



Spring 2014 **GICEL**

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Maintaining Humanity's Life Support Systems in the 21st Century

I have taken for the title of this article the title of the last of a series of public lectures presented in Vancouver in March 2014 by Simon Fraser University. The objective of the lecture series was to share with the public the insights of scientists from around the world about how knowledge of ecosystem and climate change in the distant past can help us understand and deal with the changes facing humanity today and for the foreseeable future. The main takeaway for me from the lectures was that though extreme change in natural conditions has been an ongoing feature of Earth history, at no time in the past have the changes been as rapid as in the last 300 years.

So dramatic and rapid has been the change since the beginning of the industrial revolution in the 18th century that scientists have given an informal name to this time, designating it as the *Anthropocene* epoch of Earth history. The name intentionally recognizes that the driving force of change in this period has been human activity, which has compressed into hundreds of years change that in the past occurred over many tens of thousands of years.

The major changes explicitly studied by scientists include the following: fluctuations in global temperature; extinction of species; the

spread and loss of biodiversity; and collapse of ecosystems. Apart from the rapidity of change, the other major factor making the *Anthropocene* different from all previous epochs of Earth history is the huge and still growing human population on Earth and its concomitant investment in the trappings of civilization. Because human civilization depends for its very existence on favourable environmental conditions on Earth, any adverse changes will have devastating effects on human settlement worldwide.

The huge implication of what has been said above is that humanity is engaged now, and will be increasingly engaged in the future, in the management of the natural ecosystems of the planet. This is a task for which human beings, given their historical preoccupation with cultural, political and economic affairs, are totally unprepared. Hence, what the title of this article is meant to suggest is that citizens of the 21st century, most of them still children or as yet unborn, will be charged with the responsibility of maintaining the very life support systems on which *all* life depends.

A fundamental question arising from this understanding is: What kind of education should we be investing in to prepare our children and grandchildren for this



unprecedented challenge in human history? This should be a question at the forefront of government policy on education in every nation on Earth. Unfortunately, the evidence is all too clear that education today is primarily focused on preparing children for life in a world that will no longer exist for most of their adult lives.

Clearly, if the major challenge of the future is to maintain humanity's life support systems, we need to be cultivating in our children a love of the natural world; for we know all too well that human beings will not act to care for something they do not love or cherish. An intellectual understanding of what is at risk is not enough. What is required is deep, passionate love for nature, supplemented with the best scientific understanding of how ecosystems work, and what must be done to preserve them.

This kind of ecological learning lies at the heart of what GICEL, the Gulf Islands Centre for Ecological Learning, is committed to and has been fostering in the Gulf Islands of British Columbia for more than 10 years. We are excited that parents and grandparents keep sending their children year after year to our Summer Earth Education Programs. The story of last year's programs and our plans for expansion are contained elsewhere in this newsletter. To register for programs in the summer of 2014, please go to www.gicel.ca, but do so soon, as programs quickly fill up. At www.gicel.ca/donate/ you can also **donate** to support the work of GICEL and be assured that every dollar will go directly to helping us support more children to participate. We hope our readers will spread the word so that we reach more children, and the influence of GICEL's work can spread to other educational efforts so important for the future.

To conclude, I would like to encourage our readers to consider a consensus statement put together by scientists from around the world about what the issues are for maintaining our life support systems and what needs to be done by people now. The development of this statement was facilitated

by the scientist who presented the last in the series of lectures I mentioned at the beginning of this article, and from whom I took the title "Maintaining Humanity's Life Support Systems in the 21st Century." The scientist is Dr. Anthony Barnosky, a paleoecologist at the University of California at Berkley. Dr. Barnosky told his audience at his lecture that for the first time in 30 years he is now hopeful that political and business leaders are beginning to understand the seriousness of what lies ahead and what needs to be done now to prevent the worst of it. He believes that the most important thing now is for the public to step forward and urge the leaders to take action to reduce human impact on the environment.

For full details of the work of Dr. Barnosky and his colleagues see the website <http://consensusforaction.stanford.edu/>. Here you will also find the consensus statement, which you are invited to endorse by adding your name. I encourage you to do so, and with your name also your voice on behalf of our children and grandchildren, and indeed all life on Earth.

*Desmond Berghofer PhD
Vice-Chair*



SEEC

Did you know that there is a full credit high school semester program on Saturna Island based on the philosophies and values of GICEL? The Saturna Ecological Education Centre (SEEC) welcomes students from all of the world for four month environmental leadership terms that earn them credits for English, PE, Natural Sciences, Teaching & Learning and an Independent Directed Studies course that they get to co-design and explore in any topic of their choice with the support of a local Community Mentor!

SEEC students live and learn on Saturna three days and three nights per week, living off the grid, preparing and cooking their own meals on a wood stove, and learning about the world around them through integrated, place-based, nature-immersion experiences. This fully funded public school program is open to grade 10-12 learners who want to experience a truly different way of learning in a way that may lead to greater personal and environmental sustainability.

In our first seven years of existence, we have welcomed learners from each of the Gulf Islands, Gabriola Island, Nanaimo, Victoria, Vancouver, Richmond, Surrey, Abbotsford, Mission, Quesnel, Saskatoon, Lilloet and Japan!

We can accommodate 12 students each term based on the number of bunks we have in the two funky little cabins that are designated for each gender. Each SEEC week runs from Sunday night to Wednesday afternoon, allowing the students to have a

four-day weekend at home to get involved in other activities, school programs and work. Each day is quite intense and full, as we acknowledge and promote authentic learning right from waking up in the morning, to guest speakers and fun activities in the evenings.

Our students are trained and act as “Enviromentors” for visiting school and community groups who come to Saturna for day programs involving everything from marine studies, ecology games, and geocaching to First Nations learning, disc golf and backpacking. This spring, for example, our students will be leading over 150 young visitors from the Gulf Islands, Victoria, Vancouver, Calgary and Australia, reinforcing our own leadership skills and ecological knowledge, while also introducing others to the value of being outside and getting to know the natural world.

Each semester also includes a “shared ordeal” group bonding experience, which often includes a weeklong trip involving backpacking, sailing, cycling or road tripping in our little bus! The last three years have featured backpacking trips along the Juan de Fuca Trail and Garibaldi Provincial Park,





as well as sailing trips through the San Juan and Gulf Islands. Our P.E. program is very active and a very authentic part of what we do each day. We have developed our own 18-hole forest disc golf course and hidden over 25 geocaches in Saturna Island for visitors to find!

Our Natural Science coursework varies by semester depending on who is involved, the seasons, and what is happening in the world around us. Our students have earned credit for Biology 11, Geography 12, Science and Technology 11, Science 10 and Sustainable Resources 11/12. We also share hands-on, minds-on course experiences in First Nations 12, Tourism 11/12 and Personal Planning.

Our Independent Directed Studies course is designed to encourage each of our students to explore an area of personal interest, along with the guidance of a local Community Mentor. Our people have constructed buildings, designed and made their own clothing, become sailors, invented solar dehydrators, ridden horses, ocean kayaked, cooked amazing meals, written and directed plays, composed music and poetry, developed and led workshops, danced, explored energy healing, blacksmithed tools,

erected ornate gates, trained sheep dogs, cared for miniature horses, fixed cars, learned about alternative energy systems, and engaged in environmental activism!

Reading, writing, speaking, listening, discussion and presenting are infused throughout all that we do, making our English

coursework meaningful, engaging and relevant. Our students publish much of their work and are continually reading, writing and talking about real-world topics that are important to who and where they are in the world. Much of our “work” takes place in outdoor settings, with the diverse ecosystems of the Gulf Islands as our giant environmental classroom.

Registration has begun for the 2014/15 school year and we are already half full for the fall term. You can find much more information about the SEEC program by checking out our website <http://www.seec64.ca/> where you will find the full application package and contact information. We encourage all interested students and their families to come for a visit this spring to see if our program could be right for them! You do not need to be a part of the Gulf Island school district, though you would become one of us if you are accepted for a semester of exciting ecological adventures! For quick contact please call Steve at 250 539 2472 or 250 537 7793 (cell) to get the ball rolling towards a SEEC semester for you or your teen.

*Steve Dunsmuir
Principal Educator SEEC*

Our 2013 Program Activities

Junior Leaders Training Camp

During Spring Break 2013, GICEL senior staff held a 2 ½ day training camp for young teens interested in helping at our Summer Earth Education Programs (SEEP). In all we had 9 participants and 5 senior leaders attend. The camp was held on Mayne Island and the group spent the whole time camping in their own hand made shelters. Through the time spent together the group learned about their responsibilities for the summer programs, safety, and some of the program activities/ explorations they could lead. Each participant was also expected to lead the whole group through a relevant activity of their choosing, after which the group provided feedback on the activity. This process was very valuable in helping the younger potential leaders gain

confidence and accept comment from their peers.

The process has allowed our leaders to be able to assess potential junior staff in real life settings and has proven to be very valuable. The participants have come away with some improved social and collaborative skills, some sense of leadership and comfort with being outside in all weather conditions.

Seedlings 2013

This year was the inauguration of our new program for 3 to 5 year olds – the Seedlings Program. It was held on Mayne Island with a first group of 9 children.

The *Seedlings* program was held at a peaceful, secluded home-place on Mayne Island, with access to a large meadow and an open forest landscape, criss-crossed with trails. This provided the children a child-friendly place to play freely, discover, create, explore, experience and deepen their connection



with the natural world. Nine 3 to 5 year olds participated. In addition, there were two volunteer junior counsellors in training (10 and 12 years old) The Seedlings camp provided an excellent opportunity to mentor these two young people in the role of camp-facilitator. It was an asset that both juniors have had several years' experience as participants in the SEEP program on Mayne Island. The group was guided through their half day activities by the two early childhood educators and one childhood educator in training.

The camp routine found a happy balance with both structured and free-play, and time for both energetic and restful activities. These included:

- Nature oriented stories and songs at rest times
- Daily nature-based explorations, observation and related creative activities associated with our discoveries
- emergent curriculum examples include map-making, spider-web observation & weaving, discovering examples of camouflage, insect observation, creating art-in-nature with natural objects
- Daily hikes and “bush-whacking”
- Daily sensory-based activities and games that explored hearing, sight, smell (see the Scent Game), touch and taste (for example, foraging for salal berries)
- Lots of opportunity for imaginative free-play within the landscape
- Environmental installations, and story creation—i.e. building forts and webs and inhabiting them
- Activities & games that included dress-up & art activities, and vigorous physical play

The parents were happy with the content and delivery of the camp curriculum, the location of the camp, and especially with the opportunity for their preschool age children to play and learn together in nature. (Report provided by Tina Farmilo, Seedlings Coordinator.)

Summer Earth Education Programs

Again in 2013, we were able to provide our SEEP programs on four of the Gulf Islands – Salt Spring, Penders, Mayne and Saturna islands. Each island program provides young participants with opportunities to explore nature on their own terms, learn about natural phenomena with the help of our expert leaders and enjoy comfort and fun in nature through games and play. The activities provided are wide-ranging, from forest adaptations to marine ecosystems, from use of natural materials to using all your senses to explore and from role playing the life of a salmon to exploring intertidal marshes. Specific themes also included our Pender Garden camp which immerses participants into the world of plants we eat and admire and Salt Springs Powerful People which explores human interactions with nature.

In total 157 participated in our programs for 2013 and we were able to provide employment to 10 senior leaders and 12 junior leaders. We gratefully acknowledge and thank all the volunteers, donors and local service organizations who continue to support GICEL's summer programs

Senior Leaders Fall Retreat

In early October, summer program coordinators from each island gathered near Shawnigan Lake on Vancouver Island to share ideas, critique the past year programs, start planning for the 2014 year and to celebrate accomplishments. The group spent a day and a half together working toward ensuring that GICEL remains relevant and flexible. The general consensus was that the GICEL vision and mission are as relevant today as they were when first developed in 2001. It was also noted that the core context of GICEL's philosophy – that our programs are designed to guide young participants through their own learning and instill a lifelong connection to nature using science, art, music, play and unstructured explorations- has become even more important and perhaps imperative.

Michael Dunn

Gulf Islands Centre for Ecological Learning Summer Earth Education Programs 2014	
Pender Island June 30 to July 4, 2014 Nature Program August 4 to August 8, 2014 Garden Program Contact: Andrea Mills (gicel_pender@hotmail.com) vFee: \$200 per participant per week	Salt Spring Island July 7 to July 11, 2014 July 14 to July 18, 2014 Contact: Klare Yakabuski (klareyakabuski@hotmail.com) Fee: \$200 per participant per week
Mayne Island July 21 to July 25, 2014 Seedlings Program (3-5 year olds) half day program Contact: Tina Farmilo (tinafarmilo@shaw.ca) Fee: \$140 per participant July 28 to August 1, 2014 Forest Program August 4 to August 8, 2014 Marine Program Contact: Jessica Willows – (jwillows@sd64.bc.ca) Fee: \$200 per participant per week	Cortes Island August 20 to August 27, 2014 Environmental Leadership Apprentice Program (13-17 year olds) Contact: Andrew McPhee (amcphee@sd64.bc.ca) Fee: \$500 per participant (includes all transportation, meals, accommodation) Please note that limited bursaries are available for all GICEL summer programs. Contact the identified coordinator for more information.
Saturna Island August 11 to August 15, 2014 Contact: Jessica Willows– (jwillows@sd64.bc.ca) Fee: \$200 per participant	

Report from GICEL Board Chair

For Year January 1, 2013 - December 31, 2013

GICEL again offered its popular Summer Earth Education Program (SEEP) in 2013, and continued its working partnership with School District 64 (Gulf Islands). Reports about SEEP and about SD 64’s Saturna Ecological Education Centre (SEEC) program are elsewhere in the Newsletter.

Board Membership

The members of the GICEL Board of Directors for 2013 were: Michael Hoebel (Chair), Desmond Berghofer (Vice-Chair), Shelly Johnson (Treasurer and Co-Secretary), Lisa Halstead (Co-Secretary), Michael Dunn (Programs), Cate McEwen, Steve Dunsmuir, Marie Mullen, Andrew McPhee, Jeff Hopkins.

Board Meetings

Meetings of the Board were held on February 8, 2013, May 31, 2013, and September 20, 2013. The Annual General Meeting of the Society was held on May 31, 2013.

*Michael Hoebel
Chair*



G.I.C.E.L.

Gulf Islands Centre for Ecological Learning

Throughout the world awareness is spreading that people must form a new relationship with the Earth—one that will allow civilization to prosper rather than flounder in global conditions hostile to life. The key to building this new relationship is ecological learning. For more than ten years GICEL has championed the new learning programs that must one day be taught to all children.

We are honoured that you are a supporter of this good news story and we ask that you help us to strengthen our programs and to reach out to many more students by supporting us again with a donation.

Here is my contribution to GICEL

Name _____

Address _____

Phone _____

E-mail _____

Send a Child to Camp for a week

1 child \$175 \$ \$ _____

2 children \$350 \$ \$ _____

3 children \$525 \$ \$ _____

Charter Membership (includes life membership) \$1000 \$ _____

Family/Individual Annual Membership \$25 \$ _____

Organization Membership \$50 \$ _____

Other Donation \$ _____

Total Donation \$ _____

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