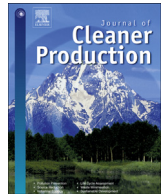




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Helping to build a sustainable future through the greening of industry and its networks: knowledge sharing and action promotion

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ABSTRACT

The Greening of Industry Network (GIN) is into its third decade of involvement in integrated environmental, social, and economic debates. This paper introduces GIN to another generation of thinkers and doers, and reintroduces it to participants who have had previous experiences with GIN and/or its activities. GIN's history and the various 'debates' sponsored by the organization over the years will be overviewed. We also identify debates and directions that we see continuing or emerging over the next few years, as GIN continues to evolve. Although GIN has been an active player in the debates about the greening of industrial development for two decades, it has evolved as social, technological, organizational, and economic developments changed. Over its two-plus decades, GIN has seen significant shifts in a number of directions, many of these shifts occurring in sporadic and unexpected ways. Climate change, resource depletion, sustainability, technological change with an expanding global communication network, social media, multiple recessions and growth periods, base of pyramid emphasis, a growing academic stream in business and the environment, have all contributed to the various lenses of GIN participants and thereby shaped action and activities in the Network. Change continues. GIN will be there to help understand and address some of these changes as they pertain to the Greening of Industry.

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1. Introduction

The Greening of Industry Network (GIN) is connecting professionals from research, education, business, civil society organizations, and government. GIN focuses on issues of industrial

development, environment, and society, and dedicated to building a sustainable future. Founded in 1992, GIN is the oldest active academic network on organizations and natural environment.

This paper focuses on the organization, its goals, and the various debates sponsored by the organization over the years. As members of the GIN coordinating team we also identify debates and directions that we see continuing or emerging over the next few years, as GIN gathers full steam in its third decade. Although research ideas are prevalent in this paper, it is not meant to focus on specific research questions but serves as a dialogue, viewpoint and opinion vehicle. The purpose is to position the broader works of this special issue within the context of the history of GIN, a major

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Over its two-plus decades GIN has seen significant shifts in a number of directions, many of these shifts occurring in sporadic and unexpected ways. Climate change, resource depletion, sustainability, technological change, an expanding global communication network, social media, multiple recessions and growth periods, base of pyramid emphasis, a growing academic stream in business and the environment, have all contributed to the various lenses of GIN participants. These issues have affected previous GIN debates and we believe GIN debates have influenced some of the thought in these areas.

GIN has evolved with at least three generations of academics, industry, and government representatives involved. Right from the beginning we have had participants who were mature thinkers on these issues; these thinkers began GIN. There are some of us who grew up with GIN and are still participating. Now, the third generation is made of new scholars, industry participants, and government officials who are experiencing debate initiation. Not every GIN participant can be pigeon-holed into one of these generations. But, for a successful network we need these various participants involved.

At one time there was concern on whether GIN had outlived its usefulness, but even a 10- or 20-year presence of trying to influence a global sea-change in thought and practice is not possible. When dealing with the relationship between human development, industry, and the natural environment measurements and a focus on decades may still be myopic. Sustainability deals with focusing on generations and inter-generational relationships. Change continues. The economic behemoth that is China, future technological developments, uncertain political and economic winds, the renewed understandings for the concept of sustainable development, the further globalization of academic research, the growth of the super corporation, philanthropic activities, and the continuing crises in population and climate sciences, may all play a role in how GIN guides its debates. GIN requires the flexibility to be able to identify, research, discuss, and communicate various concerns whether they are local, regional, or global in scale.

The place of GIN conferences in the field with respect to other conferences has always been a practical focus on policy implications of academic research. “GIN is the most practice-focused of pioneering networking organizations and represented a foundational impetus for increased attention to environmental issues” (Rands and Starik, 2009, 24). GIN is a networking and alliance formation organization. From its first conference, back in 1992, GIN has always sought to bring together government, business, and academics in the sustaincentric quest for re-integration of environmental issues in policy concerns.

Therefore, an important functional aspect of GIN is the need for collaboration. Collaborative efforts across sectors of the ‘triple-helix’, collaboration amongst generational levels, collaboration across disciplines, and collaboration across regions of the world are necessary for healthy progress and debate. These collaboration examples are evident in many of the projects and programs GIN has sponsored over the years (see for instance De Bruijn and Tukker, 2002). Collaboration will need to continue as we dialogue and debate across the various boundaries we encounter as it pertains to complex industry and environment issues. The future of collaboration and how GIN manages collaboration (networks), knowledge development and its use are important concerns addressed in this paper.

The paper is structured into three major parts: GIN's past, present and future, followed by a conclusion. Section 1, the past, presents a history of the GIN network, discussing contributions of GIN conferences to the field of sustainability and its relation with policy

debates. Section 2, the present, describes GIN today, its resources and activities. Finally, Section 3, the future, looks back to GIN's 20 years of experience, reflects on current and future challenges for the sustainable development movement in general. Challenges for GIN in particular are discussed. Finally this paper sets the stage for debates ahead.

2. Our past: GIN – a historical perspective

In the 1980's three globally defining, but regionally occurring industrial environmental disasters set the stage for the industry and environment relationship awareness. These were in turn, the Union Carbide Company's Bhopal disaster, India, December 3, 1984; the Chernobyl nuclear disaster, Ukraine, April 26, 1986; and the Exxon Valdez oil spill, Alaska, United States, March 24, 1989. These disasters represented punctuated equilibrium events that generated a sense of urgency and traction for a global sustainability agenda (Dryzek, 1997). A further, positive defining event in the 1980s was the publication of *Our Common Future* by the World Commission on Environment and Development (1987), known popularly as the Brundtland Report.

GIN is a virtual organization without formal rules, membership, structure, or regular finance. Set out in 1990 by its founders, Kurt Fischer and Johan Schot, the initial goal was to engage about 200 activists as the GIN core. Their initial goal was to change the way knowledge leads to action, by connecting people through work and ideas across professions and national boundaries. GIN's efforts include constructing research agendas and stimulating high quality research to inform policy, strategy and actions. GIN has consistently grown over the years with hundreds of active participants and thousands of interested parties. Participant characteristics and involvement have shifted through GIN's permeable boundaries. Participants' level of activity is dependent on many functions including their relative interest and issues that are on the GIN agenda. Although currently we have a coordinating team, our management and planning is as fluid and organic as the organization.

Publications, conferences, and workshops with their ephemeral linkages have contributed to GIN's fluid existence and organizational progress. Over the past 20 + years, GIN sponsored or co-sponsored 33 events (see Table 1). 1991 was the year of the first GIN Conference in The Netherlands: The Greening of Industry: Research Needs and Policy Implications was the theme. It was followed by a landmark year for Sustainable Development Policy: with the Convention on Biological Diversity Protocol on Biosafety (“Cartagena Protocol”); The United Nations Conference on Environment and Development (UNCED/“Earth Summit”); and the Framework Convention on Climate Change (UNFCCC) (Kyoto protocol), setting the sustainability agenda for the next decade. Over the years there have been more milestones related to international efforts that have sought to address various environmental concerns. Treaties, conventions and protocols all contributed to the dialogue and efforts for managing environment and industry. A listing of some of these initiatives that parallel the growth of GIN, and slightly preceding GIN development but also influencing the debates are listed in Table 2.

In the early years (1982–1987) before the beginning of GIN, the industry influences were from products they manufactured and their operations. For example, the issues with the ozone layer were greatly influenced by products and materials related to hydrocarbon emissions and regulations limiting ozone-depleting emissions started affecting industry. These concerns also led to industrial innovation. Realizing the increasing roles of industry, government, and NGOs in this period further catalyzed efforts by GIN. In 1987, the influential “Our common future” involved industry and its

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