Epilogue

Arjen E.J. Wals

Journey or destination?

The end of this journey exploring the intersection of environmental education, intergenerational learning, and transformative leadership – which coincides with the end of the United Nations Decade of Education for Sustainable Development – provides a good opportunity to reflect on where ‘we’ are. We between quotation marks as it is not so clear who will be reading this book, this Epilogue and how it will be read given the different vantage points and backgrounds the readership of this book is likely to have. Not only that, ‘we’ are unlikely to be in the same place – many of the authors stress the importance of providing space for diversity and being in different places and recognizing the generative potential of ‘difference’ as a quality of leadership for sustainability. It is unlikely and even undesirable that the various chapters will speak to every reader in the same way.

In the original call for chapters it was stated that ‘this book will share the creative and innovative contributions that academic centers, networks, and programs are making to advance strong sustainability in education...’ but also that it would help deepen the reader’s understanding of ‘strong sustainability’. The solicited contributions were guided by questions related to the ethical and moral imperative of intergenerational learning and transformative leadership, the necessary methodologies and tools for strengthening such learning and leadership, and about the roles centres, networks and existing programs in its development. Many authors followed closely to this premise while others took a different approach. All link intergenerational learning and/or transformative leadership to education for sustainability.

In this Epilogue, I will not attempt to answer the initial questions raised or comment on each of the topics identified in the call for chapters, or even try to reflect on individual chapters, but rather try to sketch the landscape that I see emerging from the book. Obviously this is a personal interpretation informed by my own journey, background and vantage point which is grounded in critical thinking, transformative social learning and in a range of ‘planetary educations’ of which environmental and sustainability-oriented education are closest to me.

Reflecting on people, planet, and profit

This is the year in which the UN Decade of Education for Sustainable Development will end and during which the field of environmental education will be fast
approaching its fiftieth anniversary. When looking at the so-called ‘triple bottom line’ of People-Planet-Profit and reviewing how it has fared during these 50 years the picture is still rather grim. When considering the state of the planet today we can only conclude that despite some patchy progress in certain parts of the world, the overall picture remains rather grim as we are facing continued loss of biodiversity and ecosystem services, runaway climate change, and increased toxicity in our waters, air, soils and bodies.

When looking at the state of the people we can see that many people across the globe have become wealthier with access to consumer goods, information and communication technology (ICT) and, increasingly, to education. However, even today there are close to one billion people without access to clean drinking water and access to fair and meaningful jobs. One billion people are currently malnourished while another one billion is overweight or even obese. Abuse of power, inequality and marginalization remain prevalent. And, how about all those people on the run or in shelters due to natural disasters and aggressive religious fundamentalism? Indeed when considering the triple bottom line over the last 50 years we can only conclude that the ‘p’ of profit has done dramatically better than the other two Ps.

Perhaps the only thing that has changed over time is the interest of the private sector in environment and sustainability. Although policy-makers welcome the interest of the corporate world and the private sector in environmental education, and particularly education for sustainable development, educators are cautious in embracing this interest as they fear that people and planet are being hijacked by profit. In the end it is not the green economy but the green society that matters, a society in which people and planet are served by the economy and not the other way around. The same holds true for education: while we are seeing education and life-long learning being re-orientated to the world-of-work to serve economic interests, education and learning designed with people and planet in mind is at risk of being squeezed out. Fortunately, there are growing niches both in education and the world of business where alternative educational and economic models with people and planet in mind are being designed and implemented.

Apparently and cynically perhaps, 50 years of EE and 10+ years of ESD, not to mention a number of other related educations, have not been able halt the train of economic globalization and thus currently fail to enable a transition from ‘doing the things we do better and more efficiently’ to ‘doing better things’. With the state of people and planet in continued decline and the urgency to respond greater than ever we urgently need to reconsider and re-imagine the role of education and learning in finding ways for people – young and old – and planet to develop in harmony, as well as develop the kind of leadership that is needed for supporting this.
First, let us recognize that a continuous and inevitable problem for both educators and policy-makers is that although we have quite a good sense of what is ‘unsustainable’, we have little certainty about what in the end will prove to be sustainable. In fact, we will never have such certainty. It can be argued that the essence of sustainably and associated learning lies in the ability to respond, reflect, rethink and recalibrate, and not just once but periodically when changing circumstances demand us to do so. To complicate things further: how this is done and to what kind of society this will lead, will be different from place to place as no situation is identical.

It is no surprise that given these uncertainties and the inevitable lack of fool proof solutions that withstand the test of time and work no matter where you are, ‘the meaning of sustainability is shifting towards the ability to continuously reflect on the impact of our current actions on people and planet here and elsewhere, now and in future times.’ Perhaps a key lesson from the DESD is that we now recognize that sustainability as such is not a destiny or a way of behaving that can be transferred or trained but rather a capacity for critical thinking, reflexivity and transformation. This is a position most contributors to this book seem to be comfortable with in spite of their diverse backgrounds. The DESD reviews that UNESCO commissioned me to carry out (Wals 2009a,b, 2012) show that much ‘work’ is being done around the world under the umbrella of ESD, but that this capacity for critical thinking, reflexivity and transformation is hardly emphasized or developed in practice. As such ESD unwillingly runs the risk of replicating systems and lifestyles that are inherently unsustainable. More is needed if ESD is to become a catalyst of a transition towards ‘a reflective society consisting of responsive, capable and critical citizens with a planetary consciousness leading meaningful lives in peace’.

When considering the capabilities needed to transition towards a more sustainable world we can distinguish: anticipatory thinking, systems thinking, inter-personal skills and critical thinking (see for instance Wiek 2011) as well as certain qualities such as empathy and empowerment. Furthermore, dealing with insecurity, complexity and risk are considered critical capacities or competencies for moving people, organizations, communities and, ultimately society as a whole, towards sustainability. During the DESD social learning has gained popularity as a form of multi-stakeholder engagement that is increasingly seen as particularly promising in developing such capacities and mind-sets and as a mechanism to utilize diversity in generating creative routine-braking alternatives.
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Reflecting on learning and leadership

Now let me turn to the importance of intergenerational learning and transformative leadership. As we live in a world that is in constant flux, one that changes continuously often in unexpected ways; a world in which what we believe to be true today may turn out to be false tomorrow; a world also in which we find ourselves more and more connected to the world of cyber-controlled big-data at the expense of physical connections with people, places and the natural world. It is in this world where we need to find forms of leadership and learning that can help us not only cope with the associated complexities, indeterminacies, and loss of identity and sense of place but that can also help in developing countermovements, trends and lifestyles that provide tangible and achievable futures that are inherently more sustainable than the ones in prospect.

To allow for the development of these capacities and enable social learning there is a need to create spaces for so-called hybrid learning (Wals et al. 2014). This refers to hybridized environments in which people can learn in new and more meaningful ways involving different societal groups and perspectives and in unconventional localities often outside of institutional boundaries. Only then can we begin to engage in the sustainability challenges of our time, such as climate change, malnutrition, loss of food security and biodiversity. This ‘hybridization’ also calls for a culture that embraces the authenticity of multiple voices and cultural and theoretical perspectives, new forms of representation, and more change-oriented and community-based approaches. Several authors in this book reflect on such approaches and the kind of ‘boundary crossing’ that is needed to make them generative in creating routine-breaking solutions to existential sustainability challenges.

A particular strand of boundary crossing and a mechanism for facilitating intergenerational learning for sustainability is ICT-supported Citizen Science, or Civic Science, which emphasizes the active involvement of citizens, young and old, in the monitoring of local socio-ecological issues by collecting real data and sharing those data with others doing the same elsewhere through social media and on-line platforms (Wals et al. 2014). The ICT-component does raise another challenge, one largely neglected during the DESD, namely, how to connect biophilia and videophilia: that is, study ways in which ever-present technologies and cyberspaces can be used to help people (re)gain a deeper and more empathetic contact with each other and with the world – as presently these technologies and spaces tend to lead to the exact opposite. There are entire generations growing up in and ICT-inundated environment where connections with the physical ecological world as well as with the life social world become so weak that they lead to attention related disorders such as; depression, radical introversion, social isolation, loss of identity
and so on, it becomes crucial to find ways to restore meaningful connections. Intergenerational learning might help in realizing such restoration as does the redesign of ICT in a way that helps young people to connect with people and place in a meaningful way.

**Post-Decade of Education for Sustainable Development**

Finally, this book informs the post-DESD Global Action Program for ESD in several ways. In the concluding chapter of the full report of the second DESD review (Wals 2012, p. 64-68) a number of premises of ESD were listed that all seem to resonate with social learning. These premises are:

- **ESD implies a life pedagogy which recreates the model of the present society and presents a more sustainable civilization project, with social justice and reduction of poverty.**
- **ESD implies a new idea of curriculum, based on meaningful subjects and inter-disciplinary proficiency which contributes to build a feeling of belonging to the Planet.**
- **ESD implies cooperative, supportive, dialogic and democratic learning processes, which require the participation of all members in the planning, execution and evaluation of education.**
- **ESD implies new public policies that can articulate the educative potentialities present in schools, civil society, government and in the private sector aiming at activities, projects and plans that intermingle when in action.**

In the post-DESD era and in the Global Action Program for ESD it will be crucial to support and further develop ESD as a catalyst for a transition in education, teaching, learning and professional development towards more holistic, integrative and critical ways of tackling sustainability issues. Doing so will require the strengthening of multi-stakeholder social learning in hybrid or blended learning environments and the creation of (sometimes temporary) vital coalitions of actors jointly seeking change, innovation and transitions towards sustainability. At the same time it will become crucial to find ways to assure the more equitable inclusion of marginalized or ‘powerless’ groups, peoples and perspectives that may not be not be in the mainstream, but could very well hold the key towards re-orienting society towards sustainability. The issue of power and inequity has hardly been touched upon within the DESD. It is often the prevalent and dominating ideas and routine ways of doing things ‘as usual’ that blind us from seeing their shortcomings and keep us from developing healthier alternatives. As such the inclusion of new and fresh perspectives and giving voice to the marginalized can be justified both on moral grounds and on sustainability grounds.
Young people and older people are often among those who are marginalized and powerless: both are essential as the chapters on intergenerational learning in this book point out. Young people offer a different and oftentimes creative look at what’s going on in the world and how things can be done differently, while older people – in many parts of the world – the largest portion of the populations with the biggest ecological footprint – have a tremendous potential in contributing to sustainability by sharing lessons from the past and their accumulated wisdom, offering their spare time to support younger people’s learning and re-thinking their own lifestyles.

Simultaneously mechanisms will need to be put in place to ensure the effective involvement of stakeholders from all levels and fields of society in the decision-making processes. Governments can support sustainability educators by stimulating the creation of ‘learning environments’ at the societal level: creating spaces where sustainability practitioners meet, learn from each other, join forces and strengthen their individual activities. One mechanism to be developed further is the role of social media, the internet and other ICTs in strengthening participation and engagement in transitions and transformations towards sustainability. There are several examples at the international policy-making and lobbying level that show that this mechanism can be powerful in mobilizing groups and voices from around the globe. The process of the online involvement of multi-stakeholder groups in the Rio+20 outcome document ‘The Future We Want’ (UN 2012) is a good example of ICT-supported social learning in the context of SD. All of these mechanisms require leadership that encompasses the special qualities that are needed to support transitions towards sustainability, many of which have been articulated in this book: empathic understanding, nurturing creativity, energizing and inspiring, commitment and trust, bridging and bonding, facilitating interactive processes and building vital coalitions of stakeholders, utilizing diversity, communicating results and providing feedback, to name a few. Such leadership can be either condensed within a few talented selfless individuals or can be distributed among groups.

Indeed, it takes leadership and all generations to take a meaningful and practical approach to the pursuit of a more liveable, enjoyable and healthy future that does not compromise the carrying capacity of Earth and the future of other species. This clearly is more than just linking up the content of, say a school’s curriculum to sustainability issues like climate change, loss of food security and pervasive poverty; it also involves developing new competencies such as dealing with complexity, uncertainty and confusion, and devising and implementing meaningful local solutions. The post-DESD Global Action Program for ESD will have to put more effort into stimulating and supporting ‘hybrid learning environments’ that blur the boundaries between science and society, school and neighbourhood, and local and global. Education for sustainable development and environmental education
will need to incorporate intergenerational learning and transformative leadership in ways that will help them thrive and move from the margins to the mainstream.

References


Afterword

Achim Steiner, United Nations Environment Programme Executive Director and Under-Secretary-General of the United Nations

To understand the far-ranging and profound implications of Earth’s changing ecologies, it helps to take a wider perspective. Professor Paul J. Crutzen, one of the world’s most respected scientists and a Nobel Prize winner in chemistry, suggested that beginning with the industrial revolution, we entered an entirely new geological epoch: the age of the Anthropocene. The suggestion has received widespread support from the scientific community. From this perspective, the human species has moved from being just one thriving species amongst many others to being the dominant species – and the most influential factor in the future of our planet. Our collective impact today is changing the planet’s life support system.

The concepts of intergenerational learning and transformative leadership are necessary to understand and respond to an array of global sustainability challenges: food security, energy security, climate change, the loss of biodiversity, resource efficiency and the challenge that within the next decade a third of humanity’s population will suffer from water shortages.

In light of these challenges, it is very easy for a citizen of the world to feel powerless: ‘what difference can I make to world hunger, to lower carbon emissions?’ Environmental education and education for sustainable development must therefore work to help us appreciate the magnitude and complexity of these challenges, but also to empower people and strengthen their belief that they can make a difference.

The contributors to this volume make a persuasive case that fostering agency and empowerment through transformative leadership can assist in this endeavor. The scholars and practitioners assembled here provide new concepts and models for equipping people with the courage and hope to believe in their own ability, first of all to understand, and then to make a contribution. It is in this context that environmental education is much more than just the curriculum in schools or in universities, it is about knowledge and empowerment.

This book provides valuable perspectives and practical examples of the intergenerational collaboration, such as UNEP’s Global Universities Partnership on Environment and Sustainability (GUPES) that will transform environmental leadership. It also shows the way to an emerging theoretical base for the environmental education we need for the sustainable future we want.
While 2015 will mark the end of the United Nations Decade of Education for Sustainable Development, environmental education and education for sustainable development will remain integral to the post-2015 policy environment. At Rio+20, member states agreed to develop a set of Sustainable Development Goals (SDGs) to build upon the Millennium Development Goals and converge with the post-2015 development agenda. The reduction of poverty and the increase of human health and wellness will be vital to these goals, and impossible without due consideration of strengthening and integrating the environmental dimension of sustainable development. We should all be heartened by the intensity with which the discussion about SDGs has unfolded since the Rio Summit and the Green Economy discussions. Indeed, just a year and a half later, the world is in the midst of evolving the next paradigm and agenda for sustainable development. The UN has reached out, literally to hundreds of thousands of people to contribute to this discussion. We are confident that we will indeed have a new set of SDGs by 2015, as part of the post-2015 development agenda.

The late Nobel Peace Prize Laureate Wangari Maathai, whose model of transformative leadership I greatly respect and admire, posed a challenge to UNEP a few years ago. She said:

I have been planting trees with millions of people. It is time we took this into a global campaign. I will challenge you not to talk about 10 million trees. Instead, I want to call for people to plant one billion trees.

I must admit that I was very nervous at the time as to whether the call to plant trees would be listened to – even with the support of such a wonderful patron as Wangari Maathai. Extraordinarily, however, only three years later the world responded in unimaginable ways, planting over 14 billion trees in response to the UNEP campaign. This example embodies intergenerational learning and transformative leadership for sustainable futures. UNEP simply gave the world an opportunity to act, to connect, to inspire one another and to be able to respond individually and collectively to climate change. The initiative gave people the ability to connect the planting of one tree with absorbing carbon dioxide and making an impact on climate change.

This tangible activity of restoring ecosystems was obviously immensely powerful for the people who participated. Herein lies another part of the environmental education challenge of today. We need to create positive opportunities. It is not only about imparting information or educating people in the traditional sense – it is about empowering people to become active themselves. And whether they are 5 year-olds or 90 year-olds, the extraordinary thing is people respond with immense enthusiasm if they are provided with the rationale and an opportunity to act.
Biographies editorial team

Corcoran, Peter Blaze

Peter Blaze Corcoran is Professor of Environmental Studies and Environmental Education at Florida Gulf Coast University, where he serves as Director of the Center for Environmental and Sustainability Education. Corcoran was awarded a Fulbright Fellowship for the 2013-2014 academic year at University of Nairobi in Kenya. In 2014-2015 he continues to work in Kenya to advance the legacy of Wangari Maathai. He has been a faculty member at College of the Atlantic, Swarthmore College, and Bates College, and a visiting professor in Australia, The Netherlands, Malaysia, and Fiji. He is Past President of the North American Association for Environmental Education. He is a Senior Advisor to Earth Charter International in San Jose, Costa Rica. He serves as a member of the UNESCO Reference Group for the United Nations Decade of Education for Sustainable Development. He is a member of the President's Council of the National Wildlife Federation, America's largest conservation organization. He was recently appointed as a Senior Fellow with the US Partnership for Education for Sustainable Development. He represents North America on the steering committee Global University Partnership for Environment and Sustainability of UNEP. Corcoran is a member of the editorial board of several scholarly journals and has edited books in environmental education, Earth Charter education, and sustainability in higher education.

Hollingshead, Brandon P.

Brandon P. Hollingshead is an instructor of Interdisciplinary Studies and Civic Engagement at Florida Gulf Coast University, where he is also interim director of the Center for Environmental and Sustainability Education. His academic and teaching interests are in rhetoric of sustainability, humanities and sustainability, service-learning, and civic engagement. Hollingshead’s master thesis from the University of Utah was on ‘Crafting Principles for Sustainable Development: Rhetorical Negotiations in the Drafting of the Earth Charter and Johannesburg Declaration on Sustainable Development.’ He has published and presented on topics connected to youth participation in sustainable development, community-engaged scholarship, and ethical dimensions of sustainability in higher education.

Lotz-Sisitka, Heila

Heila Lotz-Sisitka holds the Murray & Roberts Chair of Environmental Education and Sustainability at Rhodes University, South Africa, where she is also the Director of the Environmental Learning Research Centre. She serves on various national
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**Wals, Arjen E.J.**

Arjen E.J. Wals received his PhD in Environmental Education from the University of Michigan. He is currently the UNESCO (United Nations Educational, Scientific and Cultural Organisation) Chair of Social Learning and Sustainable Development in the Education and Competence Studies Chair Group at Wageningen University. He is also an Adjunct Professor at Cornell University, a Visiting Professor at the University of Gothenburg, and Director of the Centre for Sustainable Development and Food Security in Wageningen University. His fields of expertise include social learning, environmental education, sustainability education, and community-based learning. Prof. Wals regularly supervises international PhD students and has published in numerous peer-reviewed journals. He recently co-authored a paper in Science on the need to link environmental education and science education with citizen science in order to seriously address the sustainability challenges of our time. He is also the editor of the books *Learning for sustainability in times of accelerating change* (2012) and *Social learning towards a sustainable world* (2007).

**Weakland, Joseph Paul**

Joseph Paul Weakland works at the Center for Environmental and Sustainability Education as an editorial associate. He has contributed to several book projects, including *Young People, Education, and Sustainable Development* (Wageningen Academic Publishers 2009), *Fundamentals of Sustainable Development* (Earthscan-Routledge 2012), and *Learning for Sustainability in Times of Accelerating Change* (Wageningen Academic Publishers 2012). Joseph is a fourth-year Ph.D. candidate in the Department of English at the University of Florida. His research interests are wide-ranging, but in general he works within the fields of writing studies, science fiction studies, and environmental and sustainability education. His dissertation charts connections between ecological theories of writing, emergent technologies, and science fiction. The project draws on science fictional thought processes in order to explore the new rhetorical possibilities opened up by emergent technologies, including how these technologies might aid us in our efforts to realize a sustainable future.
Contributor biographies

Abdul Manaf, Normaliza

Normaliza Abdul Manaf is currently a Senior Science Officer at the Centre for Global Sustainability Studies, Universiti Sains Malaysia. Recently she has authored, edited and produced a few publications associated with sustainability. She is involved in the establishment and the day to day management of the South East Asia Sustainability Network (SEASN). In terms of research, at present she is involved with the Asia Pacific Network (APN) Global Change Research. Previously, she was attached with the Doping Control Centre at USM in the international anti doping laboratory. She has 13 years of experience in mass spectrometry with various types of instruments including gas chromatography, liquid chromatography and isotope ratio mass spectrometry.

Abdul Rahim, Asyirah

Asyirah Abdul Rahim is a Senior Lecturer in the Geography Section, School of Humanities, Universiti Sains Malaysia. Currently she is the Head of National Sustainability Unit at the Centre for Global Sustainability Studies. She obtained her MSc in Planning and PhD in Environmental Technology from Universiti Sains Malaysia. Her research interests are environmental management, urban environment, environmental monitoring and auditing, and education for sustainable development. She has served as Coordinator of the United Nations University Regional Centre of Expertise (RCE) on Education for Sustainable Development for Penang. She has published articles in environmental management of dams and construction activities, cities’ resilience to climate change, and education for sustainable development.

Abe, Osamu

Osamu Abe is a Professor at the College of Sociology and Graduate School of Intercultural Communication, Rikkyo University. Being an expert on environmental education and education for sustainable development (ESD), he played a pivotal role in making the Japanese proposal of the UN Decade of ESD at the Johannesburg Summit. He wears a variety of hats, including the Director of the ESD Research Center, Rikkyo University (ESDRC); the president of Japan Society of Environmental Education; the chair of the board of the Japan Council on the UN Decade of ESD (ESD-J); board member of the Japan Environmental Education Forum; and member of the Commission on Education and Communication, the World Conservation Union (IUCN).
Adam, Rahma

Rahma Adam holds a Bachelor of Arts degree in Biology and minor in Anthropology from Macalester College, a Master of Public Policy (MPP) degree from Harvard University, and a PhD degree in Rural Sociology with a focus on International Development and Sociology of Agriculture from Pennsylvania State University. Rahma’s career goal is to use the knowledge and expertise that she has acquired in food security, public health and public policy to contribute to poverty alleviation, raising nutritional levels of the poor, improving agriculture productivity and livelihoods of the rural poor, and gender advocacy.

Ahmad Fizri, Fera Fizani

Fera Fizani Ahmad Fizri is a lecturer in the Environmental Technology Division at the School of Industrial Technology, Universiti Sains Malaysia. She is also an Executive Committee member at the Centre for Global Sustainability Studies. Her research interests are in environmental management, environmental sustainability, environmental monitoring, and auditing. She has been involved in several projects from the Conservation of Pulau Singa Besar, Langkawi; the Kelah Fish of Taman Negara; the Environmental Audit of Beris Dam; and the Development of an Environmental Management System for the Construction Industry. More recently, she was involved in the ‘Integrated Approach to Sustainable Rural-Urban Development and an Inclusive Human Capital Management Programme for Rakyat Sejahtera’. She has published works on environmental management in the construction industry, human capacity development towards reducing vulnerability and increasing adaptability of disasters, sustainable lifestyles, and sustainable production and consumption.

Althoff, Klaus

Klaus Althoff is a leadership expert, facilitator and coach at Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). With his team and network partners he co-created ‘Leadership for Global Responsibility’, GIZ’s value-driven and competency-based leadership development approach. ‘Leadership for Global Responsibility’ offers change drivers from around the world a space to further develop core leadership competencies, collaboratively design innovative prototypes for work-related challenges, and build effective leadership networks on a global scale. Klaus works for GIZ’s Academy for International Cooperation and is based in Bonn, Germany. He has a long track record in international cooperation with human capacity development projects mainly on issues of good governance and regional integration in East Africa, Southern Africa, Central and South East Europe. He studied Political Science, East European History and Political Philosophy in Cologne, London, and Krakow.
Contributor biographies

Asai, Yuichi

Yuichi Asai is a lecturer in the Department of Science and Technology at Keio University, Japan. Previously, he was a post-doctoral research fellow of the Japan Society for the Promotion of Science and was also a research assistant at the Education for Sustainable Development Research Center, Rikkyo University (ESDRC). He has a Ph.D. in Intercultural Communication from Rikkyo University and has been working in the field of cultural anthropology, linguistics, and environmental studies, merging these fields by focusing on aspects of the environment that are inextricably mediated by sociocultural discursive practices. He has undertaken field research in the Fiji Islands on the contextual relationship with the environment, language, and socioculture by focusing on environmental conservation projects, chieftainship, rituals, and the shamanistic practice of indigenous poetry composition.

Barrineau, Sanna

Sanna Barrineau has worked as student coordinator for the course, Climate Change Leadership since 2012. She is also currently working on a project for the development of active student participation at Uppsala University in the Unit for Quality Enhancement and Academic Teaching and Learning. Sanna majored in International Affairs and Environmental Economics and Management at the University of Georgia, USA. She completed her MSc in Environment, Politics and Globalisation at King’s College London.

Behori, Madina

Madina Behori is a recent graduate with a degree in anthropology from Florida Gulf Coast University. As an undergraduate, she served two years as president of an organization in which she coordinated and led students in various service projects benefiting underprivileged youth in the Dominican Republic. This, along with her other international study abroad and service experiences, continue to inspire her passions for people, language, and culture.

Belay, Million

Million Belay is a founder and director of the Movement for Ecological Learning and Community Action (MELCA Ethiopia), an indigenous NGO working on issues of agro-ecology, intergenerational learning, advocacy and livelihood improvement of local and indigenous peoples. He also coordinates the Alliance for Food Sovereignty for Africa, a network of networks in Africa. Million has been working over two decades on the issues of intergenerational learning of bio-
cultural diversity, sustainable agriculture, the right of local communities for seed and food sovereignty, and forest issues. His main interest is now advocacy on food sovereignty, learning among generations, knowledge dialogues and the use of participatory mapping for social learning, identity building, and mobilization of memory for resilience. He has a PhD in environmental learning, a MsC in tourism and conservation, and a BsC in Biology.

**Blome, Christine**

Christine Blome works as a facilitator, coach and consultant in the field of international cooperation and sustainable development. Her focus lies in leadership development and transformative learning approaches in international settings. After focusing on creating and leading international Education for Sustainable Development-exchange programmes for the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Engagement Global, she widened her focus to the application of transformative learning approaches in different sectors. Christine works as a freelancer and collaborates with the social enterprise Impuls – Agentur für angewandte Utopien (agency for applied utopia) of which she is a co-founder. Christine recently co-authored the GIZ ‘Toolbox Leadership for Global Responsibility’. She holds a Diploma in International Adult Education, Psychology and Sociology. She lives and works in Southern Germany and Berlin.

**Bokova, Irina**

Irina Bokova has been the Director-General of UNESCO since November 2009, and reelected for a second term in 2013. She is the first woman to lead the Organization. Having graduated from Moscow State Institute of International Relations, and studied at the University of Maryland (Washington) and the John F. Kennedy School of Government (Harvard University), Ms Bokova has served as Bulgaria’s Secretary of State for European Integration, Minister of Foreign Affairs, Ambassador to France and Monaco and Permanent Delegate to UNESCO, among other distinguished positions. She has been actively engaged in international efforts to advance quality education for all, gender equality, human rights, cultural dialogue and scientific cooperation. She also serves as Executive Secretary of the Steering Committee of the UN Secretary-General’s Global Education First Initiative and co-Vice-Chair of the Broadband Commission.

**Calder, Wynn**

Wynn Calder is principal of Sustainable Schools, LLC, and co-director of the Association of University Leaders for a Sustainable Future (ULSF). Sustainable Schools consults with colleges, universities and K-12 schools to build environmental
sustainability into strategic planning, teaching and institutional practice. ULSF conducts research and writing in higher education for sustainability and serves as secretariat for signatories of the Talloires Declaration. Wynn consults on strategies to ‘green’ campuses, conducts campus sustainability assessments and workshops. He is review editor for the *Journal of Education for Sustainable Development*, news editor for the *International Journal of Sustainability in Higher Education*, and has written extensively on the topic of sustainability education. Wynn serves on the senior council of the Association for the Advancement of Sustainability in Higher Education. He received his BA from Harvard University in 1984 and his MA in Theological Studies from Harvard Divinity School in 1993. Wynn lives with his family in Wayland, MA.

**Chand, Sarika**

Sarika Chand is a Communications Consultant at Pacific Centre for Environment and Sustainable Development (PaCE-SD) where she has worked for over two years, with more than 10 years of experience in the media and communications industry in Fiji and abroad. She has previously worked for Fiji’s local newspaper, The Fiji Times; the Secretariat of the Pacific Community; UNICEF Pacific; and as a freelance writer and editor for local and regional publications. Ms. Chand obtained a Master of Arts in Journalism from Waseda University in Tokyo, Japan, focusing on Media Coverage of Climate Change in Fiji. Her Bachelor of Arts Degree in Journalism and Tourism Studies was obtained from the University of the South Pacific in Suva, Fiji. Ms Chand is also currently involved in the development of a climate change board game for Primary School children by PaCE-SD.

**Chen, Hua**

Chen Hua is a Member of the China Communist Party. Currently, she is the Deputy Director of Student Affairs Office in Tongji University. She is also an associate researcher in sustainable development and student affairs management. She majored in water supply and drainage engineering and received a Bachelor’s degree from the College of Environmental Science and Engineering in Tongji, and a Master’s degree in environmental engineering. She received a doctoral degree in management science and engineering from the School of Economics & Management. She has abundant experience in sustainability and student affairs. She was a full-time instructor in the College of Environmental Science and Engineering, Deputy Secretary in Communist Youth League Committee of Tongji, and a staff member in the Preparatory Office for centennial anniversary of Tongji.
Chen, Shuqin

Chen Shuqin has long been engaged in the research of building energy efficiency and environment and equipment systems. She has presided over and participated in dozens of international projects, Japan national projects, United States projects, and Chinese provincial and national projects. She has published more than thirty papers as the first author. As the Secretary of the China Green University Network, she is responsible for and participates in the compilation and evaluation of standard and technical guidelines of China green university construction, and in green campus construction in Tongji. She was awarded the Award of Achievement in China Sustainable Energy Fellow Program by Lawrence Berkeley National Lab and U.S Energy Foundation in 2011, and the Award of Excellence in Campus by International Sustainable Campus Network (ISCN) in 2012. She received her joint Ph.D from Hunan University, China and Tohoku University in Japan. She worked as a post-doctoral researcher at the Lawrence Berkeley National Laboratory in the U.S.

Clugston, Rick

Rick Clugston is the Co-Director of the Association of University Leaders for a Sustainable Future and directs the Sustainable Development Programs of Forum 21. From 2009 to 2012, Rick directed the Earth Charter Scholarship Project at the Center for Environmental and Sustainability Education at Florida Gulf Coast University. From 1989 to 2009, Rick served as Executive Director of the Center for Respect of Life and Environment in Washington, DC, where he assisted religious and academic institutions in transforming their teaching and practices to support strong sustainability. Rick was Publisher and Editor of *Earth Ethics: Evolving Values for an Earth Community*, the Deputy Editor of *The International Journal of Sustainability in Higher Education*, and served on the Editorial Board of *the Journal of Education for Sustainable Development*. Prior to coming to Washington, Rick worked at the University of Minnesota as a faculty member in the College of Human Ecology, and later as a strategic planner in Academic Affairs, Continuing Education and the Office of the President. He received his doctorate in Higher Education Policy and Planning from the University of Minnesota and his Master’s in Human Development from the University of Chicago.

Drummond, Jessi

Jessi Drummond is a recent graduate from Florida Gulf Coast University (FGCU) who majored in Environmental Studies and minored in Biology and Interdisciplinary Studies. She was a service-learning coordinator for the FGCU Food Forest, a senator in the Honors Program, and a mentor and Teaching
Assistant for the Live Learn Community. Her goal is to be an environmental educator who helps people experience the awe and wonder of the natural world.

**Falenga, Kilateli Epu**

Kilateli Epu Falenga from Tuvalu is in the process of completing a Post Graduate Diploma in Climate Change at the University of the South Pacific (USP). She hopes to pursue a Masters in Climate Change with the Pacific Centre for Environment and Sustainable Development this semester. In 2013, Ms. Falenga completed a Bachelor of Environmental Studies Degree at USP in Fiji, under the Tuvalu Scholarship Scheme award, one of the few Tuvaluans to have completed this specific qualification. Prior to this, Ms Falenga worked with the Government of Tuvalu in the Meteorological Department as a Senior Climatologist. She chose to follow a similar path in academia because of her interest in environmental issues. She has attended several related trainings and workshops in Australia, Canada, New Zealand and Malaysia, while working with the Meteorological Department. As a postgraduate student, she was one of the six from PaCE-SD to represent the region at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 19 in Warsaw, Poland.

**Fien, John**

John Fien is the Executive Director of the Swinburne Leadership Institute, and previously was Professor of Environmental Education at Griffith University and Professor of Sustainability at Royal Melbourne Institute of Technology. He has been a member of the Australian National Commission for UNESCO and led research, policy development and training projects for UNESCO, UNICEF, UNEP, World Wildlife Fund International, the World Bank and the Organisation for Economic Co-operation and Development. His current research focuses on leadership problems, and seeks to develop ways of clarifying and enhancing leadership for the greater good, leadership development, and leadership in a greening economy.

**Gagaeolo, Fetalai**

Fetalai Gagaeolo is currently a student at the Pacific Center for Environment and Sustainable Development (PaCE-SD) pursuing her Master of Science Degree in Climate Change at the University of the South Pacific (USP) in Fiji. Her research focuses on the assessment of the socio-cultural impacts of climate change in Kiribati and the exploration of relocation and its socio-cultural implications. She has been an advocate for climate change through her direct involvement in outreach programs through mentoring and tutoring tertiary journalism and climate science students. Ms. Gagaeolo has volunteered and participated in extra-curricular
initiatives, such as workshops and conferences at the community, national, regional and international level. In 2012 and 2013, she was selected to attend the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 18 and 19 meetings in Doha and Warsaw respectively, to support the Alliance of Small Island States (AOSIS) in their UN missions and negotiations as an adviser. Ms. Gagaeolo holds a BSc Degree in Environmental Science and a Post-Graduate Diploma in Climate Change, both from USP. Her passion lies in community engagement initiatives that focus towards building resilience and sustainable development of vulnerable communities in the region.

**Giblin, Judith**

Judith Giblin is a Master of Science student in Climate Change under the supervision of the Pacific Centre for Environment and Sustainable Development (PaCE-SD) with the University of the South Pacific (USP). She is a two time gold medalist; one received with her Postgraduate Diploma in Climate Change and the other with her Bachelor of Science in Environmental Science. Her research focuses on paleoceanography and paleoclimatology by reviewing past marine microfossil radiolarian records. She is affiliated with the World Wide Fund for Nature (WWF) Volunteer Programme, Pacific Emerging Environmental Leaders (PEEL) Network and Wantok Moana – a volunteer association for student conservationists at USP. Her passion lies in sharing and interacting with individuals through various modes of communications either in a professional, academic or personal capacity. These qualities sum up her personality well; tenacious, strong-willed, humble, cordial, and passionate.

**Green, David**

David Green is an instructor of marine and environmental sciences at Florida Gulf Coast University. David holds a Master’s degree in Biology from Florida International University and is a Science Education for New Civic Engagements and Responsibilities (SENCER) Leadership Fellow.

**Hawk, Faith**

Faith Hawk is a sophomore at Florida Gulf Coast University, planning to graduate Fall 2016 with a degree in Biology. She was a leader in the Live learn Community (LLC) in her first year at FGCU. She will act as a mentor to the second year of LLC students. Upon graduating she plans to attend medical school with the ultimate goal of becoming a surgeon.
Hernandez-Blanco, Marcello

Marcello Hernandez-Blanco was the International Youth Coordinator at the Earth Charter International Secretariat. He has a Master’s degree in Environmental Management and a Bachelor’s degree in Industrial Engineering. Currently he is pursuing a second master’s degree in Biodiversity, Wildlife and Ecosystem Health in the University of Edinburgh. He is involved in a Costa Rican youth network focused on climate change and is part of Al Gore’s Climate Reality Project.

Hesselink, Frits

Frits Hesselink, based in the Netherlands, is Managing Director of HECT Consultancy and specializes in strategic planning, communication, stakeholder dialogues, training and coaching. His consultancy helps international organizations, governments, NGOs and the private sector be more effective in biodiversity conservation and sustainable development projects. Frits is also the former Chair (1994-2000) of the IUCN Commission on Education and Communication (CEC) and is currently an Advisor to the CEC Chair. Before starting his consultancy in 1997, Frits co-founded SME MilieuAdviseurs, the Dutch Institute for Environmental Communication and was CEO from 1983-1997.

Holland, Elisabeth

Elisabeth Holland is the Director of the Pacific Centre for Environment and Sustainable Development (PaCE-SD) at the University of the South Pacific (USP). Holland is also the Professor of climate change – a position she has held for more than two years. Beth is an internationally recognised scientist for her work in the Earth System. In 2007, she was a co-recipient of the 2007 Nobel Peace Prize for her contribution to the Intergovernmental Panel on Climate Change (IPCC). She is an author of four of the five IPCC reports and also served as a US, German and now a Fiji representative. With a career spanning more than three decades, Professor Holland is a Leopold scholar and served as a Senior Scientist and Leader of the Biogeosciences Program at the National Centre for Atmospheric Research in Boulder, Colorado, USA. While relatively new to the Pacific Islands region, Professor Holland is passionate about working collaboratively with development partners and pacific governments to weave together science, policy and traditional knowledge to sail towards a sustainable resilient future for Pacific communities. She is also co-leading the USP and European Union funded Global Climate Change Alliance Project with Dr. Sarah Hemstock and the remarkable team at the PACE-SD.
Contributor biographies

Hollingshead, Brandon P.

Brandon P. Hollingshead is an Instructor in Interdisciplinary Studies and Civic Engagement at Florida Gulf Coast University, where he is also on the leadership team of the Center for Environmental and Sustainability Education. His interests are in the rhetoric of sustainability, humanities and sustainability, and service-learning.

Holmberg, John

John Holmberg is a professor at Chalmers University of Technology, where he holds the position of Vice President. He also holds a UNESCO chair in Education for Sustainable Development and is a member of the UNESCO expert panel for the UN Decade of ESD. He is a member of the steering committee for the Global University Partnership for Environment and Sustainability (GUPES) and the chair of the jury for the Gothenburg Award for Sustainable Development. His present research is in sustainable consumption and the combination of well-being and transformation toward sustainability. In his doctoral thesis, he defined principles (system conditions) for sustainable development and a backcasting method; these principles and method subsequently spread widely via The Natural Step activities.

Hoogesteger, Jaime

Jaime Hoogesteger has a Ph. D. in Rural Sociology and is assistant professor at Wageningen University and has done research of water management in Mexico, Iran, and Ecuador. Dr. Hoogesteger has published over 40 articles on participatory water management and water rights. His doctoral thesis has been published in Dutch, English and Spanish.

Ibrahim, Kamarulazizi

Kamarulazizi Ibrahim is the Director of the Centre for Global Sustainable Studies at Universiti Sains Malaysia (USM) and is involved heavily in sustainability research and policy matters at the local, national, regional and international levels, especially the UN system bodies. In addition, he is a Professor at the School of Physics in charge of Semiconductor Fabrication Processes and Characterization, Solar Cells, Cleanroom and Nanotechnology. He is also the Chairman for the Energy Research Program, Nano Optoelectronic Research and Technology Laboratory and a Senate member of USM. At USM he was the Coordinator for Energy Research Group from 1989-1992, Chairman for Pure Physics and Education from 1992-1997, and Master Trainer for Logical Frame Approach from 2002-2004. In addition, as the Director of the Centre for Education Training and Research Renewable Energy
and Energy Efficiency at USM, he was responsible for increasing knowledge and
awareness of the role of renewable energy and energy efficiency for professionals,
schools, tertiary institutions, schools and also to the public in Malaysia. He has
travelled and lectured widely and published vastly in energy, semiconductor
materials and devices, nanotechnology, and sustainability field.

Kafka, Benjamin

Benjamin Kafka is a designer and facilitator of transformation processes, a
consultant in organisation and leadership development, a coach, and social
innovator. He thrives in multi-stakeholder environments and is experienced
in creating spaces for effective collaboration. Currently he is working with the
MIT-based Presencing Institute, collaborating with the Worldbank and Deutsche
Gesellschaft für Internationale Zusammenarbeit (GIZ) to support leaders working
towards Universal Health Coverage in six African countries. Benjamin is a co-
founder of the Berlin-based social enterprise, Impuls – Agentur für angewandte
Utopien (agency for applied utopia) that develops innovative processes supporting
the transformation towards post-growth societies. He also co-initiated the Youth
and Elders Project that is dedicated to creating cross-generational mentorships and
supporting the development of ‘Elders’ in the workplace. Previously, he has been
engaged in value chain analysis and rural development in Tanzania, Bosnia and
Herzegovina, Burkina Faso, for United Nations Development Program and GIZ.
Together with David Seghezzi, Christine Blome and Johannes Krause, Benjamin
recently co-authored the GIZ ‘Toolbox Leadership for Global Responsibility’. He
has studied Economics, Political Science and Social Anthropology at the University
of Freiburg, Germany, and he holds an M.A. in International Economics from the
University of Sussex, UK.

Kensen, Matthew

Matthew Kensen is from Vanuatu and is a Master of Science graduate in Sustainable
Urban Management with a Major in Built Environment under the Erasmus
Mundus scholarship scheme at Malmö University in Sweden. He was awarded a
Postgraduate Diploma in Climate Change at the University of the South Pacific
(USP) in 2012, where he also completed his Bachelor’s Degree with a major in
Geography and Land-use Planning. He has previously worked as a part-time tutor
and marker at the Geography Department at USP and has also helped in writing
and compiling the modules for the Climate Science Post-graduate course that
was offered by the Pacific Centre for Environment and Sustainable Development
(PaCE-SD). Mr. Kensen was involved in the Earth Caching research project that
was carried out by the Geography Department at USP in 2010 and was also one
of the first PaCE-SD students to be selected by the Alliance of Small Island States
(AOSIS) to take part in the global climate negotiations in Bangkok, Thailand and in United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 18 in Doha, Qatar. Mr. Kensen currently lives in Luganville town in Espiritu Santo, Vanuatu.

Kliwerer, Brandon W.

Brandon W. Kliwerer was formerly an assistant professor of interdisciplinary studies and civic engagement at Florida Gulf Coast University. He is currently an assistant professor of civic leadership in the School of Leadership Studies at Kansas State University. He is also an associate scholar with Points of Light in Atlanta, Georgia. Brandon holds a Ph.D. from The University of Georgia in political science and a Master’s degree in political science from Virginia Polytechnic Institute and State University.

Koshy, Kanayathu Chacko

Kanayathu Chacko Koshy is the Professor of Sustainability at the Centre for Global Sustainability Studies (CGSS), Universiti Sains Malaysia, Penang. He was the former Professor of Environmental Chemistry at The University of the South Pacific (USP) in Fiji and the Founding Director of USP’s Pacific Centre for Environment and Sustainable Development. Dr. Koshy was also the Director of the Pacific Centres of the global change research networks – the SysTem for the Analysis, Research and Training (START), Washington D.C. and the Asia Pacific Network (APN) for global change research, Kobe. Before joining The University of the South Pacific, he was a Faculty Member of the University of the West Indies, Jamaica, and the State University of New York at Buffalo. His research involves kinetics and mechanism of reactions; environmental chemistry; science, technology and innovation; education for sustainable development; and policy. He has served as Coordinator of the United Nations University Regional Centre of Expertise for Oceania (RCE-Oce), and the UNESCO-Asia-Pacific Cultural Centre of Excellence for Education for Sustainable Development in the Pacific region. He was the principal investigator of the Asia-Pacific Cultural Centre for UNESCO, European Union, Global Environmental Facility, and AusAID sponsored climate change projects for the Pacific. His current responsibilities involve capacity building, research, policy matters and professional networking at the national regional and international level. He was a Fulbright Fellow in USA and has lectured, published, and travelled widely.
**Kronlid, David O.**

David O. Kronlid is the examiner for the course, Climate Change Leadership. David has worked at the Uppsala Centre for Sustainable Development since the late 1990s as course coordinator, course developer, work group member, mentor, lecturer, and examiner. He is currently on the board for Uppsala Centre for Sustainable Development. David chairs the Uppsala Transdisciplinary Seminar in Sustainable Development with Dr. Eva Friman (CSD Uppsala). His work focuses on environmental ethics and environment and sustainability education. His research interests are mobility, the capabilities approach and climate change, social justice, and learning and sustainable development. He is the author of *Ecofeminism and environmental ethics – an analysis of ecofeminist ethical theory* (2003), two textbooks in environmental ethics and climate change education in Swedish. He is also published in *Environmental Education Research; Religion & Environmental Change; Religion and the Environment; The Ethics of Mobilities: Rethinking Place, Exclusion, Freedom and Environment; Gendered Mobilities*; and *the Southern African Journal of Environmental Education*.

**Leicht, Alexander**

Alexander Leicht is Chief of the Section of Education for Sustainable Development, UNESCO, Paris. Before joining UNESCO, he was Head of the German Secretariat for the UN Decade of Education for Sustainable Development at the German Commission for UNESCO in Bonn for almost seven years, where he also led the organizing team for the preparations of the UNESCO World Conference on Education for Sustainable Development in 2009. He worked three years as a university teacher in Hungary and the United Kingdom, and was originally trained as a teacher, with a graduate degree in literature, at the University of Marburg, Germany, including study at the University of Massachusetts at Amherst, USA. He holds a PhD in American Studies from the University of Nottingham, United Kingdom. As Chief of the Section of Education for Sustainable Development (ESD) at UNESCO, his current priorities include the development and implementation of a future framework for ESD after the end of the UN Decade of ESD, for which UNESCO is the lead agency.

**Li, Fengting**

Li Fengting is a Professor at the College of Environmental Science and Engineering in Tongji University and the Vice Dean of the Institute of Environment and Sustainable Development. He has been formulating, developing, and implementing international education in the United Nations Environment Programme’s (UNEP) strategy for the Asia-Pacific region and Africa. Recently, he has led multi-
disciplines in education, policy research and south-south cooperation. In the past eight years, he played a key role in developing international education and expanding the relationship with UNEP, central government ministries and international organizations by establishing national and regional training programs and a network for environmental information. He worked as a post-doctoral researcher at the University of Georgia and a visiting professor in Free University. He is an expert in applying theories into practices, especially in the field of water treatment, where he established a wide-range connection with the industry. He has hosted more than thirty research projects, owns more than thirty patents, and published more than 200 papers. He was awarded for his contribution to talent introduction and education of international students from the Ministry of Education and Shanghai Government. He has established cooperation with many organizations, foreign government departments and universities.

**Lotz-Sisitka, Heila**

Heila Lotz-Sisitka holds the Murray & Roberts Chair of Environmental Education and Sustainability at Rhodes University, South Africa, where she is also the Director of the Environmental Learning Research Centre. She serves on various national and international scientific and policy fora, including the United Nations Decade of Education for Sustainable Development International Reference Group. She has been actively involved in post-apartheid educational transformation processes in South Africa since 1992. Her research interests are environmental education, learning, agency, social change and transformation.

**Maclean, Kirsten**

Kirsten Maclean is a human geographer who uses participatory methodologies to investigate the role of diverse people, knowledge and values in regional natural resource management. She is a Research Scientist in the Adaptive Social and Economic Systems program of the Australian government’s Commonwealth Scientific and Industrial Research Organisation. She works with diverse teams including scientists, multi-media experts, representatives from government and non-government agencies, and Indigenous peoples. Much of her work has been conducted in remote and rural settings in Australia (the Wet Tropics, the Torres Strait, central Australia, Victoria, New South Wales) as well as Honduras and Costa Rica. She is sensitive to cultural protocol and has developed substantial research agreements with her Aboriginal co-researchers.


Maclean, Rupert

Rupert Maclean is UNESCO Chair in Technical Vocational Education and Training (TVET) and Lifelong Learning at the Hong Kong Institute of Education. He is concurrently a Senior Research Fellow, Department of Education, University of Oxford; Adjunct Professor of Education, Royal Melbourne Institute of Technology University, Melbourne; and Visiting Professor, East China University, Shanghai. He was formerly Foundation Director of the UNESCO-United Nations Educational, Scientific and Cultural Organization International Centre for TVET, Bonn, Germany; Chair of the UN Heads of Agencies, Germany; Director, Secondary Education, UNESCO Paris; and Chief of the Asia Pacific Centre of Educational Innovation for Development, UNESCO, Bangkok. He is well known through his various publications and keynote addresses on education for development, equity and skills development for employability. In 2011 he was awarded an Order of Australia (AO) in the Queen’s Birthday Honours list for services to improving education in developing countries through his work with UNESCO.

Manzini, Sibusiso

Sibusiso Manzini has worked in various capacities in science education, science and technology diplomacy, and human resource development. He is currently the Executive Programme Director for GreenMatter, a public-private partnership programme for skills development in biodiversity, in South Africa. He has authored two books and a number of peer-reviewed and public interest papers in diverse fields. Dr Manzini has a passion for using knowledge, particularly the natural sciences, to achieve human development and social justice.

Mathai, Wanjira

Wanjira Mathai, is project leader at the Wangari Maathai Institute for Peace & Environmental Studies (WMI) and was the outgoing Director of International Affairs at the Green Belt Movement (GBM), where she managed International outreach and resource mobilization. Currently, she is Chair of the Board of the Green Belt Movement (GBM). For six years prior to joining GBM, Ms. Mathai worked as Senior Program Officer at the Carter Presidential Center, Atlanta, Georgia (USA), where she monitored and evaluated disease eradication programs. Since 2002, Ms. Mathai directed International Affairs at GBM, which was founded by her mother, the late Nobel Peace Laureate Wangari Maathai. Wanjira is a Board member for the Green Belt Movement and WMI and a World Future Councilor and Advisory Council member for the Global Alliance for Clean Cookstoves. Wanjira grew up in Kenya, traveling to the United States to attend college. She is a graduate of Hobart
& William Smith Colleges and earned graduate degrees from Emory University’s Rollins School of Public Health and Goizueta School of Business.

**McGarry, Dylan**

Dylan McGarry is an independent researcher, practitioner, artist, and has a transdisciplinary PhD in Environmental Education at the Environmental Learning Research Centre from Rhodes University in South Africa. His academic work to date has mainly revolved around sustainable rural development and social ecological learning. His artwork and creative practice is particularly focused on empathy, and primarily works with imagination, listening and empathy as actual sculptural materials. He has illustrated and written four children’s books and other visual artists books that are awaiting publication, one has recently been published by X-Libris Publishers entitled, *The Quagga and the Unicorn*.

**Morimanno, Lauren**

Lauren Morimanno is a sophomore at Florida Gulf Coast University (FGCU), majoring in Community Health. She is a Service-Learning Ambassador for Healthcare, Eldercare, and People with Disabilities; a director of Outreach for Eagles for Babies; a delegate for Everglades Resident Housing Association; and a member of the Honors Program, along with Phi Eta Sigma. She eventually plans to pursue a Master’s in Occupational Therapy. She wants to work with people with disabilities. Lauren eventually plans to open a Christian based organization that would incorporate dog therapy and people with disabilities.

**Morrison, Keith**

Keith Morrison is a human ecologist and lecturer in sustainability at Pacific Centre for Environment and Sustainable Development. He previously worked as an academic at the School of Agriculture, at the University of the South Pacific (USP) Alafua Campus in Samoa, and later at Lincoln University and the University of Canterbury in New Zealand. Since his initial work at USP, where he developed his overall research focus on village-based community development, he has increasingly become focused on complex system based conceptual modeling as a tool for participatory action research involvement with communities for their environmental management and development, including waste treatment. Currently, he has taken on the task of incorporating the challenge of climate change.
Moschella, Jameson

Jameson Moschella is the Associate Director of the Office of Housing and Residence Life at Florida Gulf Coast University. His focus is on Residence Education, and he works closely with faculty and staff in academic affairs to develop educational programming tied to the curriculum.

Muslim, Marlinah

Marlinah Muslim is currently a Research Officer at the Centre of Global Sustainable Studies at Universiti Sains Malaysia, Penang. She was a Research Executive at Sabah Forest Industries under the Ballapur Industries Ltd. paper mill company, India. While with 'Forestry and Tree Breeding,' she developed a vegetative propagation and nursery working protocol and was in-charge of the nursery working area. She is also a former member of the law and policy organisation, Safety and Health of Malaysia, and was involved in several standard operation procedure and policy developments for forestry workers at Sabah Forest Industries. Her current responsibilities include research, publication, and networking responsibilities for the newly established South East Asia Sustainability Network (SEASN).

Mwaura, Grace

Grace Mwaura is a Co-Convener of the International Union for Conservation of Nature’s Task Force on Intergenerational Partnership for Sustainability (IPS) and a Steering Committee member of the IUCN Commission on Education and Communication (CEC). The IPS Task Force brings together young and senior professionals across the IUCN Commissions, Secretariat and Member Organizations with the aim of enabling intergenerational dialogue and action. Grace served as an IUCN Council member (2010-2012) and is an Advisor to the African Youth Initiative on Climate Change. She is originally from Kenya and is presently a doctoral student at University of Oxford, researching society transformations and youth aspirations.

Osano, Philip

Philip Osano currently supports the development of the implementation strategy for the Accelerated African Agricultural Transformation Goals for the African Union Commission (AUC) in Addis Ababa, Ethiopia. A multidisciplinary scholar by training, his research interest is diverse and he has published and lectured on topics that span a range of disciplines, including environmental policy and governance, biodiversity and livelihoods in African drylands, sustainability science, ecological economics, climate change adaptation, environmental-security linkages
and sustainability education. He holds a PhD degree in Geography from McGill University, Canada, an MSc degree in Conservation Biology from the University of Cape Town, South Africa, and a BSc degree in Environmental Science from Egerton University in Kenya. He is the co-editor of *Young people, education and sustainable development: exploring principles, perspectives and praxis* (2009).

**Osman, Omar**

Omar Osman is currently the Vice-Chancellor of Universiti Sains Malaysia (USM), having served USM before as Deputy Vice-Chancellor in charge of Student Affairs, and as the Director of Corporate and Sustainable Development Division. He is an ardent supporter of education for sustainable development, and in this field he has organised international workshops, promoted Regional Centre of Expertise (RCE)-Penang, and continues to network. He keeps his research and consultancy active in the areas of project management, Education for Sustainable Development (ESD) and higher education. He is a strategic planner and was involved in the strategizing and planning of the following major initiatives: USM as a Research University, the 9th Malaysia Plan, and the Accelerated Programme for Excellence (APEX) University programme. He has a keen interest in training and human resource development aimed mainly at students’ development. Most of his publications have been in the area of sustainability in higher education, construction management, governance and economic issues in construction industry, education for sustainable development and human resource development. He is currently the President of Asia-Pacific University-Community Engagement Network and the Chairman of the new, South East Asia Sustainability Network, and travels widely for professional meetings and partnership building.

**Othman, Mahfuzah**

Mahfuzah Othman is currently the Assistant Registrar for the Centre for Global Sustainability Studies, Universiti Sains Malaysia (USM). Previously, she was the Assistant Registrar in the USM Engineering Campus in Nibong Tebal and later transferred to the Student Development Advisory Unit in USM Main Campus. During her time in with Student Development Advisory Unit, she was involved in student projects related to sustainability.

**Otto, Eric**

Eric Otto is an associate professor of environmental humanities at Florida Gulf Coast University. Eric holds a Master’s degree and Ph.D. in English from the University of Florida. His academic work includes the book *Green Speculations: Science Fiction and Transformative Environmentalism* (2012, The Ohio State University Press).
**Pavlova, Margarita**

Margarita Pavlova is an associate professor at the Hong Kong Institute of Education. She has more than twenty years of international work experience in education across a variety of contexts (Europe, Asia, USA and Australia). Her research focus is concerned with policy, planning and curriculum development in vocational education at both national and international levels. She is internationally recognised for her work and her current research and development projects are in the area of education for sustainability, development and green skills. For six years Margarita served as the Director of the UNESCO-United Nations Educational, Scientific and Cultural Centre at Griffith University and she continues with this role at the Hong Kong Institute of Education. Margarita works with such agencies as the Asian Development Bank; UNESCO; European Trading Foundation, where she led a number of research projects that aimed at developing policies, approaches to and resources for vocational education, and exploring related issues such as capacity building and poverty alleviation. She has published widely in the fields of her expertise including a book on *Technology and vocational education for sustainable development: Empowering individuals for the future* (Springer, 2009). She currently serves on the editorial board of the International Journal of Vocational Education and Training and on the editorial advisory boards of two book series.

**Fang, Ping**

Fang Ping is an Associate Professor and master instructor in the College of Environmental Science and Engineering and the Institute of Environment and Sustainable Development (IESD). She has visited Padova University in Italy, Stanford University in USA, and Jülich Research Center in Germany to study. She has been long engaged in carrying out research in farmland ecological engineering design, biological and ecological restoration theory, technology of contaminated environments, and ecosystem management. She has served as the main lecturer of many Chinese and English courses for undergraduates and postgraduates of Tongji and postgraduates of IESD. The courses include: The Foundation for Ecological Engineering, Ecological Engineering, Ecological Risk Assessment, Current Ecology & Application (in English), City and Agriculture: Food supply, safety and security (in English), Urban Ecology (in English), and Ecosystem Management (in English). Additionally, she has participated in or presided over many projects, such as the international cooperation project of European Communities, National Key Fifteenth Five-year Program, major and important research projects in Shanghai, National Key Technology R&D Program, National Hi-tech and Industrialization Program, and National Natural Science Foundation of China. She has been editor-in-chief for one bilingual textbook, a compiler member for another textbook, and has published over thirty papers.
**Pradhan, Mahesh**

Mahesh Pradhan is Chief of the Environmental Education and Training Unit of the United Nations Environment Programme (UNEP), and is based at UNEP’s Headquarters in Nairobi, Kenya. Since 2011, Mahesh has overseen UNEP’s engagement with the higher education sector through establishment of the Global Universities Partnership on Environment and Sustainability. He served as UNEP’s focal point for the Higher Education Sustainability Initiative – launched on the margins of the Rio+20 Summit – and is responsible for coordinating UNEP’s response to the UN Decade of Education for Sustainable Development, 2005-14. Mahesh is also actively involved in several regional networks, including Mainstreaming Environment and Sustainability in African Universities, the Latin America and the Caribbean Environmental Training Network, and Asia and the Pacific Regional University Consortium on Environment for Sustainable Development.

**Roca, Maria F. Loffredo**

Maria F. Loffredo Roca is an Associate Professor of Communication and Interdisciplinary Studies and Program Leader for Interdisciplinary Studies at Florida Gulf Coast University. She has her Ph.D. in Media Ecology from New York University (NYU), her M.A. in Performing Arts Management also from NYU, and her B.A. in Interpersonal and Public Communication from Purdue University. She is a GreenFaith Fellow and a Senior Faculty Associate with the Center for Environmental and Sustainability Education. Dr. Roca has been recognized for her work with the Professor of the Year Award from Florida Gulf Coast University (FGCU), FGCU’s McTarnaghan Award for Excellence in Teaching, and the Faculty Award for Service Excellence also from FGCU.

**Roche, Mario**

Mario Roche is currently a senior majoring in Psychology and minoring in Interdisciplinary Studies at Florida Gulf Coast University. He plans on attending a graduate program in psychology after graduating from FGCU.

**Rosenberg, Eureta**

Eureta Rosenberg is a PhD graduate from Rhodes University in South Africa where she taught and conducted research from 1990 to 2000. She first taught as a junior lecturer and later as associate professor in environmental education, working with and learning from students, young professionals and inspiring leaders from across the generations. Since 2000 Eureta’s consulting work has included strategic planning and evaluation of environmental education, training
and capacity-building using a systems approach. Eureta’s most recent project has been the development of the Human Capital Development Strategy for South Africa’s biodiversity sector and seeing it into a programme of implementation.

**Sauer, Jessica**

Jessica Sauer is a sophomore at Florida Gulf Coast University (FGCU) working towards a Bachelor’s degree in Biology and Chemistry. During her first year at FGCU, she became a leader for the Live Learn Community, an active member in Emerging Eagles, and a partner of an environmental project with Skyline Elementary School. Jessica plans on attending medical school to continue helping others and strives for the opportunity to work as a pediatric surgeon.

**Schudel, Ingrid**

Ingrid Schudel is a senior lecturer at Rhodes University and is involved in environmental education teaching and research at a number of levels. Ingrid has coordinated the local EcoSchools cluster for 15 years, and is a lecturer for teacher pre-service and in-service courses at certificate and Honours levels. She is also lecturer and coordinator of the Masters in Education in Environmental Education which supports environmental education in schools, higher education, communities, NGO and government contexts. She is involved in a number of research programmes and supervises doctoral students. Her research interests include transformative learning, teacher professional development, and citizen science.

**Seghezzi, David**

David Seghezzi works as a facilitator, coach and consultant in the field of leadership, transformation and nature coaching. His passion lies with understanding the nature, dynamics of processes of transformation, and innovation that foster more sustainable and mindful ways of being and doing. In his work with individuals, teams and companies, he applies amongst others the ‘transformation in natural’ approach that he developed with his wife and partner Ursula Seghezzi. Together, they lead the uma institut that offers facilitation, seminars and trainings in the field of transformative nature work. David recently co-authored the GIZ ‘Toolbox Leadership for Global Responsibility’. He holds a Master’s in Social and Cultural Sciences and is trained as a nature coach and facilitator of vision quests. He lives with his wife in a small village in Northern Germany.
Contributor biographies

**Sibly, Suzyrman**

Suzyrman Sibly is currently the Deputy Director for the Centre for Global Sustainability Studies, Universiti Sains Malaysia (USM). He received his Ph.D. in Economics from the University of Newcastle Upon Tyne, United Kingdom. He has taught courses in Introduction to Economics and Microeconomics in the School of Distance Education. He has authored articles in the Management and Decision Economics journal and the Higher Education Research Monograph. He has been involved in a number of consultancy and fieldwork research projects such as the Enhancing the Quality of Faculty in Private Higher Education Institutions in Malaysia project, The Malay Indigenous Entrepreneur Information System under Penang Regional Development Authority project, and The Wellness and Quality of Life: Tackling Lifestyle and Health Issues using New Technologies in Penang and Kelantan project.

**Stansell, Andrew**

Andrew Stansell is a United States Coast Guard Licensed Charter Captain and is the staff manager at the Center for Environmental and Sustainability Education. He holds a Bachelor of Arts in Environmental Studies from Florida Gulf Coast University. As staff manager of the Center he coordinates staff efforts and oversees the Center’s daily operations. In his career as a captain he will be working to educate clients about Southwest Florida’s fragile coastal ecosystems. Andrew currently serves as a member of the Board of Advisors for the Estero Bay Buddies Citizen Support Organization. Andrew is also the owner of a small landscaping company in Fort Myers, Florida.

**Steiner, Achim**

Achim Steiner has been executive director of the United Nations Environment Program (UNEP) since June 2006. He was director-general of the World Conservation Union from 2001 to 2006. In 1998-2001 he was secretary-general of the World Commission on Dams, based in South Africa, where he managed a multistakeholder program to develop a global policy process on dams and development. Steiner has a BA from the University of Oxford and MA in international development and environment policy from the University of London. He has also studied at the German Development Institute in Berlin and the Harvard Business School. His professional career has included assignments with governmental, non-governmental and international organizations in different parts of the world including India, Pakistan, Germany, Zimbabwe, USA, Vietnam, South Africa, Switzerland and Kenya. He worked both at grassroots level as well as at the highest levels of international policy-making to address the interface
between environmental sustainability, social equity and economic development. He serves on a number of international advisory boards, including the China Council for International Cooperation on Environment and Development.

**Sterling, Stephen**

Stephen Sterling is Professor of Sustainability Education at Plymouth University, former Senior Advisor to the UK Higher Education Academy on Education for Sustainable Development (ESD), and has worked as a consultant in environmental and sustainability education in the academic and NGO fields nationally and internationally for over three decades. His work at Plymouth involves leading the research team on sustainability education, developing strategies to support curriculum change across the institution, and he is chair of the University’s Sustainability Executive. A UK National Teaching Fellow, he is widely recognized as one of the leading voices in sustainability education. His research interest is in ecological thinking, systemic change, and learning at individual and institutional scales to help meet the challenge of accelerating the educational response to the sustainability agenda. Books to that end include (co-edited with John Huckle) *Education for Sustainability* (Earthscan 1996), the Schumacher Briefing *Sustainable Education – Re-visionsing learning and change* (Green Books, 2001), *Sustainability Education: Perspectives and Practice Across Higher Education* (co-edited with David Selby and Paula Jones), (Earthscan, 2010), and the *Future Fit Framework – an introductory guide to teaching and learning for sustainability in HE,* (Higher Education Academy, 2012). His latest book (co-edited with Larch Maxey and Heather Luna) is *The Sustainable University – progress and prospects’* (Earthscan/Routledge, 2013).

**Stucker, Dominic**

Dominic Stucker is an action-oriented collaborator who convenes diverse teams to address complex sustainability challenges. With 15 years of experience in capacity development and cross-sector dialogue, he specializes in natural resources, climate change and livelihoods. Dominic is Senior Project Manager at Collective Leadership Institute, Germany and Senior Associate at Sustainability Leaders Network, United States. Dominic served on the International Union for Conservation of Nature’s Commission on Education and Communication’s Steering Committee from 2008-2012 and founded the CEC’s Young Professionals Leadership Team and the IUCN Task Force on Intergenerational Partnership for Sustainability. He holds degrees in environment, education and literature from the UN-mandated University for Peace, Costa Rica, Brown University and Stanford University. Dominic lives with his wife and twin sons in Germany.
Tan, Hongwei

Tan Hongwei is a Professor of the School of Mechanical and Energy Engineering and Institute of Environment and Sustainable Development. His research focuses on environment and energy efficiency, urban energy planning technology and renewable energy application for buildings. He has presided over more than thirty national and provincial projects, and has cooperated with international scientific research institutions and enterprises in Japan, Europe, and the United States. In energy management, he was in charge of the development of Tongji campus energy management platform, and presided over the demonstration project of the green campus funded by the Ministry of Housing and Urban and Rural Development. He was promoted to national expert by the Chinese green campus initiative. He has been Secretary-General of the Chinese green university network. He has been awarded the Technology Promotion Award of The 14th Society of Heating, Air-Conditioning and Sanitary Engineers of Japan (SHA SEJ), the first Scientific Progress Award by Ministry of Education of China, the Copper prize by China International Industry Fair, and the International Sustainable Campus Excellence Award by the International Sustainable Campus Network (ISCN).

Tassone, Valentina C.

Valentina C. Tassone is a lecturer in the Education and Competence Studies Chair Group at Wageningen University. She received her PhD in the field of environmental and rural policy from the University of Palermo. Her work focuses on capacity building for sustainability. Dr. Tassone has performed scientific research, served as a consultant, and provided educational activities throughout Europe including Italy, the Netherlands, Malta, Estonia, and Poland and in South Africa, focusing on participatory processes, integrative policy, community development, transformative learning, and competences development to support the transition towards sustainability and enhance the quality of life. Dr. Tassone also plays an active role in numerous interdisciplinary projects funded by the European Union, the World Wildlife Fund, the International Union for the Conservation of Nature, and other international organizations.

Tsang, Eric Po Keung

Eric Po Keung Tsang is an environmental scientist by training, specializing in feasibility studies and environmental impact assessment studies. Within the Hong Kong Institute of Education he is an associate professor in the Department of Science and Environmental Studies, associate director of the UNESCO-United Nations Educational, Scientific, and Cultural Organization Centre and the chairman of the Communicable Disease Prevention committee. He also
specializes in environmental education research particularly in the evaluation of environmental education programmes and was one of the pioneers in the Green School Initiative. In recognition of his role in promoting collaboration between Hong Kong and mainland China and Macao he was appointed visiting professor by the Northeast Normal University, South China Normal University, and St Joseph University. Furthermore, he was also appointed as the founding director of the Hong Kong and Guangzhou Centre for Environmental and Science Education in South China Normal University. He is active in the local and international community, having been appointed as chairman and member of government committees; the chairman of Green Power, a major green group; and member of funding bodies such as the Environment and Conservation Fund. He also serves in the Advisory council (ACE) on the environment which advises the Hong Kong Special Administrative Region on important matters relating to environmental protection. Internationally, Dr. Tsang is a panel member of the International Year of Global Understanding launched by the International Geographical Union.

**Van Dijk Kocherthaler, Sylvia**

Sylvia van Dijk Kocherthaler has a Ph. D. in Education. She is a Professor of Education at the University of Guanajuato and collaborates with various NGOs to enhance the quality of educational services introducing a rights based approach to schools and child-rearing practices. Her research interests include children’s rights, migration and education, and teacher training. Dr. van Dijk has published 25 academic articles and three books on issues of non-formal education for women, the impact of migration on children and school-leavers. Her professional work has been focused on innovation, gender equity, evaluation of educational services and sustainable community development, including participative watershed management.

**Vilela, Mirian**

Mirian Vilela is the Executive Director of the Earth Charter International Secretariat and the Center for Education for Sustainable Development at University for Peace in Costa Rica. Mirian has been working with the Earth Charter Initiative since early 1996. She is coordinating the newly established UNESCO Chair on Education for Sustainable Development with the Earth Charter. She is a member of the UNESCO Expert Reference Group for the Decade of Education for Sustainable Development. Mirian holds a B.Sc. in International Trade and a Master’s Degree in Public Administration from the Harvard Kennedy School of Government, where she was an Edward Mason Fellow. She is originally from Brazil.
Villaronga, Brigitta

Brigitta Villaronga is head of the leadership development group at the Academy for International Cooperation, a training centre affiliated with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) based in Bonn. She enjoys working in networks to share and co-create knowledge and meaningful experiences. Brigitta has specialised in coaching and organisational development. For several years she worked as head of the regional office for the Andean Countries and in the area of rural development for the German development organization previously known as InWEnt (now a part of GIZ). As a passionate leader, Brigitta believes in the possibility of a sustainable future. Her mission is to encourage others to embark on a joint journey of transformation and to inspire with creativity. She holds a Master’s in Political Science.

Vingerling, Abraham Pieter

Abraham Pieter Vingerling works as a trainee with the European Union Delegation to Sudan. He is involved in calls for proposals of Non State Actors under the European Instrument for Democratisation and Human Rights. He works on follow-up and reporting on Good Governance, Stability and Human Rights matters. Before working for the EU, Abraham Pieter worked as Project Assistant for SID NL; one of the founding organisations of the Worldconnectors. He was involved with the preparation of a Lecture Series and responsible for the Round Table of Worldconnectors theme ‘Global Labour in Crisis’. He is co-director of ‘World Cup of Human Rights,’ an initiative looking at football as a force in society. He manages the external relations of the organisation, trying to engage people who love football and care about human rights all over the world to write about their experiences. Abraham Pieter holds a Bachelor degree in History, with a focus on Journalism, from VU University Amsterdam. He obtained two Master’s degrees, an MA in European Union Studies from Leiden University and an MA in Human Rights and Democratisation from the European Inter-University Centre in Venice.

Wals, Arjen E.J.

Arjen E.J. Wals received his PhD in Environmental Education from the University of Michigan. He is currently the UNESCO (United Nations Educational, Scientific and Cultural Organisation) Chair of Social Learning and Sustainable Development in the Education and Competence Studies Chair Group at Wageningen University. He is also an Adjunct Professor at Cornell University, a Visiting Professor at the University of Gothenburg, and Director of the Centre for Sustainable Development and Food Security in Wageningen University. Prof. Wals his fields of expertise include social learning, environmental education, sustainability education, and
community-based learning. Prof. Wals regularly supervises international PhD students and has published in numerous peer-reviewed journals. He recently co-authored a paper in Science on the need to link environmental education and science education with citizen science in order to seriously address the sustainability challenges of our time. He is also the editor of the books *Learning for sustainability in times of accelerating change* (2012) and *Social learning towards a sustainable world* (2007).

**Waswala, Brian**

Brian Waswala is an Environmental Education and Training Specialist at the Environmental Education and Training Unit, United Nations Environmental Program. His work focuses on promoting environmental education for sustainable development. He has worked with wildlife, environmental education, conservation government agencies, and non-profit organizations in Kenya. In addition to his environmental education work, Brian has made contributions to ecosystem management in Kenya such as the mapping of Kenyan wetlands, the gazettement of Tana River Delta as a Ramsar site, and on issues of savanna and wetland ecosystems during his tenure at Kenya Wildlife Service as a wetland research scientist. Brian has mentored a number of environmental science students and communities at Technical University of Kenya, the University of Nairobi, Maasai Wilderness Conservation Trust, Friends of Nairobi National Park, the National Museums of Kenya (Kisumu), and others. He is also an alumnus of Makerere University and the University of Nairobi.

**Wedershoven, Erik Thijs**

Erik Thijs Wedershoven is a consultant at KPMG’s Operations Strategy Group and currently works with the firm’s Global Sustainability Services. Erik has been engaged in a wide range of projects from developing a sustainable sourcing strategy for a large multinational corporation, to an operational redesign for an intergovernmental organisation, and post-merger integration between two non-governmental organisations. He has also been Project Officer at NCDO in the Royal Tropical Institute of the Netherlands for two years and continues to be an active supporter of the Earth Charter Initiative. Erik was elected Youth Representative of the Netherlands to the United Nations General Assembly in 2004. He was member of the Dutch Government’s Delegation to the UN Millennium Summit +5, and UN General Assembly and Committees from 2004 to 2006. In July 2009, Erik graduated from University College Maastricht, for which he spent one semester at UC Berkeley in 2008. In 2011, Erik completed a Master of Public Administration dual degree program at Sciences Po Paris and London School of Economics and Political Science. While in university, he joined the Round Table...
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of Worldconnectors and accepted board membership of the (Rutgers) World Population Foundation – where he continues to serve today as its vice-chair and member of the Audit Committee.

**Whiteside, Andra**

Andra Whiteside is currently pursuing a Master of Science Degree in Climate Change at the University of the South Pacific focusing on the changes in coral cover related to sea temperature since the 2000 mass bleaching event in Fiji. She holds a post-graduate diploma in Climate Change as well as a Bachelor’s Degree in Environmental Science with an emphasis on Biology. Ms. Whiteside served as a Climate Change advisor on the Nauruan Delegation to the United Nations Framework Convention on Climate Change (UNFCCC) during the Conference of the Parties (COP19) in Warsaw, Poland. She has also volunteered for the Climate Change Division at the Ministry of Foreign Affairs and World Wide Fund for Nature (WWF) in Fiji.

**Wohlpart, A. James**

A. James Wohlpart is Dean of Undergraduate Studies, professor of Environmental Literature, and Senior Scholar with the Center for Environmental and Sustainability Education at Florida Gulf Coast University. Jim holds a Ph.D. from the University of Tennessee and a Master’s degree in English from Colorado State University.

**Wohlpart, Sasha Linsin**

Sasha Linsin Wohlpart is an Instructor II in the Department of Marine and Ecological Sciences at Florida Gulf Coast University where she teaches a variety of courses including Environmental Biology of Southwest Florida, Historical Geology, and Environmental Science. She holds a Master’s Degree in Environmental Science from Florida Gulf Coast University. Her goal as an educator is to provide interdisciplinary, place-based, and field-oriented experiences for students designed to create an environment that is conducive to deep learning and fostering undergraduate research.

**Wu, Jiang**

Wu Jiang is a Professor of the College of Architecture and Urban Planning, Doctoral instructor, Class 1 Registered Architect and Ph.D. in architectural theory and history. He has been the Vice president of Tongji University and Dean of the Institute of Environment for Sustainable Development (IESD) since 2009. Previously, he has served as Vice Dean of the College of Architecture and Urban Planning.
Planning, Director of Human Resource Department at Tongji University, and as Deputy Director of Shanghai Planning & Land Resources Bureau. He has written many monographs including, *Shanghai Architectural History in One Hundred Year*. He has been rewarded the National Excellent Planning & Design Prize, Shanghai Excellent Teaching Award, Shanghai Planning & Design Prize, and Shanghai Decision Consulting Award. He has been a member of the International Union of Architects (UIA), UNESCO Architectural Education Assessment Committee (the Fourth District), deputy director of National Guiding Committee for Higher Education of Architecture, the executive member of Architectural Society of China, Institut pour la Ville en Mouvement (IVM), and International Urban Planning and Environment Association councils and Chair of Global University Partnership for on Environment and Sustainability Steering Committee. He has been invited as the senior expert of Shanghai Policy-making consulting since 2010.

**Zhu, Dajian**

Zhu Dajian is a Professor of the School of Economics & Management, Head of Department of Public Management, and Director of Institute of Governance for Sustainable Development at Tongji University in Shanghai. His research interests include sustainable development and ecological economics, urban and regional development, public service and macro-policy, and corporate social responsibility. He was a senior research scholar at Harvard University from 2004-2005 and a visiting research fellow at Melbourne University from 1994-1995. He has published three books, more than 200 papers and articles, and has been involved in several important research projects from international organizations such as United Nations Development Programme, United Nations Environment Programme, World Bank, and Asian Development Bank. He serves on many international journal editorial boards including, Ecological Economics, International Journal of Public Management, and Environmental Policy and Governance. He was awarded the special allowance by China’s State Council. He is a member of the Social Science Commission under the Chinese Education Ministry, the Experts Commission on Sustainable Development & Resource and Environment under the Chinese Construction Ministry, a special policy advisor for Shanghai Municipal Government and some other Chinese cities, and an environmental expert for Expo 2010 in Shanghai.
International Intergenerational Network of Centers (IINC)

Background and context

The concept for an international, intergenerational, informal network of centers in environmental and sustainability education emerged from discussions at the United Nations Environment Programme (UNEP) in Nairobi, Kenya. On August 31, 2009, Wangari Maathai, Akpezi Ogbuigwe, and Peter Blaze Corcoran addressed the Symposium on Climate Change and Sustainable Cities. At that time, Wangari Maathai solicited advice about establishing the Wangari Maathai Institute for Peace and Environmental Studies at University of Nairobi. This led to conversations with colleagues on the utility of establishing a network to collaborate and share experiences and expertise amongst university centers in sustainability.

On April 2, 2011, the Center for Environmental and Sustainability Education at Florida Gulf Coast University hosted an informal planning meeting to advance the notion of creating a network. This included the participation of Akpezi Ogbuigwe of UNEP and Heila Lotz-Sisitka of Rhodes University; Center Board of Advisors members Mary Evelyn Tucker, Richard Clugston, Jacob Scott (by teleconference), and Erik Thijs Wedershoven; and Center staff Peter Blaze Corcoran and Brandon Hollingshead. The Sanibel Island meeting was followed by informal conversations, correspondence, and meetings. During this time, Wangari Maathai became a distinguished International Advisor to the Center. Meetings at University of Nairobi on June 9-14, 2011 were particularly productive in advancing conversations about the network. These conversations included Wangari Maathai Institute, Green Belt Movement, UNEP, and the Center. Further discussions were held at the Global University Partnership on Environment and Sustainability (GUPES) meeting in Santiago, Chile, on September 5-7, 2011. Additional meetings took place with UNEP, WMI, GBM, on October 10-12, 2011 on the sad occasion of the funeral of Wangari Maathai.

The Center for Environmental and Sustainability Education and GUPES convened the first meeting of potential partners at an unofficial side event of the World Environmental Education Congress 7 in Marrakech, Morocco, on Wednesday, June 12, 2013. Participants considered an initial project to launch the network. The book you are reading is the first initiative of the IINC. All participating centers and United Nations Agencies have contributed chapters.
**Academic centers and the project of sustainability**

Individual centers have long promoted the mainstreaming of sustainability in home institutions, in higher education, and in the larger culture of our time. One purpose of the proposed network is to document and report how individual centers operate at the leading edge of sustainability – to showcase how centers practice sustainability in their home institutions and communities. Centers are able to develop programs for students, connect the university to other institutions, work with government, and involve industry. They are a platform for interdisciplinary knowledge creation. They feed ideas into a university that it may not able to produce on its own. Though centers do not replace traditional academic departments, they can move departments and disciplines in new directions.

Centers can be an innovation space for the university and community. This network of centers would, therefore, investigate the role academic centers play in mainstreaming sustainability in institutions of higher education. Academic centers have long been involved in partnerships and collaborative research projects, but to our knowledge there has been little research on their role in education for sustainable development.

We feel that centers have much to learn from “sister centers” across the globe. We see the network as a place to collaborate on research, scholarship, and action in the context of innovative approaches to mainstreaming environmental and sustainability education in higher education, both internationally and in a variety of local contexts. We wish to promote collaboration among centers and to expand our vision of strong sustainability to other centers and institutions.

A primary goal is to engage students and junior colleagues as much as possible. A network of centers would include mechanisms to get students out into the world and connected to an exchange of knowledge and ideas. This would inform intergenerational collaboration.

The network would promote intergenerational collaboration in research and activities. This would be further extended to the community to have students and teachers connect with society. The network would connect with the wisdom of people outside of formal learning systems in order to inform sustainability in the community. Topics of research might include intergenerational leadership capacity building, intergenerational justice, youth and employment, the economy of aging, and the social implications of demographic shifts.

Our hope for a network is that it would enhance the work already being done at specific centers and strengthen collaboration among like centers. The network
would exist to support centers, through collaboration, in key areas of research, service, and teaching. One of the main reasons to create a network is to focus on projects, research, teaching, and praxis that could be mutually improved by collaboration with other centers.

We see the network as a conduit for partnerships, rather than as a formalized institution. On behalf of the individuals and organizations involved to date, the Center for Environmental and Sustainability Education has assumed a formative secretariat role. The primary focus of this secretariat role is to initiate a process of consultation on the draft proposals for establishing the network. In the future, we imagine the network would have modest “governance structures” to ensure the long-term vision and organizational stability.

**Initial network goals**

1. To research the cultural transformation role of centers in mainstreaming sustainability in higher education institutions.
2. To institutionalize strong sustainability in home institutions.
3. To empower intergenerational collaboration with students and young scholars in scholarship, service, and teaching.
4. To connect innovation hubs on campuses.
5. To share a collective voice for sustainability.

The book you are reading is the first initiative of the IINC. All participating Centers and United Nations Agencies have contributed chapters.

**Current partners**

1. United Nations Environment Programme (UNEP), including
   - Global University Partnership for Environment and Sustainability (GUPES)
   - Mainstreaming Environment and Sustainability in African Universities (MESA)
   Nairobi, Kenya
   Mahesh Pradhan and Akpezi Ogbuigwe

2. Wangari Maathai Institute for Peace and Environmental Studies (WMI)
   University of Nairobi, and
   - Green Belt Movement (GBM)
   Nairobi, Kenya
   Wanjira Mathai (GBM and WMI) and Kiama Gitahi (WMI)
3. Environmental Learning Research Centre
   Rhodes University
   Grahamstown, South Africa
   Heila Lotz-Sisitka and Lausanne Olvitt

4. Center for Environmental and Sustainability Education
   Florida Gulf Coast University
   Fort Myers, Florida, USA
   Peter Blaze Corcoran, Brandon P. Hollingshead, and David Orr

5. Centre for Global Sustainability Studies (CGSS)
   Universiti Sains Malaysia (Science University of Malaysia)
   Penang, Malaysia
   Kamarulazizi Ibrahim and Kanayathu Koshy

6. Centre for Sustainable Futures
   Plymouth University
   Plymouth, England
   Stephen Sterling

7. Earth Charter Center for Education for Sustainability
   University for Peace
   San Jose, Costa Rica
   Mirian Vilela

8. Education for Sustainable Development Research Center (ESDRC)
   Rikkyo University
   Tokyo, Japan
   Osamu Abe

9. Institute of Environment for Sustainable Development (IESD)
   Tongji University
   Shanghai, China
   Wu Jiang, Li Fengting, and Fang Ping

10. Pacific Centre for Environment and Sustainable Development (PaCE-SD)
    The University of the South Pacific
    Suva, Fiji
    Elisabeth Holland
Future promise

Members of the IINC will meet at the World Conference on Education for Sustainable Development at the time of the launch of this book. We are in the process of a reflective review of our centers to identify possibilities for cooperation, collaborative research, and international exchange. For further information on the emerging network, please feel free to contact us at the Center for Environmental and Sustainability Education at Florida Gulf Coast University.

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