

## **From Environment to Sustainability: The Greening of Industry Network at the Millennium**

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### **ABSTRACT**

At the inaugural meeting of the Greening of Industry Network (GIN) in 1991, we established a ten-year program of meetings, publications and communications to form a new network of professionals interested in industry, environment and society. We made plans to evaluate the Greening of Industry Network at the ten-year mark to decide whether it should go on, come to an end or change. That time has come. This discussion draft for the second decade of GIN draws on many evaluations, workshops, documents and the advice of many individuals. We present a summary of GIN accomplishments, a record of international meetings, books and journals, an international network of professionals, a virtual organization providing catalytic thought leadership. We present an outline for an evolved Greening of Industry Network, with a sharper focus on global sustainability and North-South issues and with recommendations for creating a new Board comprising issue and functional Working Groups, and individual and institutional memberships.

Key words: sustainability, sustainable development, envisioning, system change, sustainable industry, industry and environment, partnerships, GIN Second Decade.

## 1. INTRODUCTION

Ten years ago, we created a new enterprise, the Greening of Industry Network. One important part of the mission was to limit its lifetime, but hardly its scope. When we started, we posited a few possibilities for Year Ten: such as, our work will be done, mission accomplished - or not - the Network comes to an end; or, with our success, we continue as an informal network; or, we structure formally as a society or research institute. We did not know just where it would lead. As a network, participants and observers were free to conceive of, shape, opt in or opt out of GIN. Some have seen it as a professional association, an academic society, a business enterprise, or a social movement. It has worked best as a *network*, connecting people and institutions across many boundaries around issues of industry, environment and society, one take on the emerging concept of sustainability.

At this point we present a draft plan for GIN's second decade, with a few alternatives offered for contrast. We present a focus on the transition to global sustainability and on the developing world, on North-South relations and global shifts in production and consumption. For operating the Network, we envision some additional structure, including a Working Board with specific responsibilities. We have drawn on the advice and suggestions of many participants, and members of our past advisory board and action planning committee. We have drawn on many other sources, including:

- Ideas and discussion of the GIN Working Interim Group convened in 2000.
- Ideas generated by GIN scenario teams 1998-99.
- Ideas posted during the 1999 GIN conference in Chapel Hill.
- Discussion summary from our planning workshop at the 1999 GIN conference.
- GIN-General Motors R&D project, Envisioning the Global Environment in 2025 (Rogers, *et al.*, 2000).
- GIN Research Agenda (Schot, *et al.*, 1997).
- GIN-Asia platform.
- Annual summary reports of GIN conferences published in *Business Strategy and the Environment Journal*.
- Several evaluations of GIN conducted since 1995.

We sent the discussion draft in June 2000 to the Working Interim Group for consideration and commentary as we develop the second decade mission and work plan for GIN. Next steps include developing a detailed strategic plan.

## 2. BACKGROUND AND ACHIEVEMENTS

Since the seminal meetings in 1989, the Greening of Industry Network has built an international forum for research, policy and practice on issues of industry, environment and society. Our goal has been to construct research agendas and stimulate high quality research to inform policy, strategy and actions. Working on complex issues requires diverse participation and talents. The

Network is a voluntary association that cuts across many lines, national and professional, and the only entry requirements are interest in the issues and willingness to work on them. At the same time, it is an action arena, producing international open meetings, publications and communication vehicles and influencing the work of other institutions.

## **2.1 Meetings, Publications, Communications**

We have convened nine international conferences since 1991, including *Sustainability at the Millenium: Globalization, Competitiveness and the Public Trust*, Bangkok, January 2001. And we have started planning for the tenth GIN conference to be held in Gothenburg, Sweden in June 2002, marking 30 years after the Stockholm Environment Conference. In all, our conferences and workshops to date encompass a total of 23 convenings in 10 different countries. Annual conferences draw 300-to-400 participants from 40-to-50 countries, professionals from academia, government, NGOs, consultancies and business. The conference titles themselves document the evolution of leading edge public debate on industry and environment. These are bridge building, cooperative affairs with a local host working as a partner in defining the issues and organizing the event. See <http://www.greeningofindustry.org>.

The Network produces many products and outcomes based on linked activities, convenings, publications and communications. The meetings themselves provide a neutral forum for exchange, debate and learning. We have published three books with Island Press, and a fourth is forthcoming from Kluwer Academic Press. The Network is affiliated with the John Wiley & Sons journal *Business Strategy and the Environment*, and we have produced seven special journal issues drawing from the conferences.

## **2.2 Influence**

Along with these tangible products, we believe that the most important products of the Network are the relationships we build and the influence that we have on other institutions. Many smaller networks have developed and have thrived in the working space of the Network, and many individuals have used its resources for professional advancement. The Network is often praised for bringing people together across disciplinary and professional lines around difficult issues of environment, development and equity.

In academia, for example, the group Organizations and the Natural Environment (ONE) developed in GIN's space and has since become a recognized interest group in the Academy of Management. In research, the International Human Dimensions (of Global Environmental Change) Program on Industrial Transformation (IHDP-IT) found many people assembled within the Network for its scientific committee. In higher education, the international Ph.D. program at Erasmus University Rotterdam often convenes its annual residency retreat around the Network conference, using it as a unique teaching experience. In publishing, we have a series agreement with Island Press, with further distribution by Earthscan; a new book series starting up with Kluwer Academic Publishers; a relationship with the international Wiley journal *Business Strategy and the Environment*; and many active Network participants contribute often to Greenleaf Publishing for their books and journal *Greener Management International*. In policy, agencies such as the U.S Environmental Protection Agency, U.S.-Asia Environmental

Partnership (a project of USAID), the Environment and Research Directorates of the European Union, and the Dutch Environment Ministry have all sponsored the Network and use it to gain new knowledge and develop new approaches. The Network has facilitated the development of joint research proposals for the Environment and Climate Change program of the Fifth Framework of the European Union (DGXII). Business representatives from companies such as General Motors R&D, Polaroid and Novo Nordisk have found the Network to be a unique resource, a sounding board and listening post for their strategies for sustainable development.

### **2.3 Community of Interest**

The Network is a community of interest, open to all with interest in the topics and willingness to contribute and work on the issues. It is a meeting ground for people from differing perspectives, professions and countries. It is a platform for debate, exchange, learning and knowledge creation. Through the years we have seen the debate and language evolve. In the early years, GIN discourse revolved around technology and human society. Some saw technology as machine only, an undesirable intrusion in nature, while others saw technology as an expression of human values and culture, encompassing human creativity and organization. In the middle period, GIN debate centered on incremental change through environmental management systems *versus* systems change, a new way of pursuing sustainability. More recently, GIN debate has focused on seeking the meaning of sustainability and roles for all people to work toward its realization.

### **2.4 Finance and Management**

One central question for any initiative is how to support and manage activities. More than 50 organizations have provided financial support to the Network and its activities since 1991, and another dozen have pledged to support our next conference in Bangkok (January 2001). Government agencies have supplied basic funding, and each year we seek project financing, especially for the conferences. GIN's university host institutions in Asia, Europe and the US provide substantial support and services. But volunteers probably contribute at least as much in their time. All of these relationships further build understanding, cooperation and partnerships. Originally, we coordinated activities through two centers, in the US and in the Netherlands. In 1998 we expanded to Asia with a new node for Network coordination at Chulalongkorn University in Bangkok. The US office maintains a database of about 2,000 participants, and there is a core of about 500 Network regulars. We use electronic communications including the Web and electronic mail list servers.

We have worked with an international Advisory Board of 20 members and a Planning Committee of 20 more. Given our current re-invention at the end of the first ten years, we have recently formed a Working Interim Group to take the place of the other two groups with the intention of forming a new structure in 2001. As the Network has expanded from two organizing centers to three, and as the number of individual participants has increased greatly, coordination, communication, management and finance have become more complex and require new approaches. The annual international conferences have grown with increasing response to the annual Call for Presentation and with wider thematic and geographic scope leading us to

lengthen the time between events to 15 or 18 months. This growth and success requires a new look at Network operations.

### **3. THE CALL FOR CHANGE**

Much has changed in the past ten years, the issues in public discussion, the relative roles of business and government, the evolution of other organizations, and Internet communications, for example. Listening to voices of approval, congratulations, praise, and the opposite, we hear many of the same recommendations for GIN.

#### **3.1 The Issues:**

- Sharpen the focus.
- Stay with industrial transformation and greening.
- Focus on North-South issues.
- Focus on the future of development.
- Focus on the sustainability transition
- Focus on the under-developed social and equity implications of sustainability, along with the economic and environmental.

#### **3.2 Mission:**

- Create a space to work in, a gathering place or platform for critical dialogue and learning, a crucible for ideas and knowledge creation, a spawning ground for effective approaches to sustainability.
- Identify knowledge needs and link research, policy, strategy and actions toward sustainability.
- Create communication, linkages and working relationships in an atmosphere of trust with sincere and full portrayal of the issues.
- Continue building diversity, internationally and professionally.
- Develop a new theory of growth.

#### **3.3 Method:**

- Keep the strengths of networking, and add some structure starting with a Working Board.
- Continue creating international convenings, publications and communications.
- Make a continuous effort to promote critical, cutting edge debate.
- Facilitate rather than advocate.
- Create and participate in research, education, policy and action programs.

### **4. THE EVOLVED NETWORK**

#### **4.1 Focus on Sustainable Development, System Change and Developing Countries**

Since the start of the Network the focus in the debate has changed significantly. Our name reflects the problem perception of the early 1990s: “greening” (environmental change) and “industry” (a focus on one part of society). Since then the central issue has moved toward *sustainability* in the *industrial system, including consumption*. Furthermore we have learned about the growing complexity in production and consumption structures. Societies and their economies throughout the world are experiencing a process of rapid globalization. Technological advances and open borders enable firms to organize the production of goods and services transnationally. As a result, the economies of nation states and the policies of national governments are becoming increasingly intertwined.

These global shifts in industrial regimes, trade and technology are creating deep environmental and social impacts – and inequities – in the developed and developing world. Important changes in production and consumption systems are required in order to meet the needs and aspirations of a growing world population while using environmental resources in a sustainable manner. These changes can not be governed only at the level of individual nation states. Modern societies are becoming more and more interdependent. According to a new book, the world's economic future will be determined in significant part by what happens in the rapidly industrializing countries - particularly in Asia - where capital, consumption, manufacturing and technology will again become the growth engine for the global economy. Significantly, the world's environmental future is equally dependent on what happens in Asia where economic, population and urban growth and environmental stress are converging most forcefully. (Angel and Rock, 2000). A new format of international coordination is needed to enable the transition toward a sustainable society.

Given this shift in issues and problem perception, we identify three major challenges for GIN's second decade.

First, we see the need to shift the Network from a focus on individual actors to look more broadly at institutional and societal change. In our original mission we focused for the most part on *business as an actor*. The position of one specific actor, however, is not highly relevant in the debate on sustainability. The challenge in sustainability is to create new visions for the part of society that is about fulfilling human needs and to give new meaning to the words "production" and "consumption." The issue of "system change" is becoming more and more salient in this respect, given growing international interdependency (see the Network's Research Agenda).

Second, global shifts in production and consumption are creating deep environmental and social impacts in both the South and the North. The Network should broaden its focus to encompass the full notion of sustainability. Along with environmental issues, social issues should play a prominent role in GIN activities.

Third, given that the sustainability challenges facing different regions of the world are qualitatively different, the Network should pay more attention to regional differentiation, such as:

- More sustainable modes of industrialization for rapidly industrializing countries.
- Sustainable modes of industrial restructuring for Eastern European countries.

- Sustainable strategies for post-industrialist countries.
- Issues of poverty and strategies to fulfill basic human needs in less developed countries.

## 4.2 Structure and Management

### *Form a Working Board*

To carry on and to be successful and effective, the Network should create a *Working Board* comprising a number of *Working Groups*. In the first ten years, we consulted with an Advisory Board, and in 1995 added an Action Planning Committee. The GIN Coordinators sought volunteers from these groups to help in carrying out projects. Over time the two groups grew to 50 members with varying levels of involvement and with general responsibilities. The Working Board members would serve defined terms, such as three-year renewable terms, with specific roles and responsibilities. Each Board member would serve on a specific Working Group, functional or issue-oriented, such as publications and communications, financial planning, research, education or a specific issue. The GIN coordinators would serve as steering committee for the Board. All of the following recommendations will be developed and implemented with the help of the Working Groups/Board.

### *Memberships*

Many other institutions and organizations benefit from the resources and connections that GIN provides. We should explore creating an institutional membership in GIN, with annual membership fee and benefits identified. Senior representatives of these institutional members (such as research centers, NGOs, corporations) could become members of the Network Advisory Council. Benefits and membership fees are under discussion, with two views: sliding scale *versus* flat fee.

The Network should offer individual memberships with benefits such as a discount on journals and books, reduction in annual conference registration fee, membership on an electronic list serve, and other benefits to be identified. For example, Wiley already offers a low rate to GIN members when subscribing to *Business Strategy and the Environment Journal*, and we are discussing discounts on selected book titles with them. At the same time, we should keep in mind that many in the present informal setup feel a sense of ownership of GIN that has developed organically through their work and participation. The Network should continue to be open to all interested in the issues and to strive for diverse participation, cutting across many boundaries.

## 4.3 Finance

The Network has achieved a lot through the work of many volunteers and the contributions of over 50 sponsors. To avoid volunteer fatigue, the Network will need continued institutional financial support from a number of sources, including membership fees, conference income, grants and services to be identified. Sources of funding include government agencies, private foundations, individuals and corporations. Suggestions for GIN services include professional training institutes and knowledge broker services to assemble research and knowledge-to-action teams, to be explored and evaluated with the new Working Groups/Board.

#### 4.4 Communications

One basic activity of the Network is stimulating communications among many stakeholders to cut across national and professional boundaries. Our Internet use has all but replaced hard copy mailings. GIN Web pages and email list servers are in place now, and the Network should continue to expand and improve their use for interactive communications, information dissemination, knowledge creation and community building. The Network should strengthen the community of interest already formed and make it more active and visible. For example, we have already received a proposal from a volunteer to chair a Working Group on Communication and Publications.

#### 4.5 Convenings

Continue the successful series of agenda-setting international conferences at 12-to-18 month intervals. Expand the number of smaller, focused workshops, presently one a year, working with institutional partners on relevant issues.

#### 4.6 GIN as Facilitator/GIN as Change Agent

In our November 2000 workshop *Envisioning the Future Global Environment*, with General Motors R&D, we conducted a session on new directions for the Greening of Industry. The discussion revolved around two models for GIN, as *facilitator* and as *agent of change*. These are some of the recommendations as developed jointly by GIN and GM participants.

- GIN should keep working on system level change (instead of work on eco-efficiency); GIN is the forum for system-level thinkers and distinct from other organizations in the field. GIN is appealing because of the mix of people from many professions, disciplines, countries and traditions who participate in the dialogue. GIN appeals especially to those who learn by crossing boundaries, open to new insights from many sources.
- GIN should set up pilot activities and experiments: seek volunteers to lead and work on different activities with business, government and public partners. For example, focus on what sustainability means for business. GIN could have a kind of consulting branch with a pool of people who are willing to form knowledge-to-action teams. GIN becomes knowledge broker.
- Start one-on-one cooperation between businesses and GIN. GIN could start evaluating the performance of companies and make this public. Work with other strong networks in strategic alliances to create joint research and action projects.
- Focus on the future: the GIN-GM *Envisioning Project* and scenario workshop could be a model for doing more envisioning workshops with other organizations.
- The organizational form of GIN might differ in different parts of the world. And some parts of the world are underrepresented in the Network.

- The Network should consider a name change since "greening" is a starting point, and the issues in discussion are much wider. For example, change to Sustainable Industry Network.

## 5. CONCLUSION

### 5.1 Some alternatives we considered:

- Make no changes. Keep going in the same informal networking fashion.
- The Network coordinators should do nothing. Wait and see who and what emerges.
- The Network should fragment itself and spin off activities.
- The Network should become one thing: a formal academic society, or a research or educational institute, or a business or policy institute, or a consulting group.
- The Network has run its course: *Mission accomplished!* The Network should exit gracefully by putting an end to itself.

### 5.2 Next Steps:

- ✓ - Circulate this draft for commentary, June-December 2000.
- ✓ - Assess prospects for success and consider alternatives.
- ✓ - Inaugurate the Second Decade, January 2001 in Bangkok at the 9th GIN Conference.
- ✓ - Form the Working Groups/Board early 2001.

## REFERENCES

Angel, David P. and Michael T. Rock, Contributing Editors, Asia's Clean Revolution; Industry, Growth and the Environment, Greenleaf Publishing Limited (2000).

Rogers, Jerry, and Alexandra Elnick, *General Motors Research & Development and Planning*; Julie Blair and Charalet Dunnigan, *General Motors Corporate Strategy and Knowledge Development*; Envisioning the Global Environment in 2025: Interim Project Report, Fall 2000, Publication of GM Research & Development Center; <http://www.greeningofindustry.org/publications.html> (2000).

Schot, Johan, Ellis Brand and Kurt Fischer, The Greening of Industry for a Sustainable Future: Building an International Research Agenda, The Greening of Industry Network; <http://www.greeningofindustry.org/publications.html> (1997).