A SOCIAL ECOLOGY FRAMEWORK
FOR ACHIEVING AN ORGANIC NEW ZEALAND BY 2020

What an exciting prospect, a whole country in which all managed ecosystems (gardens, farms, forests, parks, etc.) are designed and managed to promote personal, social and ecological health; a country in which the literacy and competence in each of these areas among the whole population is such that curative approaches to problems are only resorted to in emergencies; a country in which all the people characteristically choose to act on love over fear, caring and responsibility over alienation and apathy, and who have discovered how to live spontaneously and creatively in the moment, taking into account lessons from the past and collective life affirming visions for the future. Food would be produced, distributed and consumed primarily for nourishment and celebration (the end of most of the centre isles in the supermarkets!). Extension agents would be experts in ecosystem design and detection of early indicators of change. Educational programs would build on a solid foundation of personal, socio-cultural and ecological understandings. This would provide a basis for developing competency in working with others to vision, design (and revision and redesign), implement, manage and monitor systems. Many consumers would be part of community supported agriculture groups (1). Governments would have redesigned all policies, regulations, programs and services to be supportive of this health promoting, organic way of living.

The above represents a small contribution to a necessary collaborative visioning process that needs to be facilitated throughout the country as part of deciding what it is that we want to create (2). To do this effectively it will quickly become apparent that most of us will need much greater levels of literacy in a range of areas, and also full access to much information that is presently kept from us by governments and business. So early steps must include addressing these major barriers to change. To bring about sustainable change we must meet people where they are and support them in taking their own unique next meaningful steps. This is the opposite of the more common approach of preaching, shaming, manipulating and bribing to bring about change. In working with producers in transition to organics I have found it most effective to start by asking them what small initiatives they have already taken to farm more ecologically (to support regeneration of the soil or reduced dependence on inputs, etc.) - and to acknowledge and celebrate these - and then to ask them what next steps have they wondered about taking and what they need to take them, what the barriers are and how these could be removed. I have found that if this is done in a group, most of the agronomic problems can be solved by relying on the collective wisdom and resources of the group. With respect to the larger socio-cultural context it is important to be cognisant of the dominant trends and pressures, and of the things that are consequently being ignored or neglected. Some of these are listed in Figure 1.

Dominant Grand Narrative of "Progress"	Neglected/Blocked
Production (regardless of cost)	Maintenance, caring
Growth, no limits	Sustainability, limits (resources, ecological....)
Competition	Collaboration, mutualism, synergy
Wealth	Sense of enough

Individualism	Community
Consumerism (emphasising compensatory wants)	Conserver society (meeting basic needs)
Homogenisation	Maintenance of diversity
"Controlling" science ("understanding" science and arts as a disposable luxury)	"Understanding" science and arts
Powerful technologies (often centralised, imported, inaccessible, unrepairable)	Appropriate technologies (decentralised, locally accessible, repairable)
Market forces (manipulated demand, excessive advertising)	Values based decisions (participatory democracy)
Economic rationalism (monetary system of values)	Meeting the greatest "good" (social justice....)
Transglobal corporate managerialism	Regional self-reliance and responsibility
Mobile work force (disconnected from place)	Sense of place
The myths that these are embedded in are inadequate for securing a "good" future for most in present and future generations.	We need to search for new life-promoting myths that can accommodate these characteristics: some can be found within nature (and ecology)

Fig.1. Dominant pressures and areas of neglect in industrialised societies.

It is important to realise that for a transition to organics to be sustainable, changes that reflect our values and world views will be needed in each of these broader areas.

We also need to become competent at working with the processes of change. One of the most useful tools in this area in Lewin's Force Field Analysis (3). Basically, Lewin argued that if we want to bring about a change, such as making New Zealand organic, we need to firstly identify the driving and restraining forces, and secondly to figure out how to strengthen the former and weaken the latter. In doing this we need to consider these forces at every level within the system, from internal forces, such as creativity and fear, to external forces, such as global opportunities and restrictive international regulations. Taking all these factors into account, it is then necessary to establish personal, enterprise, local, regional, national and international goals, and to work alone and with others for their achievement.

I use a social ecology approach because it works (4) . Unlike most maps for change it includes the personal (as well as social and environmental), and doesn't privilege economics. It emphasises working with chaos, complexity and the unknown, collaborating across difference, being competent in the area of design, particularly ecological design, and taking issues of power and gender into account. It sees change as a co-evolutionary process and validates the taking of small meaningful steps and the public celebration of their completion to make them contagious! A first attempt at constructing a framework to support this approach is provided in Figure 2.

	PERSONAL core + adapted selves	SOCIAL cultural diversity	ENVIRONMENTAL physical resources, biodiversity

WHY	Impact - Degradation - Breakdown		
Organic Agriculture ?	Need for meaning (fulfilling work), well-being, creativity, caring	Relationships Community Peace	Maintenance Sustainability
WHAT is	*Agriculture is sustainable when it maintains the capital within the systems involved while achieving its other goals, including productivity and profit*		
Organic Agriculture ?	Personal meaning	Healthy society	Multi-species and functions Cycles Knowledge and skills *vs* inputs Appropriate technologies
WHAT'S NEEDED to make it happen ?	Redesign of Self,	Social Systems,	and of Agroecosystems
	- through empowerment, awareness, values/world views, vision, development of new competencies, and mutual support		
	Acknowledgement of one's 'good' core, unique gifts and missions	Collaborative spirit Diverse personalities and competencies Local cultural uniqueness	Ecological services Co-evolutionary processes Bio-regional uniqueness
HOW to bring about the change	*Acknowledgte the past, vision the future and identify new "small meaningful acts" and celebrate them publicly to make contagious*		
	Interrupt distress behaviours Live fully and creatively in the present. Spontaneity, synchronicity	Reconciliation Supports, rewards, penalties Decentralise Participatory democracy	Regeneration Redesign of complex systems Time, space and roles Synergy, mutualism
HOW to know if it made a difference	*Indicators of positive change*		
	Well-being Love Creativity	Harmony Peace Celebration	Sustainability Biodiversity Ecological processes

Fig.2. A framework for making organic agriculture happen.

The process starts by asking "what the issue is and why it is important?". Note that what we are concerned with here is a broader issue than just facilitating a transition from conventional to organic production and consumption. In fact, what we are involved with is the ongoing psychosocial evolution of our own species, which at this stage of our development is concerned primarily with moving from being preoccupied with control to focusing on supporting and helping - especially children, one another and ecological and community processes. Changing how we raise our children ("history is written in childhood")

will have much greater effects on achieving our goals than all other approaches combined (5).

In working with change, the primary resources we have to draw on are ourselves, especially our core self (called by some our true self, essence or the 'god' within; our adapted selves are what we had to develop to survive past traumas and difficulties, but they are what prevent us now from making progress in the present by keeping us focused on accommodating and substitution strategies), our cultural diversity and creations, and nature and its rich biodiversity. Most people are already aware of breakdown in each of these areas, and they yearn for more meaning in their lives, particularly through nurturing relationships and community, and recognise the need for sustainability. So a central challenge is to show how organics can make a significant contribution in each of these areas. The model then asks "what is involved?" and the answer is "redesign" at every level.

Supports
Education, demonstration models.
Extension and other services.
Research and development.
Legislation, regulation.
Policy, planning, public participation.

Rewards
(only available during a transition period)
Tax incentives.
Subsidies.
Low interest loans.
Special services for change.

Penalties
(For those who act irresponsibly)
Monitoring programs.
Legislation.
Enforcement.

In agriculture in particular we need to learn how to be much better at working with multi-species, multi-functions, multi-story systems, cycles and appropriate technologies. The next question is "what's needed to make it happen?" Here we must connect more clearly with our own unique agendas and missions and stop being enslaved by those of others whose values and visions are conflicting with our own. We must also work with what is available locally, both socially and ecologically. The next question is concerned with "how to actually bring about the change?". This may involve some personal recovery work to reclaim our vision and power, and some reconciliation work to enable different groups to work together effectively. Eventually this will also require most of us to be much more politically competent. Most ecosystems will require regeneration work and fundamental redesign to enable us to manage much more complex systems and be much more precise in where and when we do things, much of this redesign being aimed at reaping the benefits of nature's

natural synergy and mutualism. Politically, we need to work at every level to design more appropriate and effective supports, rewards (incentives used during the transition period to prevent the development of dependence) and penalties (Fig. 3).

Finally, the model asks 'how will we know if we are making progress?"; and here we will need an extensive array of reliable indicators of both positive and negative change. While these suggestions are necessarily general, earlier papers have provided numerous examples and more detailed arguments (6). However, the real details will be defined by all who take on the task, given their unique backgrounds, competencies and local conditions. It is certainly achievable. We just have to decide to prioritise it, overcome our differences to enable us to work together, and to DO IT!

Fig.3. Forms of political action

Let me close as I started. What an exciting prospect, of everyone who reads this firstly choosing and engaging in a small meaningful action as your unique initial contribution towards making New Zealand organic, and secondly sharing this magazine with your friends and family in an effort to encourage them to do the same. What an exciting prospect, in no time at all the whole country will be engaged in achieving this wise goal.

Professor Stuart B. Hill was appointed Foundation Chair of Social Ecology at the University of Western Sydney (Hawkesbury Campus) in 1996. Prior to that he had been at McGill University, in Montreal, Canada, where he had coordinated McGill's zoology major, and established, in 1974, Ecological Agriculture Projects (http://www.eap.mcgill.ca), Canada's leading resource centre for sustainable agriculture. He has published over 280 papers and reports, and in Canada was a member of over 30 regional, national and international boards and committees, and he is currently on the editorial board of four refereed journals. He has successfully completed projects in the West Indies, French West Africa, Indonesia, The Philippines, and the Seychelles, as well as in Canada and Australia.

Dr. Hill is committed to working for change that improves environmental sustainability, community and personal wellbeing, and our psycho-social co-evolution. He is critical of the still dominant tinkering (shallow) responses to problems, as well as their endless measurement, and is a tireless campaigner for the proactive, fundamental (deep) redesign of our lifestyles, our institutional structures and processes, our managed ecosystems and our technologies. His background in ecology, soil biology, entomology, agriculture, psychotherapy, education, policy development and international development, and his experience of working with change, have enabled him to be an effective facilitator in complex situations that demand both collaboration across difference and a long-term evolutionary approach to situation improvement. As this is a focus of social ecology, he is currently in a euphoric state as a member of a dynamic learning and action community (of over 300 staff and students) with overlapping values and mutually supportive projects.

- Groh, T. And S.S.H. McFadden 1990. Farms of Tomorrow: Community Supported Farms, Farm Supported Communities. Bio-Dynamics, Kimbeton, PA.
- Hunter, D., A. Bailey and B. Taylor 1997. Co-operacy. Tandem, Birkenhead, NZ; Hunter, D., A. Bailey and B. Taylor 1999. The Essence of Facilitation. Tandem, Birkenhead, NZ.
- Lewin, K. 1935. A Dynamic Theory of Personality: Selected papers by Kurt Lewin. McGraw Hill, N.Y.

I currently define social ecology as "the study and practice of personal, social and environmental sustainability and change based on the critical application and integration of ecological, humanistic, community and 'spiritual' values".

- De Mause, L. 1999. Childhood and cultural evolution. J. Psychohistory 26(3): 642-723; Sazama, J. 1999. Understanding and supporting young people. Rational Is., Seattle, WA.;
- Solter, A. 1989. Helping Young Children Flourish. Shining Star, Goleta, CA.;
- Stallibrass, A. 1989. Being Me and Also Us: Lessons From the Peckham Experiment. Scottish Academic, Edinburgh.
- Hill, S.B. 1991. Ecological and psychological prerequisites for the establishment of sustainable prairie agricultural communities. Pp. 197-229 *in* J. Martin (ed.) Alternative Futures for Prairie Agricultural Communities. Fac. Extn., Univ. Alta. Edmonton, AB.;
- Hill, S.B. & R.J. MacRae 1995. Conceptual frameworks for the transition from conventional to sustainable agriculture. J. Sust. Agric. 7: 81-87;
- Hill, S.B. 1998. Redesigning agroecosystems for environmental sustainability: a deep systems approach. Syst. Res. 15: 391-402;
- Hill, S.B., C. Vincent & G. Chouinard 1999. Evolving ecosystems approaches to fruit insect pest management. Agric. Ecosyst. Envir. 73: 107-110;
- Macrae, R.J., S.B. Hill, J. Henning & G.R. Mehuys 1989. Agricultural science and sustainable agriculture: a review of the existing scientific barriers to sustainable food production and potential solutions. Biol. Agric. Hortic. 6(3): 173-219;
- MacRae, R.J., S.B. Hill, J. Henning & G.R. Mehuys 1989a. Farm-scale agronomic and economic conversion from conventional to sustainable agriculture. Adv. Agron. 43: 155-198;
- MacRae, R.J., S.B. Hill, J. Henning & A.J. Bentley. 1990. Policies, programs and regulations to support the transition to sustainable agriculture in Canada. Am. J. Altern. Agric. 5(2): 76-92;
- MacRae, R.J., J. Henning & S.B. Hill 1993. Strategies to overcome barriers to the development of sustainable agricultural in Canada: the role of agribusiness. J. Agric. Envir. Ethics (61): 21-51.