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This report was prepared by ACT 4, a non-profit association in France specialising in communication of science and technology for society. Text: Marilyn SMITH. Graphic design: Maro HAAS. Translation: Babelscope. Contact: marilyn@marilynsmith.biz
HELIO International has always been considered something of a “UFO” in the international NGO galaxy. Since its creation, it has rubbed shoulders with the largest organisations, without having the same budget or membership, but having been recognised for its intellectual patrimony and the tools and methodologies it has developed to help decision-makers improve energy policy in order to contribute to the ecodevelopment of the Planet.

As the only French NGO to have established a presence in the international energy sector in 1997, HELIO has presented its work at each of the UN Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP), and has participated in numerous international, UN, and other conferences and activities. It is accredited by the UNFCCC, the UN Economic and Social Council (ECOSOC), and the UN Environment Program (UNEP), and is an international association of the Francophony.

As the only truly independent think tank focusing on energy and ecodevelopment, HELIO is able to direct all its activities toward the common good, concerning itself with fairness, gender parity and the genuine elimination of poverty.

As the only such network to have recognised experts present in all regions of the world, HELIO has been able to develop an original and efficient way of working, thanks to the dedication of each of its members and the Internet.

Despite having been the almost-perfect tool in a world that worries little about the long term, HELIO has recently been unable to replenish its internal engine, which runs on goodwill. HELIO is now disappearing, having achieved what it had set to do. Other tasks are afoot!

The broad network of experts who created and sustained HELIO will preserve it in their heads and hearts, for HELIO remains a great family of which one is proud to be a part. All have worked, mostly as volunteers, for this new type of association which we all, without exception, would like to see perpetuated. The world will always need generous, informed and relevant contributions, and above all new ideas.

The world is still seeking its path, and this path is ecodevelopment. It is necessary, therefore, to know where to look and it can only be forwards and upwards. HELIO’s final offering to fellow human beings is its proposed autonomous Smart Energy Path (in French: Voie énergétique douce autonome or VEDA), which would still afford us a livable future if we engage ourselves without delay. Some, however, are still masking the urgency of the situation with ineffective, dangerous and costly technologies…

“We run carelessly toward the precipice after having put something there to prevent us from seeing it,” wrote Pascal three centuries ago.

HELIO set out to help identify some paths to the future that would signify the end of this senseless race; the question remains whether we will embark on these roads on time?

HELIO has proudly held a unique place in the global environmental movement. It owes this to its members, who have been professionally demanding and completely dedicated to the public good worldwide.

Dr. Hélène Connor
Founder and Honorary President
HELIO Energy for Ecodevelopment – A Legacy of Measuring Progress
INTRODUCTION TO HELIO

Energy is central to our development. The use of it powers our communities, keeps us warm or cool, cooks our food and gets us from one point to another. Without it, we would not be where we are today. Yet it is only in 2015—with the establishment of the UN’s Sustainable Development Goals—that energy has been granted its rightful place in the development agenda.

HELIO’s creation in 1997 grew out of a conviction that in order to achieve sustainable and equitable ecodevelopment, understanding and monitoring how energy was used had to be a central component of any decision-making process. By doing this, HELIO confronted the “elephant in the room” head on, long before it had become accepted practice to do so. The fact that a diverse range of talented people came together and devoted their talents and time to the establishment and refinement of HELIO’s indicators is a testament to that conviction.

But beyond this collective conviction HELIO possessed a unique “esprit de corps”—due in large part to its open and creative structure—which allowed a wide variety of people to contribute their talents. Just as ecodevelopment draws on social, economic and technical capital, so HELIO drew on the rigor of its scientists, the optimism of its volunteers, and the dedication to equity and sustainability from its development compatriots. The encompassing nature of ecodevelopment, coupled with HELIO’s philosophy of inclusive participation, allowed for dialogue and debate across disciplines, countries and even cultures. Collectively these discussions contributed to HELIO achievements; the genesis of the Gold Standard and SouthSouthNorth can find their origins in HELIO’s work.

I am privileged to have been a part of HELIO, from its creation through its evolution to its place as a respected contributor in the energy debate. My own professional development has been profoundly shaped by HELIO’s principles, its work and the collective intellect of its network.

HELIO has succeeded in placing energy at the heart of the ecodevelopment discussion. Its indicators have allowed decision-makers around the world to make better energy decisions and have empowered communities to document and hold these decision-makers accountable. Individuals and communities can still be the trailblazers for ecodevelopment. Despite ceasing to exist as a discrete organisation, the suite of HELIO’s tools remains available to all, and serves as a powerful reminder of how a commitment to the open, interactive exchange of ideas and convictions can change the world.

HELIO’S legacy lives on.

Laura E. WILLIAMSON
Founding Board Secretary, Project Director, Board Member
HELIO WITHIN THE ENVIRONMENTAL MOVEMENT: From Nature Conservation to Ecodevelopment

To appreciate the role of HELIO International as one of the early “Ecodevelopment Trailblazers”, it is helpful to understand the history of the environmental movement. The environmental movement began in earnest with the Nature conservationists in the early 1900s. It emerged on the public scene only in the 1960s, when it became clear that economic development was having definite impacts on Nature, some of which would be detrimental and irreversible. The first wave of environmentalists focused on the need to preserve the flora and fauna. As industrial development forged ahead and its impacts became more pervasive, the focus of the second wave shifted to preventing and fighting pollution.

Conflicts erupted between environmentalists and those who promoted unrestrained development. The latter perceived Nature primarily as a resource ripe for mining or an enemy to subjugate. Environmentalists were portrayed as “tree-huggers” out to disrupt progress, and most environmental battles were lost. The environmental movement became credible only when it delivered growing evidence that humankind had reached the limits of Nature’s bounty.

The pivotal notion of ecodevelopment emerged around the Stockholm First World Conference on the Environment and Development in 1972, when Ignacy Sachs suggested that mankind, Nature’s greatest destroyer, needed somehow to become its protector and partner. To better understand this evolution, it is helpful to examine here the four successive generations of environmentalists that served as champions for Nature, looking at six parameters:

- **Goals** – what are the primary aims of the group?
- **Space** – what is the sphere in which they operate?
- **Main principles** – what principles underpin their actions towards the goals?
- **Members** – who feels an affinity to the goals and principles, and seeks to engage?
- **Approach** – how will they carry out their actions?
- **Tools** – what mechanisms do they develop or apply to carry out their work?

The emergence of new environmentalists has not made irrelevant the existing groups. Rather, over time, many have increasingly aligned their individual goals and activities with the shared over-arching objective of ecodevelopment.

**Nature conservationists**

Primarily concerned with the preservation of species, conservationists traditionally limited their operations to Nature in rural and wild areas. As early as the late 1800s, some scientists and Nature lovers came together in support of the principle that by observing Nature—and indeed witnessing the destruction or loss of species or habitats—they could build the case for its preservation. They still focused on raising awareness among the public, policy makers and industry by publishing scientific papers and books, and actively conserved species by acquiring threatened habitats or getting them protected by specific laws.

**Anti-pollution groups**

As evidence grew that pollution associated with development played a major role in the destruction of Nature, anti-pollution groups emerged in the late 1960s to early 1970s. They operated at the source of the problem – i.e. in cities and industry – advocating for pollution prevention and control, and in particular for the application of the Polluter Pays Principle (PPP). Anti-pollution movements attracted a wide membership, including ordinary citizens who were now able to see how pollution was affecting their lives and the Planet. They mostly only reacted, however, when it was already too late to prevent the damage. Thus, they advocated that polluters should both repair the damage and compensate those harmed (whether humans, animals or the ecosystem). Their tools, ranging from petitions and street protests to actively blocking activity by polluters, was designed to attract public and media attention, and to raise awareness about a range of serious and multiple externalities imposed on society. The environmental movement took a stronger turn and became more structured with
the emergence of the anti-nuclear movement in the mid-1970s.

**Counter-expertise groups**

The third wave of environmentalists was determined to fight destructive projects on an equal legal and intellectual footing with the project promoters. This required that environmental activists develop their own expertise. Progressively, the gravity of the dangers imposed on the environment showed the PPP to be insufficient and called for the adoption of the Precautionary Principle, i.e. stipulating that projects could not go ahead when there is a doubt about their safe outcome in order to avoid potential harm. The membership evolved from concerned citizens to include experts who could bring scientific and legal argumentation to the movement, working at a peer-to-peer level within regulated systems. With the aim of establishing Nature’s legal standing, they applied a toolkit that improved the level of efficiency of public hearings and court cases.

**Ecodevelopment trailblazers**

By the mid-1990s, it became more and more obvious that governments and decision-makers didn’t understand the global Nature of the environment, or simply didn’t want to recognise it. Environmentalists understood that they had to show the way and this required a step-change in approach. The ecodevelopment trailblazers appeared, comprising both experts and concerned citizens, with the former acting as think-tanks that enabled strategic action on multiple levels. Steering policy towards ecodevelopment, with full recognition of the value of the Global Commons, became a primary goal. Approaches moved from reactive to proactive, combining the capacity to serve as watchdogs (rather than merely observers or critics), pathfinders, guides and monitors. Expansive networks and collaborative structures were established to inform and influence policy- and decision-making. Stressing the key role of energy, HELIO secured its place among the ecodevelopment trailblazers.

Each phase of this evolution reflects crucial steps towards ecodevelopment. Yet even in 2015, that goal remains somewhat elusive as the industrial establishment still fights – seemingly tooth and nail – the notion of complying with policy that is at odds with their own vested interests. What is clear is that the movement has attracted more and more members, spanning diverse stakeholder groups – and much progress has been achieved internationally, which bodes well for the future.

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<td>Ex: Société pour Vaincre la Pollution (SVP)</td>
<td>Ex: Canadian Coalition for Nuclear Responsibility, Greenpeace</td>
<td>Ex: HELIO International</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>Preservation of species</td>
<td>Elimination of local pollution</td>
<td>Prevention of destructive projects</td>
<td>Steering policies towards ecodevelopment</td>
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<tr>
<td><strong>SPACE</strong></td>
<td>Nature</td>
<td>Cities and industries</td>
<td>National ground</td>
<td>The world and mainly the Global Commons</td>
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<td><strong>MAIN PRINCIPLES</strong></td>
<td>Conservation</td>
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<td>Prevention and legal argumentation within an imposed system</td>
<td>Proactive approach: innovation, guidance and monitoring</td>
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<tr>
<td><strong>TOOLS</strong></td>
<td>Scientific publications, acquisition of threatened habitats</td>
<td>Petitions and protests pointing at socialised externalities</td>
<td>Protests, public hearings and court cases, arguing for Nature’s legal standing</td>
<td>Think tank, influencing policy-making; networks and collaborative structures</td>
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HELIO: Mission and Traits of an Ecodevelopment Trailblazer

HYDRO, EOLIEN, LUMIÈRE, ISOLATION, ORGANOMASSE: HELIO INTERNATIONAL took its name from the energy options that can best support an ecodevelopment path: hydro, wind, solar, energy efficiency and biomass. The idea was borne in 1996 in the framework of discussions for the preparation of Rio+5 the following year, where Emilio Lèbre La Rovere and Steve Thorne met Hélène Connor and started working together. HELIO obtained its status as a not-for-profit association in accordance with the Law of 1901 in France in July 1997, with Rod Janssen serving a Treasurer and Laura Williamson fulfilling the role of Secretary under the leadership of Hélène Connor as President.

HELIO was established at the cusp of a step-change in the environmental movement. As the need to pursue a more sustainable development pathway became clear – and the reality of climate change began to emerge – previously disparate stakeholders started working together to create a new agenda for action, independent from governments that were perceived as followers, not leaders.

In some ways, energy experts had been ahead of the sustainable development wave. Throughout the 1960s, they had become increasingly concerned with emerging evidence that, while enabling economic development, energy production and use were also having severe negative impacts on people and environments. The oil crises of 1973 and 1979 sent shockwaves through economies around the world, and stakeholders urged the United Nations to engage in the global effort to establish a more energy-secure future, in part by convening world conferences that would create the necessary consensus.

By 1987, when human-induced climate change had been officially acknowledged by the US National Aeronautics and Space Administration (NASA) and then recognised as both certain and accelerating, the Brundtland Report for the United Nations Commission on Environment and Development (UNCED) acknowledged that sustainable development1 needed to more appropriately take account of three interrelated elements: the economy, society and the environment. The report, however, fell short of stressing that energy underpins development and has major effects on the environment: it lacked a chapter on energy. The 1992 Earth Summit in Rio de Janeiro was a step in the right direction, acknowledging links between energy and the Brundtland’s three pillars, but it still lacked an energy chapter.

HELIO’s intellectual triumvirate – Hélène Connor, Emilio Lèbre La Rovère and Steve Thorne – set an

“Ibrahim Togola

“The world needs HELIO; the contribution of this network is very important for the future of our Planet. I will remain committed to advance the vision and objectives of this remarkable network and the contribution that HELIO has made.”

Ibrahim Togola

1. The word “ecodevelopment” was banned from the international vocabulary by the United States in the early 1970s. As a replacement, the Brundtland Report coined the phrase “sustainable development”. HELIO and some other organisations continue to prefer the original word of “ecodevelopment”.
ambitious goal of getting energy onto the world agenda for ecodevelopment. **Their first task was to “write the missing chapter” in the strategic plans that were taking shape.** They wanted to ensure energy’s substantial contribution to the transformation of the Earth and climate change was well understood, and to present the case that a different energy path should be central to development.

However, to promote clean energy for ecodevelopment HELIO needed to do more than just raise awareness. It had to ensure there were concrete ways to assess whether energy policies were enabling steady progress towards ecodevelopment.

HELIO’s history shows its own evolution as a growing network of experts who anticipated the need for independent analysis as energy systems advanced through a critical transition, within a rapidly changing world context. As diverse stakeholders sought to define sustainable development while understanding of climate change was unfolding, HELIO anticipated – with a sense of urgency – the changing needs of both energy policy makers and the populations they serve.

As new concerns arose in this context, HELIO designed new tools by which in-country experts could systematically carry out three important tasks:

- **Evaluate whether energy policy was supporting ecodevelopment.**
- **Assess whether existing (and future) energy assets were vulnerable to the impacts of climate change.**
- **Highlight a smart energy path leading to ecodevelopment for all.**

As understanding of individual countries grew, regional and global challenges and opportunities became more obvious. **Over time, the work of HELIO influenced national policy-making and helped shape the work of major international bodies.** Most importantly, in the early days, HELIO’s work was used by the Designated National Authorities (DNA), the bodies charged with defining the criteria of sustainability for each country hosting climate projects.

This capacity to engage, inform and influence grew out of early efforts to set a clear mission for HELIO and define the traits required for its achievement.

**VISION AND MISSION: ENABLING DEVELOPMENT THROUGH WELL-GOVERNED, CLEAN ENERGY SERVICES**

With a philosophy of **ecodevelopment** as its foundation, HELIO recognised the inherent links between **humankind** and the **markets** (economies) they create at various scales, and that while energy underpins social and economic development, energy systems have direct and indirect impacts on the **environments** in which they are placed and on the people they serve.

**VALUES AND GOALS**

Humans, utilising usufructal technologies use natural resources; through participatory governance, markets are controlled and regulated. It is through these processes and interactions that ecodevelopment is achieved.
"A look back to the beginning

In our own way, alone or collectively, we try to make a difference in this world. We all find our own way of expression, our own voice. I have been privileged to be part of what we could almost call a “movement” to promote a sustainable energy globally, regionally and locally. As an original member of the HELIO Board, I was involved in all the challenges inherent in setting it up as a French NGO. Looking back, all those efforts were worth it: we certainly created a wonderful international network that has been fully committed to defining sustainable energy in a way that could be measured and monitored.

Those early days with Hélène Connor and Laura Williamson were certainly exhilarating: it was rewarding to, in a relatively short time, see HELIO establish its credibility and earn global recognition. HELIO was an anomaly, its global reach and focus – and its commitment to analytical rigour – were unlike most other environmental organisations. Civil society has evolved and is playing a much stronger and more appreciated role in ongoing climate change discussions. I believe HELIO played an important role, having earned the respect of the wider community and of the public. I look back with pride at my time as a HELIO board member and even, for a short time, as president. We really have made a difference, which is what we set out to do all those years ago."

Rod Janssen
Founding Treasurer, HELIO

Thus, with a particular focus not only on the three Brundtlandian pillars, but on the ways they interacted among themselves and also with energy, HELIO has sought to reduce the negative impacts of traditional development models and to promote ecodevelopment. This is why it has pursued this goal by leading initiatives in which participatory governance leverages deployment of usufructual technology. Ensuring that energy policies follow the principle of leaving unharmed the precious and irreplaceable capital of Nature is a key element.

Participatory governance

Good energy governance in support of ecodevelopment requires a fundamental shift from traditional approaches in which decision-making is a centralised activity, handled largely by the government and national agencies in consultation with commercial promoters, many of which do not show respect for Nature, people’s needs or gender parity. This legacy has resulted in national systems that are largely oversized, supply-driven and designed without much concern for the environment or the real needs of populations.

While community-level governance of energy had begun to emerge, HELIO sought to address the lack of a systematised way of scaling-up such local initiatives, or to “stitch” them together to ensure regional or national level provision of energy services.

HELIO believes that energy policies need to better reflect both supply and demand requirements, and to better account for the needs of and impacts on local populations and environments. It thus advocates for approaches that incorporate two key principles of governance:

- **Balanced and participative decision-making** all stakeholders, including women’s groups, affected by a decision should have the opportunity to participate in the decision-making process as early as possible, and their voice should be taken into account throughout. There should be equal means for all stakeholder groups, so that broad-ranging expertise is available and better decisions are thus made (including, if necessary, cancellation of a project).

- **Transparency**: quality information about energy projects should be made available as early as possible to all stakeholders and an opportunity for recourse should be provided.

Usufructual technology

By definition, a technology is usufructual if it performs its task without altering the quality or long-term quantity of the materials it requires. It reflects the principle of using the interest (fluxes/flows) and not the capital (stocks), and the right to use and derive profit from a good or property being granted only if the user can guarantee it will remain undiminished and uninjured.

Having entered the Anthropocene era, humankind has become conscious that its tools are transforming the environment, that human activity has truly become a “force of Nature”, for better or worse. Among the early groups advocating for a new relationship between humankind and Nature—one based on thoughtful use of available renewable resources to avoid jeopardising the future of humankind and of other living beings—HELIO opted to act in the energy arena where the need was greater.

Six Actions to Advance the Mission

HELIO used the means it had – the expertise and good will of analysts committed to energy for ecodevelopment – to carry forward its mission of helping governments fulfil their responsibility to their citizens by
strategically transforming their energy policies and systems. Over time, as the HELIO network expanded, the six key actions underpinning this Mission were carried out in more and more countries.

- **Design and develop methodological tools** for analysts, energy decision-makers and the NGO community worldwide.
- **Provide an independent means** to monitor energy policies and the implementation of ecodevelopment and climate projects.
- **Organise capacity-building** workshops for the assessment and tracking of energy policy.
- **Promote the creation and integration of Citizens’ Utility Boards for Energy** in decision-making processes for energy.
- **Support the work of other international networks** by providing strategic expertise and by disseminating information through the intermediary networks of HELIO and its partners.
- **Maintain a website** to publish reports on national and regional energy developments, provide information on HELIO projects, and on pertinent studies and events throughout the world.

A growing body of evidence shows that people are starting to rethink their relationship to the world and to economic forces that impact its future. It is increasingly clear that, if we are smart, we have the capacity to cooperate and rationally manage the Earth’s bounty. Today, many more actors are pursuing this pathway in modest, but nevertheless fundamental ways such as through sustainable energy, eco-industry, biomimicry and bio-agriculture. As awareness grows, particularly among younger generations, the movement will likely accelerate and HELIO methodologies will remain useful and valuable.

**TRAITS: SPECIFICITY OF HELIO**

From past experience, HELIO believed that independent, expert entities were necessary to assess whether policy makers were truly setting and following sustainable development pathways, with overriding aims to achieve the best for their societies. Free of political agenda, a non-governmental organisation (NGO) was best equipped to act in this space.

| GOAL | To facilitate informed decision-making for energy policy to support ecodevelopment. To that end, HELIO would develop and disseminate new methodologies and tools to ensure delivery of safe, clean, reliable and affordable energy services. |
| SPACE | The energy policy arena, at national and international level, encompassing both supply and demand. Acknowledging that climate change would have direct and indirect impacts on both sides of the energy equation, either immediate or delayed, HELIO would advocate for clean supply and efficient use. HELIO would be more active in meetings and board rooms (if possible) than in public campaigns protests, while recognising the value and complementary Nature of parallel action. A focus on reducing demand as opposed to generating costly supply would increase energy security. While focusing initial efforts at the country level, HELIO foresaw the development of regional and global networks. |
| PRINCIPLES | Proactive rather than reactive: HELIO aims to facilitate the development of sound energy policy, operating in the pre-decision phase. Local strategies, by and for local citizens: HELIO echoes the Agenda 21 principle that ecodevelopment strategies must be devised and adopted by the people living in the area. Environmentally sound, and technologically and economically sustainable: the strategies developed should protect local and global natural resources, and optimised to fit the financial and technological capacities of the country. Facilitate and train to build local capacity: rather than simply consult or advise, HELIO could undertake to train others. Learn by doing: HELIO should incorporate relevant local knowledge into its projects and programs. Openness and transparency: in addition to disseminating its methodologies and tools, HELIO would openly share results from its own investigations to trigger improvements. Non-duplication of effort: HELIO would collaborate with others, exploring how complementary roles could best advance progress toward shared goals. |
| MEMBERS | Individuals with expertise in energy, economics, environmental sciences and other relevant fields. HELIO would continually welcome the expansion of its network to achieve broad geographic representation. It would keep people engaged by giving them substantial tasks and challenges, and expecting them to deliver. People could participate in the administration of HELIO, contribute as professional advisers or as research professionals, assisting in the development and application of tools. |
| APPROACH | Build networks to build capacity: HELIO would achieve its ambitious goals by recruiting recognised experts with a passion to serve. Work would be carried forward with the help of volunteers and junior professionals; in exchange for their time and expertise in tackling substantial, challenging tasks, they would have much opportunity to build their own expertise and skills. |

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2. See the box below.
HELIO’S FOUNDING MEMBERS BROUGHT DIVERSE PERSPECTIVES TO THE ECODEVELOPMENT CHALLENGE – ENERGY, ECONOMICS, ENVIRONMENTAL SCIENCES, LAW, DEVELOPMENT ADVOCACY, ETC.

“PLACE TO ENGAGE AND GROW

I am excited by questions relating to the evaluation of public policies to reduce poverty and promote sustainable development.

This passion of mine has been marked by the attainment of several diplomas in the analysis and evaluation of projects in developing countries, the most recent of which I obtained at the Paris Dauphine University. I also had an edifying experience at the French Development Agency, supporting the director of the Technical Operations Department to streamline the department’s intellectual production (capitalising on experiences, contributing to improving the evaluation indicators for development projects).

It was therefore with keen interest that I joined HELIO as a member of the Junior Team in October 2010. My first experience was to help HELIO experts to edit the manual of 24 indicators of Information Processing for Energy Policies Conducive to Ecodevelopment, destined for policy planners. This exceptional experience taught me much, and above all revealed in me a very lively interest in the energy sector in general, and in the elaboration and execution of energy policies pertaining to ecodevelopment in particular.

Thus I attached myself to the association and thanks to the enthusiasm of its members, the Junior Team became a second family for me. The Team brought dynamism to its support functions, to its social networking communication strategies, to its partnerships with universities, and to its representation of HELIO at forums. The Junior Team brought the voice of HELIO to a younger public, and made HELIO’s message more accessible to a non-expert audience."

Christian Doualla
President

THE HELIO NETWORK: DIVERSE YET UNITED

From its inception, HELIO has been a dynamic community of individuals willing to contribute their time and intellectual resources to tackle critical questions about energy systems and the policies that underpin their development and operation.

- Structure that Supports Broad Engagement
  To a large degree, HELIO’s work was at an intellectual level – raising hard relevant questions and creating mechanisms by which to answer them. While headquartered in Paris, France, HELIO quickly became both international and intergenerational, two features that have served its mission well. The reputations of founding members naturally attracted peers who brought diverse perspectives to the ecodevelopment challenge – energy, economics, environmental sciences, law, development advocacy, etc. An informal structure allowed individuals to put forth ideas and establish “pods” of people who would take them forward. As long as the initiative was aligned with the overall mission, HELIO was pleased to see organic growth, particularly when it led to networks across different regions of the world that tackled specific issues. A key element of HELIO’s success was the engagement of experienced individuals, including some retired people, who were willing to devote time to mentoring younger members.

- 100+ Experts, 40+ Countries
  Each time HELIO presented its work, regardless of the context, individuals came forth to express interest in joining. By 2015, HELIO’s membership grew to comprise more than 100 energy experts in over 40 countries.

- Incubator for Junior Experts
  Any organisation needs people on the ground to carry out day-to-day operations; in the case of HELIO, this ranged from organising meetings to managing the production of publications. HELIO could not have achieved all that it did without the assistance of volunteer workers and junior experts, individuals who joined because of their concern for the interplay of energy and development, and a clear desire to enhance their own professional capacities in an independant convivial environment. HELIO provided an opportunity for such individuals to build their skill sets.
While also benefiting from regular interaction with thought leaders.

For many years, volunteer teams met every Tuesday morning at the Maison des Associations in the 16th Arrondissement of Paris. Alexandre Quatch, fresh from France’s Sciences Politiques, organised a particularly dynamic Juniors Team that proposed new networking and computing opportunities and encouraged HELIO to become active in social media through YouTube and other platforms. Another group, for “Peace and Climate”, launched with Phyllis Kotite attracted Samira El-Daher, Nina Campbell and Pierre Beaudouin. The Junior Team was represented at the Board level by Irene Beucler.

- **Work for EU Research Projects on Energy**
  From 1998, HELIO was asked to work as advisor on a number of projects from the European Commission General Directorate for Research. Such major projects included: JOINT, MAXIMA, MEDRES and NEEDS.

For a relatively small organisation, largely comprising volunteers, HELIO has had a subtle but widespread impact. Without doubt, its work will continue to grow in value.

**“HELIO engagement created opportunity to explore new connections”**

I joined HELIO International’s Board in 2007, at the invitation of Hélène Connor. At that time, I was chairperson of another not-for-profit organisation, Eden Energy, which aimed to help entrepreneurs and intrapreneurs within the energy sector develop their start-ups in order to achieve energy awareness in Europe.

I was impressed by the huge volume of work HELIO International had done so far, and by the lifetime commitment of Hélène to ecodevelopment in developing countries and her attachment to energy resiliency. It was obvious that what Hélène had been doing for such a long time was the perfect complement of what Eden Energy was trying to do. While HELIO focused on government empowerment through expertise in economics, Eden Energy was dedicated to people empowerment through entrepreneurship and intrapreneurship.

During my eight years as HELIO Board Member, I tried my best to help, using my skills and the scarce time I could allow to HELIO. I met with many people, young and senior, all committed to developing tools to help local organisations, mainly in Africa, to cope with climate change and energy vulnerability.

I sincerely hope that others will take up new opportunities to pursue HELIO’s goals anywhere in the world.”

Dr. Ing. Valérie Blanchot Courtois
Business owner of Human Ventures

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**THE HELIO NETWORK**

- **EUROPE** 32%
- **RUSSIA** 3%
- **ASIA SOUTH & EAST** 10%
- **OCEANIE** 4%
- **NORTH AMERICA** 9%
- **LATIN & SOUTH AMERICA** 4%
- **NORTH AFRICA & MIDDLE EAST** 9%
- **SUB-SAHARA AFRICA** 29%
EVALUATING ENERGY POLICIES

“An extremely important role in the energy field and NGO ecosystem

HELIO’s early focus on actual measurement of the sustainability of energy systems; its strong adherence to, and further development of, soft energy path principles; and its continued emphasis on strong representation from countries from both the global North and South, have created a presence and impact far beyond what might be expected from its size or financial resources. I have been proud to be associated with it.”

John Robinson,
Associate Provost, Sustainability, University of British Columbia

HELIO INDICATORS FOR SUSTAINABLE ENERGY WATCH

ECONOMY
- Energy independence
- Public sector investment

SOCIETY
- Access to electricity
- Energy burden

ENVIRONMENT
- CO₂ emissions
- Ambient pollutants

TECHNOLOGY
- Energy productivity / intensity
- Deployment of renewables

ASSESSING POLICY SUPPORT FOR ECODEVELOPMENT: SUSTAINABLE ENERGY WATCH (SEW)

At its inception, HELIO got to work on creating a means by which independent stakeholders could assess and monitor whether national energy policies were contributing to ecodevelopment. This implied investigating also whether policies were implementing environmental conventions and principles and also supporting an improved quality of life for citizens.

This required mechanisms to gather and analyse accurate, unbiased information on energy development. To satisfy the first need, HELIO established a set of eight indicators, the application of which came to be known as the Sustainable Energy Watch (SEW). Six of the indicators reflected the three pillars of the Brundtland Report: i.e. two indicators each for economy, society and environment. For the environmental criteria, HELIO adopted the objectives set out by scientists. At the time, many seemed too radical to certain individuals, but considering the targets and mechanisms expected to be set at COP 21, these bold ideas have been justified in 2015.

To these, HELIO added two indicators to reflect the technology aspects of energy, as generation requires equipment for the process of transforming original sources into usable energy.

Each set of indicators delivers both quantitative measurements and qualitative assessments of the local situation. Together, they create a framework that enables evaluation of whether national energy policies contribute to long-term sustainable development.

These indicators feed into the core SEW methodology, which examines national energy development across six interrelated elements.

- Define development
- Assess the energy contribution
- Analyse policy issues
- Establish an approach
- Apply the indicators
- Expand application

Working with both energy experts and grassroots leaders in diverse countries and regions (see below), HELIO put its indicators and methodology to the test. Against a baseline year of 1990, the reference year for climate change negotiations, each country or region was assessed for progress towards ecodevelopment. HELIO hosted workshops to train these individuals to combine analysis of in-country energy production and evaluate daily life, thereby providing a comprehensive assessment of the interplay of energy developments and their impacts on society. Participants also had opportunity to be assisted and mentored by the SEW developers.

RIO+5 proved to be the perfect venue to launch this series of reports: the global impacts energy was having on the environment were more visible and climate change was front and centre. People who had never before considered the state of the environment began to show interest in meteorological trends, the links to the depletion of the ozone layer, and the work of the Intergovernmental Panel on Climate Change (IPCC). But few were thinking about how to quantify the effects or whether they could be linked to energy policy.
HELIO Energy for Ecodevelopment – A Legacy of Measuring Progress

**THE FIRST GLOBAL ASSESSMENT: IS ENERGY CURRENTLY CONTRIBUTING TO SUSTAINABLE DEVELOPMENT?**

This report was presented at Rio+5 [1997, Rio de Janeiro, Brazil]. It included reports from Africa, Asia, Eastern Europe, India, Latin America, OECD countries and South and East Mediterranean. Collectively, they demonstrated that energy policy support for ecodevelopment was seriously lacking in the regions assessed. The timing of this presentation was vital, as it was in 1997 that the Kyoto Protocol was signed, thereby implementing the United Nations Framework Convention on Climate Change (UNFCCC), which itself had been signed in 1992 at the Rio Earth Summit.

The fact that HELIO was establishing a valid methodology and indicators attracted a great deal of attention, and many new analysts joined the HELIO network, eager to learn how to assess their own countries.

HELIO was ahead of the curve, already presenting assessments that demonstrated local observers could carry out realistic and reasonably quantified appraisals, supplementing missing national statistics by their on-the-ground expertise.

To some degree, RIO+5 also proved the old adage, “If you build it, they will come.” The fact that Sustainable Energy Watch (SEW) existed had a ripple effect across the community of energy experts committed to ecodevelopment. Many came forward to HELIO, offering to fulfil the role of in-country experts who could carry out assessments. To sustain the momentum, Richard Heede of the Rocky Mountain Institute undertook to edit the first user’s manual for the indicators.

**ASSESSING AND STRENGTHENING GOVERNANCE FOR ECODEVELOPMENT**

After Rio+5, HELIO hosted a workshop (Bangkok, Thailand in 1998) to further refine the methodology and indicators. Both were validated during subsequent methodological workshops in 1999 (Cape Town, South Africa) and 2000 (Paris, France). During this period, HELIO also added two more indicators under the category of governance (civic) to better reflect the degree to which the government of a country being evaluated engaged in ecodevelopment.

HELIO determined that each indicator should carry the same weight in relation to its contributions to ecodevelopment, as this approach supports their use to compare their relative values (rather than absolute values). It was also agreed to use the following convention when determining whether an indicator is moving towards or away from sustainability:

- An indicator value of one or higher finds the observed parameter is not sustainable.
- A negative value indicates that impact of the observed parameter is declining relative to the base year.

Plotting the base year indicators, then repeating the exercise at regular intervals provides a proxy for the evolution of progress towards ecodevelopment. As indicators move over time – either positively or negatively – it is possible to track the overall progress towards ecodevelopment. A decrease in the total area of the star representing the assessment means the

“**Impressive achievements reflect impressive leadership**

Besides all HELIO achievements thanks to its own projects, maybe the most striking and original feature of this institution was its outcome in terms of giving birth to new significant institutions and projects.

For example, an HELIO’s paper on Criteria and Indicators for the Assessment of the Contribution of CDM Projects to Sustainable Development, is at the roots of the establishment of SouthSouthNorth, besides supplying the basis for the creation of the Gold Standard label for mitigation projects.

This is all the merit of the main driving force of HELIO, Hélène Connor, and of her capacity of putting the right people together and persuading them to work hard even with very limited resources available. HELIO’s achievements will remain memorable, thanks to her energy and enthusiasm.”

Emilio Lèbre la Rovère

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**HELIO ADDS GOVERNANCE INDICATORS**

**ECONOMY**
- Energy independence
- Public sector investment

**SOCIETY**
- Access to electricity
- Energy burden

**ENVIRONMENT**
- CO₂ emissions
- Ambient pollutants

**TECHNOLOGY**
- Energy productivity / intensity
- Deployment of renewables

**GOVERNANCE (CIVIC)**
- Quality of information
- Participative decision-making
energy sector of a given country is on the desired trajectory.

HELIO’s second major report, *Energy and Ecodevelopment: An Assessment of the Impact of Energy Policies on Planet Earth*, was presented in 2002 at the World Summit on Sustainable Development or Rio+10 (Johannesburg, South Africa). The concise global analysis was accompanied by a total of 19 country and regional reports in which the SEW Index had been applied (see below). With improved methodology and indicators, these reports were better able to elucidate some of the linkages between energy and the environment; energy and health and welfare; and energy and long-term security, peace and a safe future.

The global report set out six broad conclusions:

- Few people are aware of what the energy situation implies for their country, and even less so for the rest of the world. Greater awareness of climate issues is forcing them to pay attention to the global consequences of local energy use. In complying with Kyoto commitments, countries must adapt energy policies to lower environmental impacts: efforts are encouraging but will they succeed in stabilising the climate?

- Many energy specialists see technology as the plank of salvation, often believing bigger and more complex technology is better. But then people have less access to information and less discussion of the issues means decisions are taken without citizens’ valuable participation.

- Every country has declared energy efficiency and renewable energy as priorities of their energy policy, but very few are actively implementing those policies.

- The advantages of renewable energy sources have not been fully acknowledged, even by specialists of multilateral banks, who still help developing countries invest in old-fashioned energy production. This reflects low internalisation of costs and benefits and low application of the “Polluter Pays Principle”, which thwarts competition.

- Renewable energy is not always beneficial or sustainable: this is generally acknowledged in the case of large dams, but not so much when it comes to biomass. Land-based countries have a good performance in the use of wood for energy, but this consumption can be detrimental even in the short term. Other sources of energy have to be promoted urgently in these countries. Modern renewables are a priority for their ecodevelopment.

- Modernisation of energy systems is still perceived as meaning more infrastructure and more roads, rather than improving public transport or railways; more large plants rather than decentralised systems; more grids and networks rather than access to local

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**TEN SUSTAINABILITY INDICATORS**

1) $\text{CO}_2$ emissions

2) Ambiant pollutants

3) Access to electricity

4) Energy burden

5) Vulnerability

6) Public sector investment

7) Energy productivity

8) Renewables

9) Quality of information

10) Participative governance

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![TEN SUSTAINABILITY INDICATORS](image.png)
resources. Most people are still unaware of the many downsides of this so-called progress.

HELIO’s conclusions from this group of SEW reports raised the concern that industrialised countries were continuing to buy and monopolise energy sources and trade all over the world with little or no benefit for local populations. Thus, poor countries were fast losing their last means of controlling their own development. In some cases, the desire to access or maintain control of energy deposits and corridors was leading to a military buildup (the United States in Afganistan and Georgia in particular) which could lead to major environmental degradation. Globalisation, particularly in the energy field, needed to be better understood. And energy in general needed to be humanised.

The first two SEW initiatives set the stage for HELIO to widen the network of countries assessed, thereby enabling publication by COP 12 in 2006 (Nairobi, Kenya) of a more comprehensive report: The Ultimate Challenge: Energy for Global Ecodevelopment. Covering 18 countries from diverse regions, this report was better able to assess how ecodevelopment principles were being integrated into energy and other related domestic policies. A key aim of the analysis was to build evidence to support more robust, comprehensive policies for long-term ecodevelopment.

Importantly, the 18 countries constituted a representative cross-section of world economies, including the two largest countries by population (China and India), the development of which will surely have major impacts in terms of resource availability, energy security and the global environment. Similarly, the world’s richest economy, the United States, was included

### Summary of countries and findings in SEW Global Report

#### LOW-INCOME

- Bangladesh
- Benin
- Cameroon
- Dem. Rep. of Congo
- Haiti
- India
- Mali
- Tanzania

These countries are struggling for survival and the most vulnerable; most reported significant environmental and economic deterioration due to the energy systems used, and all were becoming more dependent on expensive imported fossil energy. Their poverty reduction strategies, which include energy factors such as access to electricity, are slow to materialise. Energy services are improving but from a very small base. In many localities, increasingly unsustainable use of biomass is threatening people’s ability to meet their basic needs. India is the exception because of its size and rate of economic expansion but even so, its energy services are being delivered only to a narrow segment of the population and energy practices lead to significant environmental problems.

#### LOWER-MIDDLE INCOME

- Brazil
- China
- Iran
- Tunisia

These countries show some progress, but with many problems remaining. Within this group, China by its very size raises global concerns. Brazil, China and Tunisia have put in place some innovative initiatives but in a piecemeal fashion; comprehensive sustainable policies and programmes are needed. China, for example, has made progress on policies and programmes for energy efficiency and renewables but is simultaneously expanding electricity generation capacity with sub-optimal coal technology or nuclear. The rate of increase in CO₂ emissions is unsustainable; China has pursued rapid economic development without assessing negative consequences, either nationally or globally.

#### UPPER-MIDDLE INCOME

- Mexico
- Russian Federation
- Rep. of South Africa

All of these economies are experiencing growth, but show mixed results on the SEW assessments. Mexico and the Russian Federation are major oil producers with their energy sectors being major engines for economic development, but the environment is given lower priority than economic expansion. South Africa has emerged from its apartheid past to become one of the most important role leaders in Africa, and shows some excellent examples of innovative environmental work.

#### HIGH-INCOME

- France
- New Zealand
- United States

Having wealth, access to every energy service, and political weight, these countries could choose to act alone or collectively to provide global leadership. The United States has the greatest impact, but also much to offer in terms of technology development and resources to put towards sustainable energy options and emissions reduction. It could take the lead in fostering ecodevelopment policy globally but seems to defer to the European Union. France and New Zealand, as well as the European Union, have uneven records. While acknowledging their responsibility for many of the environmental problems worldwide, industrialised countries appear to be paying lip service to the goal of ecodevelopment. Their current actions continue to contribute to the downward spiral of pollution and social instability.
“An encounter that changed my personal perspectives, and my engagement with my country

Before I met Hélène Connor during COP 3, I was a chemist concerned about ozone depletion, but not much of a climate advocate or an anti-nuclear activist. The process of developing the SEW index transformed me from a naïve consumer to become an ardent advocate for renewable energy and energy efficiency. Ultimately, then, it was a wonderful encounter.

In my home country of Taiwan, as well as many (quasi-)authoritarian states, energy policy is a well-guarded field, closely associated with national security. Only a handful of elites have access to detailed information and make decisions about the country’s future that will affect everyone. Since decisions are made within a small circle, corporate lobby and vested interests often trump the welfare of society, which is how the nuclear policy decisions were made in many countries. The population has to take whatever energy is provided, with no alternatives offered. Many dislike the status quo, but do not know how to challenge the establishment.

The SEW index provides tools that concerned citizens can apply to evaluate their country’s energy policy – including its deficiencies and impacts on society, and how far it strays from sustainability. It also makes it possible to compare one’s home country against others, helping citizens understand where their country stands in the global picture. Once they have this knowledge and understand the urgency of climate change, people start to ask questions, take actions, demand transparency and participate in the energy decision-making process.

Importantly, the SEW index can be used by independent organisations to raise public awareness and set direction for moving beyond the current climate impasse. By creating the tools needed, HELIO has spawned such organisations at the national level. ”

Gloria Kuang-Jung Hsu
Ph.D, MPA, National Taiwan University

because of its impact on global energy trends; also, its energy use per capita dwarves that of any other country (except possibly Canada) and associated CO₂ emissions are already having global impacts. Six countries from Sub-Saharan Africa were vital to include in that if they fail to be more sustainable, they will endure even greater hardship and have even greater problems in reducing poverty, achieving and sustaining economic growth, and maintaining political stability. These countries (and several others from Asia and Latin America) desperately need more modern and better-adapted energy services, but on a sustainable basis.

The European Union was included as a whole as it is a main driver of policies to promote sustainable energy, the positive impacts of which are felt well beyond its borders.

CITIZENS’ UTILITY BOARDS FOR ENERGY (CUBEs)

In 2007-2009, HELIO led a campaign to better balance energy decision-making through the creation of Citizens’ Utility Boards for Energy (CUBEs), civil society organisations that facilitate the exchange of information between and among various users’ groups, to help users better understand available policy and technology options. A CUBE is entitled to distribute alternative information on energy in the envelope a utility company uses to send its bill to users. The CUBE concept is inspired by the US Citizen Utility Boards (CUBs), which exist in some US states.

A CUBE, created by legislation, becomes the formalised body through which citizens can contribute directly to rational energy decision-making and more actively promote climate stabilisation and ecodevelopment through energy efficiency and renewable energy options. CUBEs represent the citizens and enable them to negotiate at hearings with energy providers.

Why are CUBEs needed?

Energy has considerable impacts on our way of life, our health and our environment. The recent liberalisation of energy markets and the increasing role of local authorities in climate issues have slowly shifted how energy decisions are made. For energy services to most efficiently meet the needs of consumers – such as quality of supply, reasonable cost, environmental and social protection – involvement of civil society through genuine citizen involvement is required.

As CUBEs operate at the local level and HELIO’s mandate is more at the national and international levels, HELIO left the idea for other NGOs to pursue. The concept and model remains valid in 2015.
Overall, the results of the Global Report were “pretty dismal” in HELIO’s opinion. The improvement seen in some countries or regions were shown to be unsustainable and achieving ecodevelopment goals seemed evermore elusive. The report concluded that what informed people want is a green (ecological), lean (efficient) and clean development for themselves and future generations, but their governments are not listening. Countries with global impact are the most worrisome: they are in the best position to take strong action and show leadership, but are doing neither. Developing countries are becoming more innovative and learning from each other, while also developing technologies that should be of interest to industrialised countries.

In 2006, it was becoming increasingly evident that sustainable energy needed to play a central role in a future founded on ecodevelopment. On a positive note, new communications technologies and international platforms were boosting knowledge sharing and collaboration on common problems. But 35 years of warning with increasing urgency about the risks (pollution and climate change) associated with inefficient energy use, had failed to prompt effective government action. HELIO felt it had become obvious that the solution lies in far greater and earlier involvement of concerned and informed citizens – voters, householders, consumers, and particularly women – in the energy planning process both at local and national levels.

**NATIONAL ASSESSMENTS CREATE A GLOBAL PICTURE**

HELIO delivered SEW reports at major sustainable development events from 1997 to 2007. Thus, over time the SEW approach generated in-depth knowledge of individual countries and its outputs created a global “virtual centre”.

The SEW success is that regional coordinators who are familiar with local contexts carry out the work, with support and supervision from an Advisory Group of international experts. The methodology, which defines the type of data needed and describes how to carry out calculations, will continue to be a valuable tool for baseline assessments and measuring progress.

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**1997: Is Energy Currently Contributing to Sustainable Development?**
**Rio +5, Rio de Janeiro, Brazil**

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<tr>
<th>Africa: Youba Sokona</th>
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<th>Eastern Europe: Bernard Laponche &amp; Adam Gula</th>
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<th>Latin America: Emilio Lèbre la Rovère</th>
<th>OECD member countries: Dean Anderson</th>
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**2006: The Ultimate Challenge: Energy for Global Ecodevelopment**
**Conference on Sustainable Development (CSD 14)**

| Bangladesh: Ijaz Hossain M. Tamim | India: Dipankar Dey |
| Benin*: Moutairou Raoufou Badarou & E.C Herbert Kouléto | Iran: Morteza Sabetghadam |
| Brazil*: Ricardo Cunha da Costa | Mali*: Cheick Ahmed Sanogo |
| Cameroon: Emmanuel Ngnikam | Mexico: Odon de Buen R. & Isabel Bustillos |
| China: Jiahua Pan & Xianli Zhu | New Zealand: Molly Melhuish |
| Democratic Republic of Congo: Séraphin M. Kasemuana | Russia: Vladimir Karghiev |
| European Union: Pieter de Meyer | South Africa: Ndumiso Dlamini |
| France*: Yves Marignac | Tanzania: Bartholomew Lymo |
| Haiti*: Jean André Victor | Tunisia*: Houa Ben Jannet Allal |
| United States: Jennifer Atlee | Zimbabwe: Kudakwashe Munjeri |

**2007: A Preliminary Assessment of Energy and Ecosystem Resilience in Ten African Countries**
**Conference on Sustainable Development (CSD 15)**

| Burkina Faso: Joseph Wethe | Democratic Republic of Congo: Séraphin Kasemuana |
| Mali: Cheick Ahmed Sanogo | Nigeria: Ewah Otu Eleri |
| Senegal: Secou Sarr | South Africa: Ndumiso Dlamini |
| Tanzania: Bartholomew Lymo | Tunisia*: Houa Ben Jannet Allal |
| Uganda: Timothy Byakola | United States: Jennifer Atlee |

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* Indicates the report was produced in French only. Note: The third report series and the 2007 report were supported by a grant from the French Ministry of Foreign Affairs.
CLIMATE-PROOFING ENERGY SYSTEMS:
Measuring Vulnerability, Adaptation and Resilience (VAR)

SELECTION AND MONITORING OF CLIMATE PROJECTS

In relation to ecodvelopment, governments had stumbled badly at the Kyoto Protocol meetings in December 1997. Their monstrous failure, largely brought about by the United States’ refusal to accept the allocation of fines for countries not fulfilling their commitments, led them to agree to use market instruments to constrain greenhouse gas (GHG) emissions via projects. The underlying principle of these projects was a dual benefit: they would effectively reduce GHG emissions and also contribute to sustainable long-term development of host countries.

HELIO organised a second methodological workshop (Cape Town, South Africa; February, 1999), this time widening the network to include Richard Heede of the Rocky Mountain Institute, Pierre Beaudouin of France Nature Environment, René Karottki from Denmark, and Randall Spalding-Fecher from South Africa. Steve Thorne also invited several colleagues from the University of Cape Town.

As the alternative approach of using the Clean Development Mechanism (CDM) and Joint Implementation (JI) programmes to allocate emission permits, which countries could trade as credits on the emerging carbon market, began to take shape, HELIO quickly recognised a need to define what host countries could accept as sustainable development projects. This was a decision to be taken from the bottom-up by civil society, or at least with a fair method of assessment of what could be considered sustainable in relation to the national Agenda 21.

HELIO’s intellectual triumvirate – Emilio Lèbre la Rovère, Steve Thorne and Hélène Connor – set to work on developing relevant criteria and indicators for selecting climate projects that would meet the Kyoto Protocol requirements.

In consultation with other NGOs (mostly from the Climate Action Network or CAN), HELIO developed a framework that would allow countries involved in CDM and JI projects to select those best suited to their national context and stated Agenda 21 goals. The document, Criteria and Indicators for Sustainable Development in Host Countries, was written by the trio and presented to official negotiators at COP 5 in Bonn (1999), with Jim Barnes moderating a panel of ten negotiators and experts.

Once again, HELIO’s work was well-accepted by the international community; in fact, the document served as a guide to the Designated National Authority (DNA) of several countries as they set out to establish their own CDM project selection method. The document also played a key role in giving birth to a vibrant African NGO, SouthSouthNorth (SSN), which developed and tested a matrix in South Africa, Indonesia, Brazil and Bangladesh. SSN was created by Steve Thorne and Stefan Raubenheimer.

“HELIO was a pioneer in studying and promoting truly sustainable energy policies and measures based on the synergies among energy sufficiency, energy efficiency and renewables. Its work and the network it created worldwide will be vital for the ongoing energy transitions in both industrial and developing countries.”

Bernard Chabot
HELIO LEADS PETITION TO BAN NUCLEAR ENERGY IN PROJECTS UNDER THE KYOTO PROTOCOL

In the lead up to COP 5 (Bonn, 2000) and the 9th Session of the UN Commission for Sustainable Development (UNCSD), HELIO invited other NGOs active in environment, development, disarmament and human rights to express their “deepest regret and extreme concern” that nuclear energy might be included in the Kyoto mechanisms.

The signatories felt inclusion of nuclear was against the spirit of Agenda 21 and the mandate of the CSD. Equally, it was contrary to the interests of developing countries, most of which required sustainable, largely decentralised and low-cost energy solutions. Such energy systems needed to be adapted to local needs and to the availability of capital, labour and natural resources.

“Nuclear power is not a clean, safe or sustainable energy source,” the petition stated. It closed by urging the CSD to exclude all non-sustainable energy technologies, particularly nuclear, from debates, exhibitions and other activities. And ultimately to exclude such sources from eligibility under the CDM and JI programmes.

Ultimately, over 600 international NGOs signed the petition, including major players such as the World Wildlife Fund (WWF), Greenpeace, Friends of the Earth and the full constellation of the Climate Action Network.

In 2010, SSN as part of a consortium for the Department for International Development (DFID) and the

SSN demonstrated the HELIO tools to be highly effective and also developed a specific matrix for the selection of projects.

Their work in Brazil, South Africa, Bangladesh and Indonesia inspired many governments to pursue ecodevelopment and gave birth to numerous other projects. SSN is now involved in training, supporting practice and facilitation in all fields of climate and development. It works with many donors and organisations such as the United Nations Industrial Development Organisation (UNIDO), the United Nations Institute for Training and Research (UNITAR), the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), and the Danish Government, Foreign and Common Wealth Office (FCO).

In 2015, however, there is a resurgence of efforts by this now increasingly obsolete and unprofitable technology.

Climate-proofing efforts prompt international collaboration and a mechanism to certify CDM projects

Two substantial initiatives, SouthSouthNorth and the Gold Standard, arose from HELIO’s early work in the area of climate-proofing energy projects, both of which have grown and become stronger with the passing years.

- SouthSouthNorth established to carry out pilot projects using HELIO CDM and JI indicators
  Before COP 5, HELIO’s Steve Thorne, Hélène Connor and Emilio Lèbre la Rovère met with Stefan Raubenheimer to discuss how the newly developed CDM and JI indicators might be tested. The idea of HELIO’s tool found favour with Paul Hassing, a government official from the Netherlands, who supported the suggestion of applying the matrix to actual projects in a number of Southern countries.

A new institution, aptly named SouthSouthNorth (SSN), was established in 2000 to bring together institutions dealing with climate change from both sides of the equator. The SSN idea was that southern countries had a lot to learn from each other and that projects developed in the region would be more relevant across the region. Northern countries could engage by helping to finance such projects and their deployment.

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In 2010, SSN as part of a consortium for the Department for International Development (DFID) and the
“SouthSouthNorth and the Gold Standard, key elements of the HELIO legacy

After seven years of being a UNHCR refugee, I returned in 1991 to the promise of a new South Africa. The possibility of applying my scientific and engineering skills in pursuit of a policy agenda that was strong in sustainable development and in social and economic justice was high on my agenda, and energy had emerged as the main vehicle for my engagement. My early work around access to modern energy services for the urban and rural poor must have led to an initial dialogue with Hélène Connor and an introduction to HELIO. When HELIO convened a side event at COP 5, during which Emilio, Hélène and I presented our work on using indicators and ecodevelopment approach to appraising CDMs, it drew an unprecedented audience. Over time, this grew into collaboration with many others: Stefan Raubenheimer, Agus Sari, Atiq Rahman and Youba Sokona, and later colleagues from Tanzania and Mozambique. Everyone was committed to establishing ways to bring to their own countries the HELIO methodologies and tools that would allow us to monitor, evaluate and advise on energy policy.

SouthSouthNorth was inspired by the values of HELIO and is part of the HELIO legacy. Similarly, the Gold Standard Foundation was built, in part, on the ecodevelopment appraisal methods (with many iterations strengthening the initial work).

HELIO has inspired so much in the NGO world of sustainable energy and climate change. That HELIO managed to develop a network of energy professionals on a shoestring budget reflects the capacity of Hélène and Laura to inspire people to engage deeply for the greater good. HELIO’s achievements and values continue to inspire me and many individuals in the energy/climate/social justice nexus-scape. The legacy will certainly continue.”

Steve Thorne
Founding Member, SouthSouthNorth

VULNERABILITY, ADAPTATION AND ENERGY SYSTEM RESILIENCE IN AFRICA (VAR)

The acceleration of climate change, illustrated by the increasing number and severity of natural disasters, prompted many NGOs to assess the damage caused by traditional technologies for producing and using energy. The Kyoto Protocol, designed largely to mitigate the climatic impacts of energy production, was showing signs of success as industrialised countries began to shape energy policies around targets to reduce GHG emissions. In many cases, however, measures taken to satisfy the Protocol failed to account for the fact that the energy systems themselves will become more vulnerable to the expected impacts of increased climatic variability: flooding, seasonal droughts, storm surges, landslides, extreme wind speeds, freezing conditions and heat waves, to name the main.

Given energy’s importance to the principles of ecodevelopment, HELIO recognised the increasingly urgent need to protect energy assets. It strategically reversed the cause and effect question, seeking to understand how climate change would impact energy supply, demand and access, as well as the ecosystem services that provide some forms of energy. At that time, HELIO was alone in turning its focus towards the problems climate change would create for energy sources, and the need to climate-proof energy systems and policies.

Thus, led by Axel Michaëlowa, HELIO undertook to develop an analytical framework that would allow countries to assess how vulnerable their...
energy systems – both existing and forthcoming – are in what ways, and to put in place appropriate adaptation mechanisms. As the climate changes around them, energy generation systems need to have built-in resilience.

The overriding challenge centered on how to undertake energy projects while also meeting other goals such as maintaining a healthy ecosystem, achieving development priorities and improving the overall quality of life? Once again, a main obstacle was the lack of commonly accepted parameters/indicators to assess a given country’s adaptation needs and to determine which adaptation measures would be effective within its national context. Also missing were ways to calculate the total social costs of delivering clean, affordable energy supply in a context of climate change that would account for externalities.

HELIO therefore focused its efforts on the pressing question of how to plan energy systems to serve those most vulnerable to climate change impacts.

In 2009, the **Vulnerability, Adaptation and Energy System Resilience in Africa (VAR)** Project set out to reduce vulnerability by establishing parameters and indicators to compare adaptation needs of different countries and assess the effectiveness of their respective adaptation measures. The VAR approach was developed with Axel Michaelowa and has been applied in ten Sub-Saharan African countries.

### VAR INDICATORS SHOWN TO BE EQUALLY VALID IN SOUTH AND NORTH CONTEXTS

After learning about VAR projects in sub-Saharan Africa, the government of Tunisia asked HELIO for training on how to apply the indicators in their own context. Axel Michaelowa and Hélène Connor led a one-week workshop in Tunis, which built capacity for VAR and also demonstrated the intricacies of assembling a CDM project.

HELIO was subsequently invited to present the VAR methodology at a North Atlantic Treaty Organization (NATO) Advanced Research Workshop on Weather/Climate Risk Management for the Energy Sector (Italy, October 2008), which was strong recognition for its validity in relation to work being carried out in an entirely different context. The presentation focused on how indicators can be used as a way of improving communication on energy systems vulnerability, resilience and adaptation to climate change. A publication based on workshop papers was published in early 2009.

ADEME invited HELIO to engage in a particularly interesting major EU project in the Maghreb. MEDRES was assessing methods to bring cost-effective renewable energy to rural areas in the Mediterranean region and also examining the socio-economic impacts of electrification in Morocco, Algeria, Tunisia and Egypt. The project was led by Houda Allal and carried out with Charlotte Colleu.

### Approach

- Systematically assess and monitor energy systems to ensure they are robust enough to adapt to anticipated climate-related impacts.
- Expand the current assessment process to new energy systems.
- Develop a medium- to long-term strategy to move towards a safer, decentralised, low-carbon energy supply system.
- Implement energy demand management as an adaptation measure.
- Cultivate in-country capacity to evaluate and respond to energy needs from a climate perspective.
- Invest in ecosystem services that support existing and planned energy production.
- Establish transparent technology transfer and financing procedures.
- Develop participatory energy governance to cultivate first-hand knowledge of energy needs and to mobilise vital support from beneficiaries.

### Countries that have applied VAR

- Benin
- Burkina Faso
- Cameroon
- Democratic Republic of the Congo
- Kenya
- Mali
- Nigeria
- Senegal
- Tanzania
- Uganda
Africa findings demonstrate value of vulnerability assessments to the rest of the world

The work of analysts who applied the HELIO vulnerability indicators to the energy system elements in 10 countries in sub-Saharan Africa is now being used to shape policy, technology and financing decisions. It is also prompting other countries to take notice.

As climate change is a global phenomenon, all countries need to carry out vulnerability assessments, establish adaptation strategies and establish resilience strategies. While the work of identifying adaptation measures is still young, HELIO has been a front-runner in working towards commonly accepted approaches.
**PROCESSING INFORMATION FOR ENERGY POLICIES CONDUCIVE TO ECODEVELOPMENT (TIPEE)**

Policy makers often face the daunting task of having to make decisions beyond the scope of their areas of expertise. In addition, they often operate in a context in which legitimate stakeholders have competing interests. A further challenge particular to developing and emerging economies is that data to support decision-making are in short supply.

The Processing Information for Energy Policy and Ecodevelopment (TIPEE) Project elaborated a means to improve the capacity of energy information systems so that energy data could better support policy-making. The project aimed to demonstrate that decision-makers may have close at hand more information than they realise. Or that even incomplete information, when analysed properly, can aid decision processes and help constituents understand the criteria used to make final choices.

**KEY FINDINGS FROM THE FIELD**

With the cooperation of the Institut de l’énergie des pays francophones (IEPF), the approach has been field-tested in ten African countries. In Cameroon and Togo, HELIO held workshops to train stakeholders – including government, energy experts, academia and civil society – how to use the indicators and interpret results to assess their national energy situation. Participants also learned how to adapt the indicators to reflect national constraints and to apply the results to climate-proof national energy policies and approaches.

Application of the TIPEE approach in Togo and Cameroon revealed six main conclusions:

- Climate change is creating vulnerability for power plants, refineries and hydro in Cameroon; in Togo, electricity grids are also at risk.
- There is a lack of knowledge on the traditional biomass uses and renewable penetration (projects implemented by NGOs in remote areas.
- The volatility of fossil prices has a high impact on household welfare.
- Electricity cuts/shortages have strong social and economic impacts.
- Energy efficiency and renewable energy create a window of opportunity to improve the country resilience.
- Existing mechanisms need to be enhanced to support broader involvement of civil society in energy decisions.

The country-specific results are plotted as shown below.
<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>PARAMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENVIRONMENT</strong></td>
<td></td>
</tr>
<tr>
<td>1 Greenhouse gas emissions (CO₂)</td>
<td>Greenhouse gas emission (CO₂) from the energy sector</td>
</tr>
<tr>
<td>2 Major local energy pollutant</td>
<td>Concentration or emission level of a significant energy-related local pollutant (CO₂, NOₓ, or SO₂ particulates) per capita</td>
</tr>
<tr>
<td>3 Deforestation</td>
<td>Number of hectares of deforestation or loss of forest vegetation (biodiversity) used for energy purposes</td>
</tr>
<tr>
<td><strong>SOCIAL</strong></td>
<td></td>
</tr>
<tr>
<td>4 Electricity access</td>
<td>Number of households that are electrified</td>
</tr>
<tr>
<td>5 Household energy burden</td>
<td>Proportion of household income spent on energy services</td>
</tr>
<tr>
<td><strong>ECONOMY</strong></td>
<td></td>
</tr>
<tr>
<td>6 Non-renewable energy imports</td>
<td>External energy dependence</td>
</tr>
<tr>
<td>7 Non-renewable energy reserves</td>
<td>Number of days of stock of non-renewable energy supplies</td>
</tr>
<tr>
<td><strong>TECHNOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>8 Renewable energy</td>
<td>Deployment of modern, local renewable energy</td>
</tr>
<tr>
<td>9 Energy efficiency</td>
<td>Energy intensity of industry; GHG emissions per unit of production; or energy intensity of the economy</td>
</tr>
<tr>
<td>10 Quality of electricity supply</td>
<td>Length and recurrence of power cuts and variations in voltage</td>
</tr>
<tr>
<td><strong>GOVERNANCE</strong></td>
<td></td>
</tr>
<tr>
<td>11 Income control</td>
<td>Reduction in the share of energy revenues that escape taxation</td>
</tr>
<tr>
<td>12 Informed consultation</td>
<td>Public hearings and consultations on the impact assessments of proposed energy projects</td>
</tr>
<tr>
<td>13 Citizen participation</td>
<td>Active participation of civil society (particularly women) in the energy sector</td>
</tr>
<tr>
<td>14 Balanced governance</td>
<td>Balanced representation of energy demand and supply stakeholders as well as transparency in the decisionmaking process</td>
</tr>
<tr>
<td><strong>VULNERABILITY</strong></td>
<td></td>
</tr>
<tr>
<td>15 Vulnerability of thermal power supply</td>
<td>Vulnerability of power plants (and refineries if applicable) to flooding</td>
</tr>
<tr>
<td>16 Vulnerability of renewable power systems</td>
<td>Vulnerability of renewable energy systems to climatic variations</td>
</tr>
<tr>
<td>17 Vulnerability of transmission lines</td>
<td>Length of transmission lines/distribution networks threatened by extreme weather events</td>
</tr>
<tr>
<td><strong>RESILIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>18 Investment assets</td>
<td>Rate of domestic savings/GDP</td>
</tr>
<tr>
<td>19 Mobilisation of renewable energy potential</td>
<td>Proportion of national investment earmarked for renewable energy and energy efficiency</td>
</tr>
<tr>
<td>20 Local technical capacity</td>
<td>Annual number of science and engineering graduates per total population</td>
</tr>
<tr>
<td>21 Scientific information</td>
<td>Availability of risk maps (flooding, desertification, contamination)</td>
</tr>
<tr>
<td>22 Siting guidelines</td>
<td>Climate-proofing guidelines for power plant siting and building</td>
</tr>
<tr>
<td>23 Crisis management</td>
<td>Emergency plans for power plants</td>
</tr>
<tr>
<td>24 Insurance</td>
<td>Availability of domestic insurance policies that account for climate change-related damages</td>
</tr>
</tbody>
</table>
The TIPEE methodology comprises 24 easy-to-calculate indicators, once again using the categories of economy, society, environment, technology and governance, and including indicators of vulnerability, adaptation and resilience. It was designed to respond to the lack of information for decision-makers to devise adequate energy policy and evaluation means to meet ecodevelopment targets, while also taking account of the potential impacts of fluctuating climate conditions and constraints. By building up the body of knowledge in support of decision-making, TIPEE aims to prevent damage and promote adaptation.

Once the indicators had been defined, HELIO developed a detailed Manual for Energy Planners and a shorter Guide for Policy Makers, with the aim of providing decision-makers with a tool that supports the delivery of accessible, clean and efficient energy services in a climate-constrained environment.

Over time, monitoring the TIPEE indicators allows decision-makers to check progress and see how well their national energy policies are contributing to ecodevelopment – even under fluctuating weather conditions.

HELIO’s TIPEE Project was possible thanks to collaboration with the Climate & Development Knowledge Network (CDKN), the Institut de l’Energie et de l’Environnement de la Francophonie (IEPF) and l’Organisation de la Francophonie (OIF). TIPEE results were presented at COP 17 in Durban, South Africa (2011).

ENERGY, ECODEVELOPMENT AND RESILIENCE IN AFRICA (EERA)

The challenge of climate-proofing energy systems and policies is particularly great in West Africa, where many people still have no access to energy and current supply is often inadequate to meet market demand and support healthy economies. Many of these countries are now in the process of building or expanding modern energy systems, but their approaches are quite different than traditional models in industrialised economies. Central, large-scale energy systems are being built up, but so are small-scale off-grid solutions that bring energy to remote areas – many of which rely on renewables.

In such contexts, governments need to develop social and economic strategies that satisfy peoples’ needs and aspirations while being compatible with environmental sustainability and participatory governance.

With the financial support of the CDKN, the Energy, Ecodevelopment and Resilience in Africa (EERA) Project was launched (in 2011) in Togo, Mali and Benin. The overarching goal was to provide policy makers with a tool that supports the delivery of accessible, clean and efficient energy services in a climate-constrained environment – i.e. to create energy systems that are both climate-proof and resilient. The projects were carried out via a two-track process that examined the current context and sought to set the country onto a Smart Energy Path (SEP).

Through the EERA project, HELIO was able to also assist these three countries to start identifying the conditions for Smart Energy Paths (SEPs) leading to their ecodevelopment. The project also strengthened the capacity of national energy experts in defining the strategic steps to plan and implement a SEP. The experts received training in how to gather available knowledge and skills. Thanks to the EERA training and assessments, each of these countries went on to develop “bankable” energy projects.

**TRACK 1: CONDUCT A MULTIDIMENSIONAL ASSESSMENT OF THE ENERGY CONTEXT**

- Use the 24-indicator HELIO approach to assess the current energy and policy situation
- Apply the TIPEE decision-making tool, the Decision Maker Guide (printed in 2012) and the Manual for Energy Planners to interpret the results.
- Apply the information acquired to develop an integrated energy policy, consistent with ecodevelopment.

**TRACK 2: APPLY THE SMART ENERGY PATH METHODOLOGY**

- Develop modern energy services that use soft energy technologies, which HELIO defines as those that:
  - Rely on renewable energy flows;
  - Are diverse, flexible and relatively low technology to be affordable and accessible;
  - Are matched in scale, geographic distribution, and energy quality to meet end-use needs; and
  - Optimise the free distribution of most natural energy flows.

1. Smart Energy Paths (SEPs) refer to an approach to energy planning that aims to meet peoples’ needs and aspirations while being compatible with environmental sustainability and participatory governance.
A NEW ECODEVELOPMENT STRATEGY: Accounting for Climate Change in Energy Planning

SMART ENERGY PATHS, AS ENVISIONED BY HELIO, FOCUS ON THE ROLE ENERGY PLAYS IN PROVIDING SOCIETY WITH VALUABLE SERVICES.

Having worked so closely with experts from so many countries, HELIO developed in-depth knowledge of the energy sector’s central role in developmental issues. In addition, HELIO helped stimulate the process of substantially transforming the energy sector in many countries.

While ecodevelopment has taken hold in some contexts, many challenges remain – particularly when one moves to the global level. HELIO’s final efforts focused on convincing more stakeholders to buy into the principle of using energy more intelligently, that is to say, efficiently, simply and in harmony with legitimate needs of well-informed energy users.

SMART ENERGY PATHS: A PERSPECTIVE BASED ON ENERGY SERVICE NEEDS

Typically, stakeholders value energy for the economic gains represented by each unit produced and traded in energy markets. Smart energy pathways, as envisioned by HELIO, focus instead on the role energy plays in providing society with valuable services: heat for cooking and comfort, motive force for manufacturing and transportation, light to read, refrigeration to store food and medicine, power to ease the burden of human labour, and its capacity to support operation of all the devices used for communication and entertainment that run on electricity.

Such SEPs use soft energy technologies, combining a prompt and serious commitment to efficient use of energy, rapid development of renewable energy sources matched in scale and in energy quality to end-use needs. SEP paths:

- rely on renewable energy flows;
- are diverse—the energy supply is an aggregate of many individually modest contributions, each designed for maximum effectiveness in particular circumstances;
- are flexible and relatively low technology – which does not mean unsophisticated, but rather, accessible and easy to understand and use for the average person; and
- are matched in scale, geographic distribution, and energy quality to meet end-use needs in order to take advantage of the free distribution of most natural energy flows.

The SEP approach requires a multi-sector and multi-stakeholder team

SEP planning uses “backcasting” rather than forecasting as the primary tool. Instead of projecting how much energy will be needed at a future date and figuring out how to supply it, backcasting imagines a desired future across multiple targets and goals, and then plans backwards how energy can contribute to achieving these broader aims. The horizon is usually of 50 years, or the time it takes to renew all equipment to produce energy. Thus renewable energy can be progressively introduced to replace the polluting forms of energy without perturbations.

SEP planning requires active stakeholder participation from a more diverse group, with both technical expertise and interpersonal skills. All energy actors are grouped into “seven families” directly or potentially affected by the development of energy policies and strategies: public institutions, energy utilities, energy service and technology providers, users, mediators.

The concept of a Smart Energy Path (SEP) is central to this transformation. It builds on the Soft Energy Path approach developed by Amory Lovins in 1976, which became very popular because of the first oil embargo and shocks (1973, 1979) by adding concerns about climate change, governance and the poverty gap.

1. In French: Voie énergétique douce autonome (VEDA).
The need for a tool to assist the financial community in selecting their investments in the energy sector to support ecodevelopment was first discussed during the HELIO workshop in Indonesia in 2007. The challenge was great, and it is fair to say that HELIO needed to advance through refining the other methodologies and indicators reflected in this report to arrive at publishing The HELIO Index for Investors (HIFI) in time for COP 21 in Paris (2015).

In the coming decades, trillions of dollars will need to be invested in the global energy sector and investors need guidelines to select the most profitable options.

HELIO set out to provide criteria that will guide both investors and policy-makers, such that financing for energy supports broader ecodevelopment goals. More and more investors are seeking to direct their investments towards socially responsible energy alternatives – and to be able to show the ex-post performance of such investments. This requires that they have better access to timely information on the quality of a given country’s ecodevelopment policies and also mechanisms to monitor and measure impacts.

Managing energy wisely is essential to economic and social development, and to climate change mitigation and adaptation. To achieve a balanced growth while reducing its carbon and environmental footprint, it is crucial to have reliable tools that can measure and monitor how well a country’s energy policy supports ecodevelopment goals.

The HIFI concentrates this information into a single index, delivering a clear picture of a country’s attractiveness for sustainable energy investments, thereby signaling to investors where they will realise the best returns. In addition to allowing investors to compare countries’ performance, the HIFI will allow countries to benchmark among themselves, identifying where they need to strengthen their ecodevelopment policies to attract investment.

The HIFI builds on the TIPEE methodology and similarly uses readily accessible information. Through simple calculations, it allows all stakeholders (e.g. investors, policy makers, and members of civil society) to monitor the effectiveness of national policies and pinpoints areas for successful investment in climate-proofed, efficient, green energy projects.

The Index is unique in that in addition to assessing the five forms of capital in an economy, it acknowledges the roles of participatory governance and usufructual technologies while also taking into account climate change. This multi-focused approach is designed to provide an easy-to-calculate perspective of a national energy system within any social, economic and environmental context.

These initial analyses demonstrate that the HIFI will be applicable worldwide to assess country energy systems as they relate to ecodevelopment, and identify the best investment opportunities. As such, the Index shows excellent potential to directly contribute to the UN Sustainable Energy for All (SE4All) initiative.

“An impressive record across the years, on many challenges and the around the globe

Over more than two decades, HELIO played an important role in the international climate negotiations. Despite its small size, it consistently worked on the crucial field of indicators to measure benefits of mitigation and adaptation activities.

In the late 1990s, HELIO was catalytic in developing indicators for benefits of the CDM, which subsequently became the largest incentive for mitigation activities in developing countries.

The work on indicators for resilience of energy systems to impacts of climate change undertaken in the mid-2000s was equally pioneering, and will be highly relevant to implementation of adaptation activities under the Paris Agreement.

Collaboration with experts in sub-Saharan African countries was exemplary and shows the way for other NGOs engaging in climate policy support. HELIO never compromised on its independence and never joined any advocacy camps, allowing it to raise a credible voice above the cacophony of vested interests.

I deeply regret that HELIO is unable to continue its work. For me, HELIO provided an opportunity to bring results from academic research to the real world and to learn about the challenges related to that process. I always was happy to collaborate with Hélène and Laura, whose dedication to the cause of limiting anthropogenic climate change has been outstanding.”

Axel Michaelowa
Managing Director, Perspectives
HELIO: A SHARED HISTORY

HELIO’S INTERNATIONAL NETWORK

Over the years, HELIO developed a strong network of partners and supporters, as noted in the following table, many of which will ensure the methodologies and tools developed will continue to enable good energy governance in support of ecodevelopment.

INTERNATIONAL PARTNERS AND LINKS

- Climate Action Network (CAN Global & Europe)
- ECO-Forum
- Environnement et Développement Tiers Monde (ENDA-TM-Energie)
- European Environment Bureau (EEB)
- Global Network on Energy for Sustainable Development (GNESD)
- Global Reporting Initiative (GRI)
- International Network for Sustainable Energy (INFORSE)
- Institut de l’énergie et l’environnement de la Francophonie (IEPF)
- International Institute for Sustainable Development (IISD)
- International Union for the Conservation of Nature (IUCN)
- Northern Alliance for Sustainability (ANPED)
- Observatoire Méditerranéen de l’Énergie (OME)
- Plan Bleu
- Réseau Action Climat-France (RAC)
- South•SouthNorth (SSN)
- Sustainable Energy for All (SE4All)
- Sustainable Energy Forum (SEF)
- The Sustainable Energy and Economy Network (SEEN-IPS)

MAIN FUNDERS

- Climate & Development Knowledge Network (CDKN), UK
- Council of Churches
- Deutsch Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Germany
- DG Recherche, Commission européenne
- Earth Council
- Gaz de France
- Institut de l’énergie et de l’environnement pour la Francophonie (IEPF), Canada
- MicroSystems
- Ministère des Affaires étrangères, France
- Ministère de l’Environnement, France
- Ministère des Affaires étrangères, Pays Bas
- Organisation internationale de la Francophonie (OIF), France

Scientific and Technical Advisory Committee Members

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“A network that crossed borders and disciplines, united by a passion for the Planet

When I joined HELIO some 15 years ago, I was chairman of FRAPNA (Federation Rhone Alpes de protection de la nature, a naturalist French NGO), and shortly after I became member of the board of France Nature Environnement (FNE), which federates the majority of the French NGOs in the realm of environmental and nature conservation.

I am an engineer, and not a naturalist. I found myself suddenly surrounded by people whose priority was Nature. My conviction was - and still is - that Nature will survive all of our mistakes, even if we don’t. And that one of our biggest mistakes is our relentless and ruthless spending of energy, particularly in the western world. At the same time, I am very aware of the fact that while we do this, most of the other parts of the world and humanity just survive and do not benefit from our advantages. Some of which we steal from them... I am very aware and shocked about the desperate situation most Indigenous Peoples are left in by our pursuit of “progress”.

The objectives of HELIO offered a way to participate in the network Hélène Connor had already established, and to share knowledge about more effective use of energy all over the world, including regions that do not benefit from the energy wealth we have in the West. It was also a chance to participate in the deployment of renewables.

HELIO put the right emphasis on education, which I think is the most necessary ingredient to change the world’s perspective – one of the most difficult challenges.

My modest contribution to HELIO is very negligible compared to the amount of time, energy and effort put in by Hélène, Laura and others over the past years. I want to thank them for having lead and sustained this ‘big little NGO’ for so long.”

Pierre Beaudouin
Fédération Rhône-Alpes de Protection

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DR. HÉLÈNE CONNOR AWARDED THE LÉGION D’HONNEUR, FRANCE’S HIGHEST RECOGNITION

In 2012 Dr. Hélène Connor, Founder and Chairman of HELIO International, was awarded in the Légion d’Honneur, with the grade of “Chevalier” in recognition of her four decades of visionary work in promoting environmental protection, sustainable energy and participatory governance. It was noted that HELIO has carried out its work through an international network of independent energy experts that promote ecodevelopment via the implementation of sustainable energy policies.

“Energy is the cornerstone of all development. For HELIO International, no work is more vital than ensuring that everyone has access to clean, safe, affordable energy,” said Dr. Connor upon hearing about the award. “I share this award with all those who work tirelessly to secure a good quality of life for all.”

France’s oldest and highest distinction, the Légion d’Honneur was created by Napoleon Bonaparte in 1802 and is awarded to outstanding individuals who have contributed to France and to the ideals it upholds. Past recipients include environmentalist Dr. Jane Goodall, as well as oceanographer and environmentalist Jacques Cousteau and Dr. Wangari Maathai, founder of the Green Belt Movement.