics of Happiness - www.localfutures.org, 2011

Internet

FEASTA, Foundation for the Economics of Sustainability - www.feasta.org

International Society for Ecology and Culture - www.isec.org.uk

Relocalization: www.naturalsystems.blogspot.com/p/relocalization.html

Local First: www.livingeconomies.org/local-first

Social Enterprise Coalition. www.socialenterprise.org.uk

Sample Experiential Learning Activities

Divide the group into smaller subgroups to have them do as many of the following activities as possible. Report back to the whole group. Remember to devise measuring tools to assess the results and effect of these activities.

Plugging the Leaks

Have the students break into 'affinity groups.' (Depending on the composition of the plenary group, these affinity groups could separate, for example, into rural dwellers, suburban dwellers and city dwellers in three different groups). The students should map the flows of money into and out of their local economies. Which goods and services are their communities buying from outside and which are they providing for themselves? Could they provide more for themselves? Which goods and services provide the best opportunities for import substitution?

Show a Social Enterprise Slide Show

A slide show of eco-village and other local economies around the world provides many clues as to what kinds of goods and services can be produced on a relatively small scale by community enterprises. Facilitator will need to develop a slide show.

Panel of Ecovillage Entrepreneurs

Question & answer session with a panel of locally-based social entrepreneurs. Prepare some general questions before the panel to guide the conversation.

Social Enterprise Exploration

Invite the participants to talk about their home communities (intentional or otherwise). Have them brainstorm on the various goods and services being provided - or that they would like to see provided. Are there any (food retailing, food preparation, child care, entertainment, environmental restoration, etc.) that they feel especially drawn to? Have them explore, initially alone and then in small groups, what kinds of businesses they could imagine locally, and how they might contribute to the creation or operation of an enterprise providing these goods or services.

Module 4: Community Banks and Currencies

Learning Goals

- Analyzing an understanding what money is and how it works
- Gaining case study insights on how different ecovillages and other communities (intentional and conventional) around the world have managed to develop flourishing local economies
- Providing practical operational information on how to set-up and manage community banks and currency systems

Content

The way that money is created and circulates is a principal driver of the current un-sustainable global economy. Banks in the form of loans create the great majority of money in circulation, with interest attached. This necessarily builds in a growth imperative, as all borrowers need to increase their income to repay capital and interest. The interest payment mechanism also distributes money wealth from the poor (borrowers) to the rich (lenders), thus further exacerbating income inequalities.

At the international level, the deregulation of financial markets begun in the 1980s enables capital to move anywhere on the planet at the touch of a button. This has dramatically increased the instability of global financial systems, as illustrated in the 1998 and 2008 financial crises. In addition, local communities and fragile ecosystems alike are made vulnerable, as businesses can be rapidly transferred to new locations offering lower wages or slacker environmental regulations.

Much work has already been done to develop models for monetary systems that promote greater resilience, equity and ecological sustainability. These involve a number of different features:

- Re-introduction of controls over international capital flow.
- Better control over the lending policies of private banks.
- The introduction of multiple currencies operating at different levels: community, city, national, regional, global, and
- The creation of an international currency to settle trade that is independent of all national currencies.

The fewer locally-provided goods and services there are, the more money leaves the local system and the less there is to circulate locally to buy from and invest in local businesses which will, in turn, find it more and more difficult to produce in order to satisfy local needs.

Economist Richard Douthwaite explains: "If people living in an area cannot trade among themselves without using money issued by outsiders, their local economy will always be at the mercy of events elsewhere. The first step for any community aiming to become more self-reliant is therefore to establish its own currency system."

Ecovillages have found two ways of addressing the problem of plugging the leaks: The first is by creating their own local exchange trading systems (LETS) or community currency systems. The history, strengths and weaknesses of the different types of systems will be explored. Students will also have the opportunity to see a community currency system at work and will be led through the process of creating a currency to suit the context of their home place.

The second tool for keeping money circulating within local economies is the creation of community banks or other legal structures to permit community members and their friends and supporters to invest in community enterprises and projects. We will explore the history of credit unions, micro-credit and other community banks. Students will also have the opportunity to see a community bank at work and will be led through the process of creating a similar body.

Finally, as a way of pulling together the threads of modules 3 and 4, best practice in the creation of vibrant community-based economies is presented, including material on the Sarvodaya movement in Sri Lanka, the Mondragon cooperative movement in Spain, Maleny community in Australia and the Damnhur ecovillage in Italy.

Resources for this module

Videos

Brave New Economy - New Economics Foundation, London

Internet

New Economics Foundation - www.neweconomics.org

Zero Emissions Research Institute - www.zeri.org - leaky bucket model

Community Currency Magazine www.ccmag.net

LETSystems - the Home Page - www.gmlets.u-net.com

Sample Experiential Learning Activities

Devise a way to measure the results and impact of the following activities:

LETS Game

Illustrates how LETS systems work. Students are asked to list what goods and services they are able to offer and then they trade these things between themselves, with no exchange of money or any form of paper currency. Use index cards to label or tag the imaginary items to be traded during this exercise.

Hands-on Sessions

With those who have created community banks and money systems: explore the specifics of design, creation and management of various schemes. Come out of this session with a newly designed unique alternative currency system.

Module 5: Legal and Financial Issues

Learning Goals

- Developing knowledge and familiarity with the various legal and financial options available for ecovillages and social enterprises, and be able to identify the one(s) best suited to specific contexts
- Begin to use the various tools provided in this and earlier modules in creating their own ecovillage projects, and social enterprises
- Gain familiar and practice with feasibility studies and business plans

Content

There are myriad different legal and ownership structures to choose from in the creation of both ecovillages and social enterprises. Moreover, the options vary between different regions - and even between different countries within the same region. (The teacher must be well versed, within reason, in the specific legislation prevailing in the region(s)/countries of the course participants.)

Two points are of central concern in determining appropriate legal ownership structures:

1. That these reflect the core social and economic values of the group:
 - Is income to be shared equally between all members of the enterprise/ecovillage?
 - Or are some to be paid more than others?
 - Is the income of those working outside the ecovillage to be put into the communal pot or are they able to retain all or some of this income?
 - Are enterprises to be owned privately, communally or by share capital?
 - In the case of share ownership, are voting rights to be linked to the scale of investment, or will all investors have just one 'golden' voting share?
 - In the case of an ecovillage, is the land to be held privately or communally? Will increases in the value of land accrue to individuals or to the collective? Is special provision to be made for the housing of poorer members of the community who may not be able to afford to buy or build? How?
2. That these be related to anticipated sources of financing:
 - In most contexts, specific legal and ownership structures are required for ecovillages or enterprises to be able to receive government grants, charitable donations, raise share capital, etc.
 - In most countries, different legal forms exist for for-profit, not-for-profit, and social enterprises.

All of these questions will have a bearing on the appropriate legal and ownership structures to be chosen.

Thought is required in advance to gain clarity on what short- and long-term sources of financing are anticipated for the project to launch and move forward. There are four different types of capital that ecovillages and ecovillage-based enterprises may need to draw upon:

1. Seed capital - for feasibility studies and for planning, zoning and other permits and licenses
2. Share capital - money from investors, who usually share in the ownership and control as well as in the risk of the project
3. Borrowing/debts - that generally also involve interest payments
4. Gifts, grants and donations

There are, in turn, seven potential sources of capital:

1. Ecovillage or enterprise members/employees
2. Supportive individuals who may be either local to the project or part of the wider 'family' of shared interest
3. 'Business angels' - wealthy friends within the business community who share the values of the project
4. Non-profit organisations such as charitable trusts, foundations and various service providers (for example, the Epidaure ecovillage in Switzerland receives payments from the Swiss youth services ministry for the work it does in working with underprivileged youth and refugees)
5. 'Friendly bears', larger organisations that share in the interests of the project, including housing associations, organic food processors, etc.
6. Government - local, national or regional.
7. Foreign Aid Programs

A matrix can be constructed showing which of these sources is most likely to provide which type of capital and relevant examples are provided of each. Then, the favoured sources of funding can be related back to the legal and ownership structures most suitable for attracting these.

All this information is set within a context of 'creating abundance' - that is, on helping participants understand that techniques for identifying and mobilising financing are rarely enough; success is generally dependent on creating a vision and aligning with it so fully that one becomes an agent in its smooth unfolding.

Participants are then guided through some of the principal issues relating to finance, including: risk-return ratios (strategies for fund-raising associated with risky projects); security (the kinds of collateral generally required by lenders and the associated risks); gearing (the ratio between share capital and loans); and fair returns (defining and negotiating fair rates of interest to the borrower).

Participants return to their regionally defined small groups to discuss legal and financial options relevant to their own contexts.

Participants are also then guided through the theory and practice of creating feasibility studies and business plans. Relevant, concrete models are offered of each and the participants are given the opportunity, individually or in groups, to create their own documents.

In closing, a guided meditation takes participants back through the entire Economics curriculum, helping them to re-connect, in turn, with each of the tools that should now be in their community economics tool-kit - ecological footprints, 'Right Livelihood' commitments, Plugging the Leaks, community banks and currencies, ideas for social enterprises, knowledge about legal, ownership and financial options, etc. They are invited to focus in on a project - creating an ecovillage, establishing a social enterprise, supporting a social enterprise - and to consider how they can best use the tool-kit to turn their dreams into reality.

Participants can then either:

1. Return to their regionally-defined small groups where each takes it in turn to describe and elaborate on their vision, requesting the support of the group to put it into practice; or
2. Create working groups around a smaller number of 'champions', participants who have clear ideas on specific projects they wish to develop.

The economic curriculum ends with one or more of the following, depending on the time available and what feels appropriate:

- Presentations of the projects in the plenary group
- A round of commitments for future actions
- A short evaluation - what went well? what could have been better?
- Appreciations...

Resources for this module

Internet

A Feasibility Study for Community Supported Agriculture

Co-op movement www.cds.coop/coop_movement/new-to-co-ops

Land Trusts: www.smallisbeautiful.org/clts/related_articles.html

Roundup of Business Incubators www.entrepreneur.com/article/202260

The Coalition of Community Development Financial Institutions www.genesisfund.org/cdfi.htm

Sample Experiential Learning Activities

Arrange the class in small groups of three or four members to explore the creation of feasibility studies and business plans. Devise a way to measure the results.

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THE ECOLOGICAL DIMENSION



Gaiaeducation
design for sustainability

Learning Outcomes

Participants will learn to...

- ✓ design integrated systems: worldview, social, ecological, and economic
- ✓ design and/or participate in a local food production system or CSA
- ✓ design integrated infrastructures of water, energy, and mobility
- ✓ measure and design for carbon neutral ecological footprints
- ✓ to rebuild and restore nature and ecological settlements, urban and rural

"Whole systems operate through mutual give and take, in reciprocal relationships. Whole systems learning involves our perceiving this fundamental mutuality in our own lives and organisations."

Joanna Macy

Overview

From designing single houses to groups of houses we now design whole settlements also including energy and food production systems as well as giving birth to social and new economic structures, a whole new paradigm in lifestyles.

Natural Building

We start with the natural house. Building your natural houses has become the dream of so many - it is like shaping your own personality anew. Many have done it with little means building beautiful houses out of natural, local available materials. Experiences now demonstrate what works. Natural insulation and cooling is important to save energy. Refurbishing the existing houses will be a major effort as building new will be too expensive.

Local Food and nutrient cycles

A shift from agribusiness to production of fresh, local food is underway. It will also be part of agricultural systems using much less energy than today. The design of such systems for persons, village scale and towns will be part of the overall design. Nutrients are important to recycle in cradle-to-cradle thinking as some of them are becoming scarce.

Infrastructure

Water is becoming a rare and an increasingly important condition for life. We now think in whole cycles and maximum benefits on its way back to the ocean. Roads, transport, energy and heating will be dealt with as part of the same need to be CO2 neutral. Cities all over the planet are taking the lead in becoming CO2 neutral, as governments cannot agree on relevant measures. Iceland was the first, and then Denmark declared the goal of becoming 100% renewable energy before 2050. Bikes are becoming an integrated part of transport.

Rebuilding after disasters, rejuvenating cities

Settlements, transition projects and whole cities will need to become CO2 neutral to keep the planet liveable. Copenhagen is competing with other capitals to be number one in this (bikes for transportation, heating and electricity by renewables, abandoning oil and coal, clean water from the underground cleaner than water on bottles). Food is however not yet part of the competition.

Ecological Design/ Permaculture Design

Ecological concerns are fundamental to the design and development of ecovillages and sustainable communities. Ecological and Permaculture is here used as synonymous. An ecological village is integrated into the landscape in a way that benefits both humans and their encompassing environs. Designers will take great care to ensure that life-supporting natural functions are not only preserved but enhanced whenever possible. The strategy here is one of working with Nature rather than against Nature. The ultimate goal of sustainable settlement design is the creation of self-reliant, self-maintaining, self-regenerating 'living systems' that can assume a life of their own with a neutral carbon footprint. Permaculture is here stretched to not only concern a single house (as it was developed) but the whole ecological setup in zones and sectors of a village.

Whole Systems Design

We end this section with this whole systems approach to how we want to live sustainably within our ecological footprint in a fun and beautiful way in local abundance. It is an integration of what is found in all four dimensions.

When each new ecovillage or sustainable community development project is seen as a unique opportunity, as a novel creative challenge in integrating human habitat into a particular ecological niche, then ecovillage designing becomes an exciting and demanding natural art and science. A working un-

derstanding of the design disciplines is a pre-requisite. These disciplines complement one another and can be synthesized into an Integrated Ecovillage Design (or whole systems design) that includes social, economic, spiritual, as well as ecological parameters. Also required is a good understanding of natural laws and processes, and the way these can be applied to a settlement design scenario. Rajendra Pachauri, in his speech when receiving the Nobel Prize on behalf of the IPCC, said that what the world now needed was “a one to one example of all the good ideas woven together creating synergy- and that it probably had to come from one of the Scandinavian countries”. That is what the Ecovillage and Whole Systems Designer has already been trying to achieve in co-operation with the inhabitants for many years all over the world.

The accomplished ecovillage designer becomes a true trans-disciplinary maestro, able to work with, conduct and communicate knowledge from such diverse fields as engineering to botany, landscape architecture feng shui, renewable energy, farming, cultural and social anthropology, etc. While all this is true, effective communication and social skills - as well as understanding people’s deepest needs - may be the most meaningful knowledge a designer can cultivate and possess. Hence this holistic education

The people who will be living in them also build eco-villages; they are not developer led, so they have a chance to grow into living systems. Sustainable systems - those that can be continued into the indefinite future - are modelled after natural systems; the ecovillage, by definition, is integrated into its surrounding and supporting local ecology in a way that benefits all. They demonstrate the synergy of using the best of knowledge in one single context. In this way ecovillages serve as models and learning places for those wanting to rebuild and rejuvenate cities and towns. The Transition Towns movement includes this as one of its goals.

The Role of the Designer

An effective ecological designer will become highly skilled at observation - taking the time to develop a keen working relationship with a particular site, coming to understand gradually its unique qualities and attributes, its cycles, surges, and periodicities. Catching, channelling, and storing these energy flows are important aspects of the design. Standard developers generally rush right into a project - eager to maximize profit - giving little heed to the long-term consequences of their actions. The people will be living there, for generations to come, so naturally long-term consequences are considered very carefully when build Ecovillages. The role of the designer is therefore to present to the group of residents the different choices so that they make the final decision.

The following modules are intended to instil an ‘ecological literacy’ - a functional knowledge-base influencing not only our thinking and critical design judgment but also our way of experiencing Life as a celebration of organic, evolutionary fullness and plenitude.

- ✓ **Module 1 - Green Building and Retrofitting** begins the teaching of how to construct or retrofit healthier, more ecologically friendly and energy efficient environments with a distinctly vernacular, regional flair.

- ✓ **Module 2 - Local Food and Nutrient Cycles** makes participants aware of the need to grow food locally, for reasons of personal health and planetary well-being.
- ✓ **Module 3 - Water, Energy and Infrastructure** (appropriate technology) provides an overview of 'state-of-the-art' technologies with a realistic appraisal of their effectiveness.
- ✓ **Module 4 - Nature and Urban Regeneration, and Disaster Recovery** describes the many ways in which the ecovillage knowledge may be useful in restoring and regenerating the health of the local environment. An Integrated Ecovillage Design, then, is the most effective way to rebuild after human- and nature-caused disasters also recreating the social fabric.
- ✓ **Module 5 - Whole Systems Approach to Design.** This is an abbreviated and condensed introduction to the very holistic, systemic process by which designers integrate the ecovillage or the Transition Towns project into its local ecology, thus creating a human-scale microcosm of the macrocosm, a focalized holographic representation of the cosmic whole. This is the culmination of all previous Modules in the EDE series, in both concept and practice. The ecological/Permaculture part of this is given special treatment.

Ecological Resource: *Designing Ecological Habitats*

Designing Ecological Habitats - Creating a Sense of Place is the Ecological Key of Gaia Education's series *Four Keys to Sustainable Communities Everywhere on the Planet*. Download gratis from www.gaiaeducation.org

Module 1: Green Building and Retrofitting

Learning Goals

- Evaluating objectively the problems inherent in 'modern' building and construction techniques
- Increasing familiarity with various 'green,' sometimes called 'alternative,' building techniques whose designs provide healthier, more energy efficient and less environmentally damaging structures
- Gaining awareness of the need to discriminate as to the choice of building materials and architectural styles best suited to a specific bioregion
- Explore issues in retrofitting poorly designed structures, including urban and suburban patterns
- Develop plans for rehabilitating and re-inhabiting partially or completely abandoned existing settlements; reconstructing lost cultural identity

Content

This module looks at the healthy building issue in some detail and offers a variety of solutions to improve it. Materials will be investigated one by one and assessed from the aspects of manufacturer and user health, environmental impact, costs, and user comfort. The concept of "embodied energy" will be explored at length. The learning will be focused toward providing students with the ability to design and build, or retrofit, a sustainable dwelling of their own.

This module strongly stresses the importance of insulation and the preservation of energy over add-on technology. It is far more effective, and cheaper in the long run, to emphasize energy efficiency from the very beginning of the design process than to have to retrofit later. The module also strongly advocates adapting vernacular designs and a local bioregional approach, drawing on the traditional knowledge and techniques of an area.

Specific considerations include:

Siting of Dwellings

- Aspect, Aspect, Aspect!
- Fire! Flood! Designing for catastrophe prevention
- The impact of the climate near the ground
- Siting - relationship to supporting infrastructures and terrain

Designing for Comfort

- Passive solar design principles
- The breathing wall
- Passive and active insulation
- The importance of cross flow

Design and Budget

- Size does matter
- Impact of materials on cost
- Shared facilities/Shared costs

Buildings Come in All Shapes and Materials

- Framed timber construction
- Concrete block
- Adobe
- Dome houses/Geodesic dome
- A-frame homes
- Building with stone
- Recycled materials
- Brick/Brick veneer
- Rammed earth/poured earth
- Cob
- Straw Bale
- Pole house
- Underground houses and earth shelters

Building for Health (including the ABC of concerns)

- Should we worry?
- Allergies
- Can you smell it?
- Heating and cooking
- Multiple chemical sensitivity
- Radiation
- Warning signs
- Biological warfare
- Electricity and magnetic fields
- Lead poisoning
- Pesticides

What Can You Do About It (responding to pollutants)

- Heating
- Construction materials
- Fabrics and fibres
- Adhesives/removers
- Plastics
- Pesticides and fungicides
- Electricity
- Timber and timber products
- Paints, varnishes, stains
- Metal products
- Household maintenance

Many places on the planet have been intensively inhabited and farmed for thousands of years, yet partially or totally abandoned in the past few decades - the primary reason being exodus out of rural areas and into cities. A classic example of this phenomenon is foothills of the Mediterranean basin, but regions of Africa, Asia, and South America can also be cited. The principles of Green Building and Retrofitting apply equally well to whole settlements as to individual buildings. Restoration and re-inhabitation of abandoned or depopulated settlements will mean attentively considering the local laws, customs, economics, flora and fauna, history and traditions of a place in order to replicate and re-invigorate local culture. Communicating with the elders who have chosen to stay - people with deep, mature knowledge of their territory - will be an invaluable source of information.

Further points to consider:

- Observe the existing settlement: read its history, culture, and community life through the built architecture, in its main structures as well as in its details
- Research available oral and written sources, including aerial photos
- Identify patterns of chaos and order in the original settlement plans, where private and public spheres have in the past overlapped, thus maximizing 'edge effect'
- Decide on a few distinctive marks of the native vernacular (colour patterns, door and window styles, motifs, partitioning, accessory buildings, etc.) and introduce them organically into the design

Principles of Ecovillage Design, as outlined in this and other modules, are uniquely qualified to guide and inform the retrofit of existing (and usually quite dysfunctional) urban and suburban settlement patterns. We expect this kind of retrofit to become of increasing concern as the full effects of 'peak oil' are felt.

Sample Experiential Learning Activities

Depending on the location and time of year, participants may work alone or in small groups to begin their designs. Devise a way to measure and improve the results. Design components should include at least two of the following:

1. Drawing up plans for a cottage using local materials and a vernacular style.
2. Evaluating the structural and energy efficiency of and/or existing buildings
3. Combining the ingredients for a cob mixture and making a useful cob project
4. Participating in the construction of a straw-bale dwelling, including framing
5. Locating, preparing and using recycled materials for construction purposes
6. Taking an active part in the reconstruction or renovation of existing buildings
7. Redesigning on paper new uses for existing spaces, public and private
8. Taking an active part in restoring agricultural infrastructure and buildings

Module 2: Local Food and Nutrient Cycles

Learning Goals

- Gaining an awareness of the benefits of growing, distributing, and consuming local food
- Making the connections between personal and planetary health and well being
- Designing a local food production scheme for a village or a neighbourhood
- Trying various methods and techniques for organic food production and storing
- Finding a context for direct, hands-on, community agricultural experiences

Content

This is a huge field of concern; so, as with all the other modules in the EDE, this can only be an introduction. On the one hand, there are very real and serious political and macro-economic concerns, such as: local vs. imported products, centralized vs. de-centralized power, total food miles from producer to plate, the effects of unsustainable industrial, fossil fuel-based agriculture on the environment. Will oil prices force a new structure in agriculture to happen with a possible repopulation of the land? Can we anticipate this? What about the loss of family farms and whole farming communities? And what about agribusiness, government subsidies and transnational trade blocs? How do we engage with the issue of local self-reliance, the disappearance of indigenous knowledge and genetic stocks, preventing waste from ending up in the oceans or in dumps etc.?

And then there is the productive, proactive, and indeed fun “how to” part: growing vegetables and fruits at both the home and community scales, integrating animals into combined food production systems, edible landscaping and integrating food into garden designs, creating value-added products - not to mention harvesting, storing, preparing and eating the food you have grown. Creating a full nutrient cycle making sure the soil is being built up. This module attempts to strike a balance between important considerations at both ends of this wide spectrum.

Introduction to the Politics of Food

- What is the real cost of food?
- What can we do about it?
- What is a sustainable diet?
- What does food cost the Earth?
- The politics of food in developed and developing countries

Growing Your Own

- An introduction to soil science
- What does NPK mean?
- Weed control
- Improving your soil organically
- What is biochar?
- Establishing a no-dig/bio-intensive garden

- The role of legumes in organic gardening/farming
- Introduction to Botany
- Irrigation
- Gardens for small places/container gardens/crops for pots and balconies
- Seed saving
- Multi-layered, integrated horticulture
- Biodynamic gardening
- Crop rotation
- Food forest: fruits, nuts, medicinal
- Garden elements and planning: Permaculture Zones 1 and 2
- Integrated Pest Management
- Berries
- Orchard design: establishment and maintenance
- Animals and aquaculture
- Community-scale food schemes such as Community Supported Agriculture (CSAs), share cropping, Co-ops, and Farmers' Markets

Local Food is at the heart of supportive, nurturing, self-reliant community.

Resources for this module

Internet

Local Food Toolkit - International Society for Ecology and Agriculture - www.isec.org

Sample Experiential Learning Activities

After completing any of the following activities devise a tool to measure the results.

In an ideal situation, students would be given a chance to create a small vegetable plot early on in the course, plant it with seedlings, and then harvest those seedlings to be eaten in a salad on their graduation day or a later date! Depending on such variables as the weather, location, available time and resources, and student experience, this module's activities could include the following:

- Designing a small scale food production system
- Making compost or liquid manure and teas
- Inoculating legume seed
- Collecting and applying mulch
- Pruning existing orchards
- Designing and installing an herb garden
- Designing and/or constructing a poultry shed or chicken tractor
- Designing a rotation fodder system for large browsers - cows, sheep, horses
- Canning, preserving, and storing a harvest

Module 3: Infrastructure, Water and Energy

Learning Goals

- Understanding the water cycles of an ecosystem
- Evaluating energy issues for human settlements and individual households
- Understanding the elements of local renewable energy systems
- Knowing the principles of mobility, roads, and integrated infrastructure
- Comparing a wide range of alternative low impact technologies applicable to ecovillage and single dwelling design, not just energy technologies

Content

This module will look at appropriate technology techniques for: roads and access infrastructures, communications, energy, water, wastewater, and waste recycling.

What is Appropriate Technology?

- Low cost, long lasting
- Legal
- Locally produced
- Safe
- Low embodied energy
- Low maintenance
- Solutions are found and implemented at lowest possible energy-use levels

Expectations from designed infrastructure include “culturally and climatically appropriate” choices: It is important that these techniques and solutions are “fitting the local conditions” and can be apprehended and maintained by the locals.

Roads and Mobility Infrastructures

This curriculum is designed to cover enough information to allow the apprentice-designer to be an active participant in decision-making. A basic understanding of engineering terms is thus communicated:

- Design Criteria (including cross sections/long sections, cut and fill, “standard” road design)
- Shoulders
- Bridges and other creek crossings
- Material choices
- Visibility
- Maintenance
- Designing storm-water infrastructure
- Calculating catchment

Communications

This segment in the main will look at technical considerations. There is also a module in the Social dimension of the EDE curriculum that covers specifically transpersonal, inter-human communication. Here we will focus on communications infrastructure.

- What is the status of the industry?
- Experience from ecovillages around the world
- Intra-net
- CENTEL
- Emergency and Amateur Radio – AR - operation
- Other medium - and low-tech possibilities
- Communications during design and construction

Energy

This segment will look at what is possible now and how we can design to bring new innovations into our communities and ecovillages, as they grow.

- What is energy? What is energy power?
- What is the status of the technology? - a comparison of main renewable sources of power: solar, wind, bio-fuel, gas, hydro
- Can we store energy? - batteries, fuel cells, flywheels, water, gravity, stirling motors
- Reduce, conserve - design! What have other projects done?
- Energy and mobility - multiple options
- Village-scale energy potentials and solutions
- Measuring “ecological footprints” and design for carbon neutrality

Water

There are very real global issues around fresh water availability, and these are likely to grow more acute: need/greed/fair-use. We need to understand the relationship between potable and non-potable water - how to collect, store, and distribute water reliably and safely for twelve months a year.

- | | |
|---|---|
| • Infrastructures for potable water | • Rainwater storage, including tank materials, calculating size of tanks, various gadgets for WH & S, and by-pass |
| • Construction of dams - including associated infrastructures | • Construction of ponds |
| • Reticulated systems | • Bores |
| • Wells | |

Wastewater

“Wastewater” is a misnomer. A more descriptive phrase would be Nutrient Enriched Water (N.E.W.)

- Grey and black water - what’s in faeces, what’s in urine?
- Dry composting
- Microphyte system
- The Living Machine
- Creating an assessment process
- Direct drop systems
- Septic systems
- Bucket systems
- Wet composting
- Separating system (Mats Wohlgast)
- Comparison of systems

Solid Waste/Garbage

- Introduction to the challenge: the facts
- Reject consumerism: reduce, reuse, and recycle!

For the past 100 years or so, the human project of civilization has been enjoying a one-time energy bonanza in the form of easily exploitable fossil fuels. An entire globalized socio-economic infrastructure has been created that is completely dependent on ever-increasing supplies of these cheap fossil fuels. Now, reliable analysts are predicting that the global production of oil and natural gas will soon reach its “peak” - meaning that, just as demand increases, supplies will begin to decline. This represents a restructuring of unparalleled proportions: transportation, agriculture, urban densities, the relationships between nations, and the entire global economic system will be significantly affected. Implications for local conditions will need to be seriously assessed in any design scenario. We may see worldwide adoption of Ecovillage Design principles, as out-lined in this curriculum.

Resources for this module

Videos

Natural Swimming Pools, Permanent Publications, UK

The 4th Revolution, the Energy Revolution with Hermann Scheer and Preben Maegård.

Experiential Learning Activities for Module Three

Devise measurement tools to assess the results of the activities below. Depending on available resources participants can:

- Evaluate and assemble a photo-voltaic system
- Design and assemble a rainwater catchment system for a roof
- Assess an integrated renewable energy system
- Design and construct a grey water system
- Design a constructed wetland
- Design a swimming lake
- Measure their own, or a project’s ecological “footprint”

Module 4: Nature and Urban Regeneration, and Disaster Recovery

Learning Goals

- Applying practical techniques for restoring Nature and accelerating natural earth-healing processes
- Taking stock of the magnitude of reparation for such human-caused disasters as salination, deforestation, desertification, depletion of aquifers, global warming, and pollution of all kinds, including nuclear waste
- Applying principles of ecovillage design that can be used to rebuild after disasters - both natural disasters and human caused disasters
- Adapt resilience design principles to urban and rural sustainable community design
- Successfully manage resource scarcity and substitution

Content

Restoring Nature

The Earth is a finite system, materially closed yet energetically open. After a couple hundred years now of reckless exploitation and poisonous industrialization, major life support functions of the biosphere are in a state of degradation and deterioration. From ecological, economic, social, as well as spiritual perspectives, the situation is quite serious and calls for our immediate attention. One of the best things you can do to heal the Earth, your communities and yourselves, is to begin taking active, practical steps today toward restoring Nature - with simple steps like planting trees, mulching an existing orchard, building topsoil, or restoring damaged ecosystems like riparian zones, etc.

Ecovillages are in a unique position for restoring Nature. Through thoughtful Permaculture design, ecovillage projects can actually be used to regenerate damaged ecosystems. For example, the concept of 'urban village' is currently being employed as a strategy to infill Brownfield sites. With the social, cultural, spiritual, and economic patterns that emerge from ecovillage living, preserving the health and vitality of the local environment becomes not only wise, not only an issue of long-term survival, but an actual creative function of human-in-the-biosphere - human beings can assume the role of conscious regenerative agents for planetary evolution. Thus, an ethic and practice of honouring and restoring Nature is easily incorporated into the ecovillage lifestyle.

Whatever the case, a commitment to honouring and restoring Nature will mean at times stopping just talking about it, putting on the boots and gloves, grabbing the tools, and going out to do the physical labour of actually helping restoration take place. For those who are ready for this level of engagement, here is a list of essential principles based on the premise that "Nature knows best:"

- Mimic Nature wherever possible
- Work outwards from areas of strength, where the ecosystem is closest to its natural condition
- Pay particular attention to “keystone” species - those which are key components of the ecosystem, and on which many other species depend
- Utilize pioneer species and natural succession to facilitate the restoration process
- Recreate ecological niches where they have been lost
- Re-establish ecological linkages - reconnect the threads in the Web of Life
- Control and/or remove introduced species
- Remove or mitigate the limiting factors which prevent restoration from taking place naturally
- Let Nature do most of the work
- Love nurtures the life-force and spirit of all beings and is a significant factor in helping to heal the Earth

Urban Regeneration

With more than 50 % of the global population living in big cities and megalopolises we need to create sustainable solutions for cities. For years a myth has been flourishing that you could build cities actually producing energy but that still has to be seen. The Chinese models gaining so much interest (Dongtan Ecocity project. Shanghai, Arup consultants) never materialized and the Arab cities in the desert (Abu Dhabi), can never be models to imitate. They are far too energy intensive.

Transition Towns (TT) is a movement founded in 2005 with the aim of preparing communities for the two challenges of Climate Change and Peak Oil. It has in 2012 spread all over the world. When a Transition Town has achieved its energy descent and aligned itself with other deep sustainability goals it can be said to have reached sustainable community status and gone beyond the transition and transformation it set out to attain.

The main aim of a TT project is to raise awareness of sustainable living, drastically reducing carbon emissions (to mitigate the effects of Climate Change) and increase significantly local resilience (to mitigate the effects of Peak Oil). Communities are encouraged to seek out methods for reducing energy usage as well as increasing their own self-reliance. The twelve step process of winding down is using many Permaculture and ecovillage ideas.

Transportation is a major issue in redesigning cities. Many attempts are on their way to reduce the use of cars. Bicycles deserve a note of their own. With their unsurpassed efficiency, bicycles will have an important role to play in a low-energy future.

Rebuilding after Disasters

In these days, natural disasters seem to be more frequent and severe: earthquakes, tsunamis, hurricanes, flooding and fire are all inflicting massive destruction and incalculable suffering on human communities. Coupled with human disasters such as salination, deforestation, desertification, and industrial pollution, nuclear catastrophes - not to mention the pathetically ever-present human tragedy of war - a systematized methodology needs to be devised to effectively and efficiently rebuild after

disaster. The principles and practices of an Integrated Ecovillage Design - as outlined in this curriculum - are an obvious solution.

As a case study, witness the re-vegetation and regeneration efforts of the community of Auroville, in the Tamil Nadu of India: over the course of thirty years, a once parched, baked-mud landscape is now a thriving forest, viable habitat for a multitude of creatures - including human beings. Another case study can be drawn from the aftermath of the tsunami of December 2004, which devastated much of the Sri Lankan coastline. In immediate response, the Sarvodaya infrastructure, in consultation with experienced ecovillage designer Max Lindegger, was there to help with the rebuilding process. Vinya Ariyaratne of Sarvodaya won an international award for his efforts.

One of the benefits of using an Integrated Ecovillage Design as a methodology for re-building after disaster is that sustainable, nature-encoded patterns of development can be inculcated and instituted at the ground level. Thus, further development has the advantage of building upon the sustainable patterns that have been laid down at the outset. (As the Taoists say, how can you have a satisfactory conclusion if you don't get off to a good start?) In a curious and compassionate sort of irony, the clearing away that comes from disaster brings the opportunity for renewal at a higher level of integration. Life goes on.

Truly, experience has shown that government is incapable of responding to people's needs after disaster strikes. In order to maintain any sort of integrity and self-direction, communities must rely on themselves for the rebuilding effort. In the future, we envision teams of ecovillage designers being flown in to assist with laying the groundwork as the rebuilding begins.

Resources for this module

Videos

Wake Up, Freak Out - Then Get a Grip by Leo Murray: www.vimeo.com/1709110

Flow by Irena Salina: www.youtube.com/watch?v=oFAEulGGaCA

"The End of Suburbia": Oil Depletion and the Collapse of the American Dream

Sample Experiential Learning Activities

Devise measuring tools for assessing the results of doing the following restoration and recovery activities. Practical restoration work, like that described below, is essential to bring body-based muscle memory into the experience. Engaging in these activities as a group will forge strong community bonds. Taking the work out into the greater community, and accomplishing tasks required by the locals, will bring a sense of service and good will to the learning process.

Start a transition initiative in your own community. This activity should be facilitated by a certified TT Trainer.

Formulate an emergency action plan for the bioregion or nearest big city. This will be a valuable theoretical exercise. Interfacing and consulting with local authorities in this matter will build trust and goodwill. Measure the results.

Module 5: Whole Systems Approach to Design

Learning Goals

- Presenting a comprehensive “Whole Systems Design” – demonstrating a synergy of spiritual, social, economic, and ecological parameters in the design process
- Working as design teams and learning how to be a “midwife” for future community residents and users of village services
- Gaining a ‘nuts and bolts’ understanding of the technical considerations and ecological principles for designing and implementing truly ecological villages, homes, and projects.
- Demonstrating a clear and replicable design process
- Practicing the use of design tools and modes of communication with the design team

Content

What is it about an ‘ecovillage’ that makes it a ‘village’? To answer this question it is important to review the history of traditional villages - both North and South - and to investigate the various types of villages found currently throughout the world (eco-villages, eco-hamlets, eco-enclaves, eco-aldeas, sustainability learning centres, and other variations of intentional community). Looking at the accomplishments of the Global Ecovillage Network over the past years will shed light on the tremendous work that’s already been achieved in bringing the ecovillage concept credibility and acceptability to ‘mainstream’ decision makers. Increasingly the Ecovillage knowledge is being used to create transition projects in towns and cities. We have to train existing inhabitants in order to reduce our “footprint” of human settlements everywhere to an acceptable level.

Prior experience with Permaculture Design is a good pre-requisite for an Ecovillage Design course. As such, the following aspects of Permaculture will be reviewed in this module: ethics, principles, patterns in Nature, laws of Nature, laws of attitude, and the relevance of all these to the design and implementation of sustainable human habitation systems. Principles of Ecological Design, as tools in the design process, will be summarized with visual images of prominent examples from around the world. Various perspectives of Whole Systems Design will be introduced for their conceptual utility.

The ecological aspects of the ecovillage design process will then be illustrated in detail:

Design Approach & Methods

Here we are analyzing the land, the existing biotic and topological structures, to discover available and potential resources, energy flows, sources and sinks, etc. This is a very structured and systematic methodology, relying on as much field study as possible, inclusive of the greater watershed and bioregion.

Observation, Research & Recording

This is a vital phase of the design process that is too often neglected or foreshortened. Ideally, this phase would be ongoing through the full cycle of the seasons, gathering as much information as possible (information being “a difference that makes a difference.”) The amount and quality of data that can be collected, recorded, and interpreted will have a direct bearing on design efficacy.

- Overlay Method, Method of Exclusion
- Creating a Base Plan
- Aspects and Micro-climate
- Hydrology - channels, storage, surges, fall
- Soil - arable/non-arable, suitable for foundation
- Vegetation - indigenous, exotic, invasive, economic
- Wildlife - there will still be some left; useful species?
- Slope - greater than ‘1 in 5’ too steep for building

Integrated Design Considerations

What will be our frame of mind as we approach the design process and what criteria will be used for making decisions?

- Design Vision
- Values and Ethics
- Limits of Design
- Needs vs. Greed

Layout Considerations

How will we represent our design ideas in communicable media?

- Size (numbers)
- SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)
- Carrying Capacity

Infrastructure Design Goals and Aims

The engineering aspects of the site plan.

- Roads and access infrastructures (bridges, drainage)
- Communications (new and retrofitting telephone, email infrastructures)
- Energy (transport issues, electricity, heating/cooling, ethics)
- Water (placement of dams, tanks, wells, ponds)
- Wastewater (history of flush toilet, principles of wastewater design)
- Waste and Recycling
- Common Trenching
- Soft Engineering

Social Aspects of the Design Process

Designing for getting around: a circulatory system of pathways, roadways, and parking for pedestrians, bikes, roller-skates, horses, etc. - as well as autos

- Creating the opportunities for spontaneous social engagement: social nodes
- Designing for placement of common facilities: community centre, child-care, bath house/sauna, visitor accommodation, performance hall, cafe, educational facilities, medical/health centre, meditation sanctuaries, recreation, etc.
- Allowing for balance and demarcation between public, semi-public, and private spaces: intimacy gradients
- Integration of seniors plus mobility and developmentally challenged

Economic Aspects of the Design Process

- Business Centre: office space, technology, communications
- Production Facilities: cottage industry, light industry, certified kitchen
- Agricultural Infrastructure: processing, storage, animal shelter, irrigation

Spiritual Aspects of the Design Process

- Landscape temples
- Feng Shui, Vastu, Sacred Geometry
- Dowsing and probing for ley lines or energy centres
- Becoming familiar with the socio-cultural history of the place

Ecological Aspects of the Design Process

- Design of food production system: vegetable, rotation of fields, lay out for animals and their feed, berries and fruit trees, nut trees
- Shelterbelts, suntraps, and windbreaks
- Swales, berms, and hedgerows
- Zone and sector analysis
- Accommodation for wild places and wildlife corridors
- Riparian zone enhancement and protection
- Remediation of degraded soils and re-vegetation
- Forestry, coppice systems, and renewable harvest
- Edible landscaping

Project Management

Specialized skills for the implementation phase.

- What is a system?
- Uncharted waters - getting from idea to reality
- The building phase
- The people issue
- Project variables (somebody moved the goal posts)
- Project closure

Preparing a Concept Plan:

Including legal aspects that will vary from project to project.

- Creating team glue
- Dealing with councils/authority
- Preparing a document which 'sells' the project
- Presenting your proposal
- Environmental Impact Studies
- Re-zoning applications
- Development applications

The content of this module also includes a spot about selecting land for communities. This is a site assessment list that allows designers, through critical analysis, to evaluate the strengths and weaknesses of Greenfield as well as Brownfield sites. This assessment is even useful for discovering weak aspects in existing communities.

An important issue is the role of the designer as midwife helping a group of inhabitants to make the decisions the group wants.

Finally, we will look at the Site - survey Check List. This analysis follows when a site has been selected. It is a social-cultural as well as environmental-ecological tool.

Resources for this module

Videos

Wake Up, Freak Out - Then Get a Grip - by Leo Murray. <http://www.vimeo.com/1709110>

Flow - by Irena Salina: <http://www.youtube.com/watch?v=oFAEulGGaCA>

The New We - European ecovillages www.newwe.info/

Crystal Waters Permaculture Village - GENOA www.ecologicalsolutions.com.au

Futures of Paradise: The European Ecovillage Experience - Light Source Films

Ecological Design: Inventing the Future - The Ecological Design Project

Internet

Ecological Solutions - consultancy and education - www.ecologicalsolutions.com.au

Village Design Institute - collecting, organising, researching, and disseminating knowledge for a sustainable, village-based future - www.villagedesign.org

Sample Experiential Learning Activities

In collaboration with course participants, devise a measuring tool to assess the results of doing the following design exercises and products.

Site Analysis

Students will be guided through a comprehensive site survey. Then, working in design teams, students will create a site analysis. This will entail mapping existing features and energy flows onto a base map.

Overlay Method

The overlay method, first articulated by Ian McHarg, will be experimented with, affording students the opportunity to create multiple thematic over-lays on tracing paper, providing rich depth to their site analyses.

Sketches and Creative Expression

Creating rough sketches of the site plan will be an excellent demonstration of learning. Students generally will be encouraged to freely translate and communicate design ideas into creative visual expression, which might also include model building.

Integrated Ecovillage Design/Whole Systems Design

Using all the knowledge gained in their exposure to this Ecovillage Design Education, students will begin conceptualizing a fully integrated eco-village design - synergizing spiritual, social, economic and ecological parameters into a systemic whole. Students are then invited to return to their home communities and re-create this very holistic, organic, holographic process.

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The Living and Learning Pedagogy

The way we learn is equally important to what we learn; process is just as important as content; theory is meaningless without practical applicability in real people's lives. A revolution has been underway for years within learning communities, a revolution with many new names: Liberation Pedagogy, Relational Learning, Partnership Education, Transformative Learning, Experiential Learning, Action Learning, Earth Pedagogy... And now there is the Living and Learning Pedagogy of the Global Ecovillage Network (GEN). One central motive that all these pedagogies - that is, principles and methods of instruction - have in common is an effort to make the educational process directly relevant to people's lives, to focus learning on the solutions to real problems that people are experiencing.

Within ecovillages lie special and unique opportunities for offering an immersive experience in living what you are actually learning. We call this the "Living and Learning Pedagogy." It is a whole body learning style - as you live it at the same time as you learn. It is a very effective way of learning. In places other than ecovillages (cities, universities, schools) as much as possible of this pedagogy is brought into the classroom.

At a conference in Thy, Denmark in 1998, fifty-five educators and enthusiasts from ecovillages around the world forged the following significant statement:

"Learning needs to return to its roots in the whole community of people and no longer exist in separate institutions. In this way, context, methods and personal development will happen all at the same time for all ages. This is a living, evolving learning system that embraces global considerations alongside local concerns. This system is geared to plant seeds for the next seven generations."

A GEN brochure states:

"Ecovillages which teach are powerful catalysts for change. They are places where people can come and learn about sustainable living through practical experiences that can be replicated throughout the world. They are local planetary models. See it, do it, take it home, share it with others, and recreate something new. It's about training trainers through inspiring on-the-ground programs. Because what works in one part of the world often works in another. Because it's not about re-inventing the wheel, but creating effective new ways of working together. Because the challenges ahead of us require real co-operation, fast action, and deep insights."

Important elements in the Living and Learning Pedagogy include:

1. Living and Learning means you go and live in an actual ecovillage as part of the education. You immerse yourself in a new world of community living. Each ecovillage is unique, so you will have varying experiences according to the choice of ecovillage, but in all cases you will eat, work, celebrate with, and learn from the pioneers that are actually making it happen. An ecovillage culture is manifesting itself as an expression of a new way of being.

2. The purpose of this pedagogy is to educate the whole person. People do not learn only with their brains - the whole body and all the senses are involved. The use of what are called "seven intelligences" or "multiple intelligences" as developed by Howard Gardner has become a popular way of conveying our intention. Different people learn in different ways. We use:
 - Hands-on experience, body-based memory
 - Theory, reading, discussions, reasoned dialogue
 - Dance, song, creativity, play, games, performances
 - Quiet time, reflection, meditation, connecting with nature
 - Workshops, symposia, seminars
 - Interactive group process, participating in decisions
 - Café, bar, open time, celebrations
3. Shared work, for the purpose of accepting responsibility for community maintenance, is a component of the Living and Learning Pedagogy:
 - Garden
 - Workshop
 - Kitchen
 - Cleaning
 - Care-giving
4. Creating intentional community and a sense of trust in the learning group is also part of the Living and Learning Pedagogy:
 - Attunements
 - Time for sharing
 - Open communication
 - Transparency in the motivations of facilitators
 - Creating a safe, supportive environment
5. The contexts we create in which to teach reflect ecovillage values:
 - Non-hierarchical
 - Rotation of responsibility
 - Everyone has something to share
 - Everyone is a designer
 - Cherishing diversity in ages, cultures, abilities
 - Respecting different, even contrasting, points of view
 - Emphasizing the needs and health of the whole

Here is the suggested organisation of a typical day at an "Ecovillage Design Education":

8 hours of sleep and rest; 8 hours of activities alone or in groups; 4 hours of social integration; 4 hours of free and meals time.

The activities time will typically be used like this:

- 4 hours of theory (including slides, video, symposia, discussions)
- 4 hours of practical work (applied theory and community maintenance)
- 4 hours of personal integration and reflection (meditation, dance, song, yoga, private time, etc.)
- 4 hours for meals and casual conversations (1 hour breakfast, 2 hours lunch, 1 hour dinner)

Each and every day of education in an Ecovillage teaching an EDE will integrate all of these distinct elements into a truly holistic, multidimensional learning experience. Learning will occur on many different levels simultaneously and will be influencing the whole person - mind, body, spirit, and emotions. As an immersion experience, learning will be transpiring twenty-four hours a day, and this has the potential to make it deeply transformative. Transformed and freshly educated individuals can then return to their communities of origin and begin the process of recreating all they have lived and learned - this is the essence of the Living and Learning Pedagogy.

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Coming soon: The Pedagogic Key - *The Fifth Key: A book on the Living and Learning Pedagogy*, edited by May East and Daniel Greenberg.

Adapting the EDE to Local Needs

The Global South, Cities, Towns, Universities, Virtual Classrooms, and Schools

The EDE is intended to be accessible to any group or initiative around the globe working on issues of sustainable community design and development - that is, solutions for sustainable human habitats. By late 2011, it had been tested almost 100 times in 26 countries mostly in ecovillages but increasingly in other circumstances. It has proven possible to create a community of learners in universities, cities and other places and live parts of the Ecovillage culture. In the following, we outline some important considerations for teaching the EDE when being taught in the following specific contexts: Urban, South, Academia, Virtual, Schools.

EDE in the South

Wealthy social elites living Northern consumer lifestyles rule most Southern countries today, while the majority of their citizen's live in poverty. The poor in these countries struggle to survive in an increasingly degraded environment controlled by global market forces. Many rural villagers are in the process of abandoning their indigenous livelihoods, values, ecological and community practices and invaluable diverse cultures. Many of their young people dream of immigrating to the North and are uncommitted to improving local living conditions that they view as hopeless and "not modern".

Against these negative forces, there exists a groundswell of yearning to preserve the best of the past. The past of this "dream" strongly resembles ecovillage living, in terms of human relationships with nature, protection of the environment, close community bonds and solidarity based on positive values, shared spirituality, etc. Therefore, the ecovillage movement comes to many in the South as an answer to their prayers. The South is indeed a fertile ground for the creation of new dynamic ecovillages or local networks.

Based on these observations and understandings, we outline in the following how the EDE curriculum and pedagogy can be adapted to countries in the South, often referred to as the "developing countries" or the "Third World." Recent developments are breaking this old dichotomy of North/South and we are seeing a much more complex world, with China, India and Brazil as a new axis of development and with Asia gaining momentum.

Ecovillage Types in the South

- Modern ecovillages of choice on the Northern model, developed in collaboration with the Southern elite (the exception, e.g. Auroville in India)
- Traditional ecovillages, based on preserving, enhancing and retrofitting the existing village, its values and lifestyle, while introducing selected modernization
- Mixed modern and traditional ecovillages in which an urban elite group joins forces with a traditional village

- Networks of traditional villages reformed along an ecovillage model (e.g. Sarvodya in Sri Lanka, SEM in Thailand)

Aspects of EDE more applicable to the South than to the North

- Spiritual, cultural, social, economic and environmental preservation and adaptation of indigenous ethnic traditions and lifestyles, and reintroduction of the best of these disappearing traditions. A worldview of Oneness is often still present
- Techniques for working with and fundraising through development assistance agencies, including national government, multilateral and bilateral agencies, NGOs and other donors
- Ecovillage pedagogy based on Freirian participatory principles and on action learning that creates the ecovillage in the process of teaching the curriculum
- Ecovillage training in basic literacy, book-keeping, management, language and other capacity-building skills
- Collaborative work exchanges and development activities between the Southern ecovillages, whose representatives form social groups that work together on the ground
- Policies of admitting to ecovillage network membership not only ecovillages but NGOs and other organisational partners of the villages that express an interest in working with the network
- Deep conflict resolution suited to people forced by circumstance to live throughout their lives in the same community, with the same neighbours. And to people who have been through wars and other conflicts.

Importance of knowledge exchange between Northern and the Southern ecovillages

- Wealth of lost indigenous and community knowledge available to Northerners
- Basic technical and literacy skills that Northerners, even young students, contribute to Southern ecovillages
- Potential for ecovillages integrating Northerners and Southerners together to give birth to new forms of collaboration in community with the potential of achieving more than either type of ecovillage alone

EDE in Cities (Urban Settings)

Is the term “Sustainable City” an oxymoron? Perhaps, yet in varying degrees, the urban pattern will have to be shaped and moulded to assume a more sustainable, self-reliant form. We have no choice, as now more than 50% of the 7 billion human population live in cities. Ecovillage ideas, values and culture may be used in transforming cities. Copenhagen has e.g. as a goal to be 100% based on renewable energy. Bicycling paths are being extended all over; local food markets are on the increase. City farming and Community Supported Agriculture are spreading, as are networks built to create better social interactions.

One key here is decentralizing in every conceivable way - politically, economically, socio-culturally, topologically - from the densely packed urban core to harmonious “eco-neighbourhoods” or “urban villages.” The decentralization process will coincide with ‘re-localization:’ identifying numerous sub-nodes spread throughout the urban fabric. These sub-nodes become multiple new centres for village-

scale spatial organisation. Once these village-scale spatial units have been delineated, a multitude of steps can be taken to transform each one into a self-organising, self-maintaining, self-regenerating living system of its own - degrees of autonomy here being equated with levels of effective sustainability. Many EDE's, or parts of, have happened in megacities e.g. in Sao Paulo and Mexico City, and have proven their value.

Approaching sustainable solutions within the amalgamated cellular pattern of the village-scale urban villages will bring visible, affordable, and replicable results quickly. What is even better, once the large-scale infrastructure issues have been resolved, the residents will be able to implement sustainable solutions all by themselves! The EDE is very effective at this scale of application; all twenty modules are pertinent. Process will facilitate an "action learning" whereby residents assume responsibility for localized urban renewal that will foster their own self-reliance and self-direction, while centralized power structures are phased out.

Most cities already contain a semblance of identifiable neighbourhoods, districts, or quarters. Once these existing spatial patterns are more sharply delineated - with well-defined centres and well-defined boundaries - then a true urban village pattern will have a chance to emerge and begin to take form. As a matter of clarification, the planning profession has been playing with the concept of urban village for some time now. However, we believe their applications lack the interdisciplinary depth and diversity needed to inform comprehensive, long-term solutions.

Indeed, what good is a sustainability education if not capable of addressing the severity of urban problems? With deep compassion for all the squatters and slum-dwellers and parentless children wandering the streets, on the edge of survival, let us not forget that there is a direct correlation between the availability of cheap oil and massive urban densities. Once oil peaks, urban densities will begin to decline. A colossal relocation could be on the horizon as the recent flight to the cities reverses direction and people head back to the villages. Overall population will have to find a steady-state equilibrium at a level of ecological impact much lower than today.

Universities

The "Living Routes" program under the leadership of Daniel Greenberg has for 20 years been taking students from different American universities into ecovillages in Africa, Europe and Asia. Students and faculty experiencing the EDE create "learning communities" within "living communities," and apply new knowledge and skills to the creative solution of real life problems. EDE's are increasingly being requested at universities, as they are of relevance to the students and to transforming society. Cooperation has emerged in many countries.

In Brazil, partnerships between city universities and Gaia Education have been a major factor in spreading the EDE.

Students experience the thrill of translating conceptual material into results, right there, as a process of learning. In the EDE, there is no artificial distinction between acquiring knowledge and using knowledge; they are part of the same flow. Knowing but not acting is tantamount to not knowing at all. Learning is the successful application of knowledge and the re-organisation of lifestyles. The inner

structure of the EDE provides a richly trans-disciplinary approach to the acquisition and assimilation of knowledge. Knowledge is not separated and isolated into little 'bits,' or reduced to some atomistic 'unit,' but has immediate relevance across the full spectrum of experience. What's more, knowledge is not presented simply for the sake of adding to the store, but is always focused and centred on one overarching theme: the design and implementation of truly sustainable human habitats. Physics as well as plumbing can be approached in this way. University students appreciate the release of their full creative potential as it is directed toward relevant problems that affect them and their futures most intimately. Students will also appreciate being able to thread all they have learned - both in and out of school - into a richly colourful fabric that is a unique expression of their own special gifts and talents.

Here are a few insights about developing relationships with academic institutions:

- Prepare yourself: Call a series of meetings with all interested persons to develop a proposal for your community and, eventually, a potential academic partner.
- Choose your potential partner(s) wisely: Collect and study current materials such as mission statements, course catalogues, "State of the Campus" and Strategic Planning documents, and organisational charts of administrative and decision-making structures. Are these all compatible?
- Get to know key players: Talk with people in a wide variety of offices, including Study Abroad, Admissions, Accounting, Publications, Registration, and Communications.
- Consider your options: There are many ways to build bridges between an ecovillage and an academic institution. Here are a few ideas:
 - Thematic ecovillage tours
 - Collaborative research projects
 - Ecovillage-based courses
 - Opportunities to pursue internships
 - Joint educational and service programs
 - A set of ecovillage-based programs

Virtual

Through UOC, The Open University of Catalonia, Gaia Education offers an 8 months Internet post-graduate course called GEDS, Gaia Education Design for Sustainability in Spanish and English. Students are supposed to spend 2 hours a day at a time of their choice learning. This makes it possible for people all over the planet to attend a course even if they have a job and without having to travel. A global classroom with up to 20 students is formed with several forums for discussion and sharing tasks, assignments and designs. 4 teachers cover one section of content each. They get access to well designed Internet pages with relevant reading material. Even under these circumstances it has been possible to preserve the openness and creativity of the ecovillage culture. In 2014, we hope and expect the course to be accredited for university students throughout the EU.

A less academic course has also been offered through UOC since 2008, and will continue to be offered to all interested parties. In sum, Information Technology offers interesting, and yet to be fully explored, possibilities for creating a "virtual" dimension to ecovillage design education. This dimension

will greatly assist the goal of making the EDE accessible to any group or initiative in the world working on issues of sustainable community design and development.

Schools

Answering to a demand for an EDE for school children Gaia Education has for a while been experimenting with the concept. The goal is to give children a feeling of global solidarity and that there are solutions to all miseries they hear about and see, and thus give them courage and optimism about the future. A key learning is that cooperation is better than competition. Another is to help them to trust their own divine centre and source of creativity. A third is to give them tools to help them in staying balanced in confusing times.

All modules of the EDE are relevant for children from elementary school to university. It may be organized as special weeks (4 weeks course, possibly spread out over the year) or integrated into a one-year program - or as project work running through all activities at the school. Many ideas will be easier to implement in small schools with access to land and nature. Eventually, a program will hopefully emerge suited to be introduced on a national level. Some of the ideas for content follow:

Worldview

Children must learn to feel their bodies at all levels and learn to relax when stressed. Dreams are easy for them to remember and express through art. They should learn how to write a diary. They should get comfortable with touching other children (massaging each other), learn to listen to nature and to the group. They should learn to respect nature and care for animals and birds.

Social

The classroom is seen as a community. Pupils learn facilitation, conflict resolution, taking leadership, creating rituals etc. It may be several hours a week or it may be a special week set apart for a theme, e.g. learning to be part of a local community and helping those in need. Projects should/could be organized across age groups with the older pupils teaching the younger ones.

Economics

The school may turn itself into production units, stores and a whole village with its own complementary currency for exchanging favours. They should learn the basics of earning and spending money and taxation. They need to learn that money has no value in itself, but is a tool to help achieve real wealth in building up a loving and well-functioning local community where all are respected for what they can contribute.

Ecological

Children should learn about food miles, transportation of food, nutrient cycles. What is being produced locally? And they should learn how to grow food. They should have access to a garden nearby where they care for their own vegetables and plant trees. They should learn to cook over fire. Learn about life cycles, the circular flow and dependencies of plant and animal systems, including the importance of healthy soil, water and air. They might design a chicken house, find out how to look after chicken, what to feed them. Or they may learn about their own body ecology. Energy is a topic they will understand. Energy saving. Renewable energy. Design a house, a garden, a village.



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