

# External Progress Review

**UNEP-GEF Technology Transfer Networks:**

**[www.SustainableAlternatives.net](http://www.SustainableAlternatives.net) (SANet)**

**By:**  
**Ferd Schelleman**  
**Independent Evaluation Expert**  
Netherlands,  
3 March 2003<sup>1</sup>

---

<sup>1</sup> This report was prepared in August 2002, for the expected conclusion of Phase I in October 2002. However, as a result of consultation between UNEP and the GEF Secretariat, TTN Phase I was extended until May 2003. The report for the most part, therefore, is an evaluation for the project implementation up to September 2002, except for the final part. The sections “Recommendations of the Evaluator,” “Other Recommendations” and Phase I Co-financing, were substantially revised, taking into the recommendations made by the Advisory Board members, in which the evaluator was included, during a meeting held in Paris in December 2002.

## CONTENTS:

<b>1. REVIEW BACKGROUND AND APPROACH .....</b>	<b>4</b>
<b>2. SANET BACKGROUND .....</b>	<b>4</b>
<b>3. SANET'S OBJECTIVES AND APPROACH .....</b>	<b>5</b>
<b>4. SANET PROGRESS AND CURRENT STATE OF AFFAIRS .....</b>	<b>6</b>
4.1 Start-up of SANet .....	6
4.2 SANet progress and results .....	7
4.3 Current SANet staff with their main responsibilities:.....	12
4.4 Budgetary situation .....	13
<b>5 OBSERVATIONS AND FINDINGS OF THE EVALUATOR.....</b>	<b>14</b>
5.1 General observations.....	14
5.2 Comparison of SANet results with expected first year outcomes .....	15
5.3 Achievement of overall objectives.....	15
5.4 SANet team and management.....	16
<b>6 RECOMMENDATIONS OF THE EVALUATOR .....</b>	<b>16</b>
6.1 SANet continuation:.....	16
6.2 SANet team and management.....	16
6.3 Other recommendations .....	18
 ANNEX 1: List of References: .....	 20
ANNEX 2: List of interviewees.....	21

## **List of Acronyms and Abbreviations**

ACOA	African Council of Organic Associations
ADB	Asian Development Bank
BAUM	B.A.U.M. Knowledge Networking Association
CATIE	Tropical Agricultural Research and Higher Education Center
CDG	Carl Duisberg Society
COMFAR	Technology Transfer & Investment project analysis software of UNIDO
CP	Cleaner Production
CSP	Concentrating Solar Power
CTI	Climate Technology Initiative of the International Energy Agency
DG	Development Gateway of the World Bank
DSF	Decision Support Facility
DTIE	Division of Technology, Industry and Economics of UNEP
EETIC	Energy and Environmental Technologies Information Centres of the International Energy Agency
FCCC	Framework Convention on Climate Change
FIDIC	International Federation of Consulting Engineers
FoE	Friends of the Earth
GEF	Global Environment Facility
GREENTIE	Greenhouse Gas Technology Information Exchange
GRID	UNEP Global Resource Information Database Center
GTZ	German Agency for Technical Cooperation
IAF	Renewable Energy and Energy Efficiency Investment Advisory Facility of UNEP
IEA	International Energy Agency
IFOAM	International Federation of Organic Agriculture Movements
I-GO	IFOAM- Organic Certification Capacity Building Project
IPCC	Intergovernmental Panel on Climate Change
MEA	Multilateral Environmental Agreements
MoU	Memorandum of Understanding
NCPC	UNIDO-UNEP National Cleaner Production Centres
NRCan	Natural Resources Canada
PCF	Prototype Carbon Fund of the World Bank
PNI	Pro-Natura International
PPP	Public and Private Partnership
PREGA	Promotion of Renewable Energy, Energy Efficiency Program of ADB
PV	Photovoltaic
RET	Renewable Energy Technology
RETScreen	Renewable energy technology investment analysis software of NRCan
SANet	Sustainable Alternatives Network
TNC	The Nature Conservancy
TT	Technology Transfer
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP-FI	UNEP Finance Initiatives
UNIDO	United Nations Industrial Development Organization
UNOPS	United Nations Office for Project Services
WB	World Bank
WFEO	World Federation of Engineering Organizations

## 1. Review background and approach

This external progress review has been requested by the GEF Secretariat as the SANet project moves into its second year of operations. The review is being managed by UNEP. The GEF Division, in partnership with UNEP's Evaluation Unit has developed the Terms of Reference. The GEF Secretariat and its independent evaluation unit were asked to provide comments and inputs to assure full consistency of this progress evaluation with GEF requirements.

The evaluation has started on July 15, and was completed on 26 August 2002 with this review report. Evaluation results will be presented to and discussed with the SANet team together with UNEP, GEF and GRID representatives in order to identify best ways to implement the recommendations. The review results will subsequently be discussed in a group of external advisors. This group will include representatives of the Biodiversity, the Climate Change Convention and the GEF Secretariats, as well as independent business and finance experts who are frequently involved in technology transfer decision making. This group may continue to act as an advisory board to support the SANet team during project implementation.

Objectives of the review were to:

1. Provide a detailed overview of project progress;
2. Assess SANet achievements after one year of operation;
3. Evaluate the financial aspects of SANet's operations;
4. Review the managerial aspects of SANet;
5. Develop recommendations for improving the effectiveness of SANet's approach.

The review was conducted through the following activities:

- Assess all available project documents including the project proposal as adopted by GEF. Documents will be made available by the UNEP SANet team in Paris. The consultant will use other documentation, scientific reports related to SANet's objectives and approach
- Examination of available SANet's products like SustainableAlternatives.net in order to assess the effectiveness of SANet's activities and intermediate products;
- Prepare a summary of findings and a checklist or questionnaire for conducting a series of interviews with UNEP SANet staff in Paris and with SANet partners (scientific experts, policy makers etc.) through email and telephone;
- Prepare a draft-report to be submitted to UNEP/Evaluation Unit for comments;
- Prepare a final report in which UNEP comments have been incorporated.

First the background of this review is summarized in Chapter 1. The next chapters of this report provide further insight in the SANet project (2. SANet background, 3. SANet objectives and approach, 4. SANet progress and results). Chapter 5 presents the main observations and conclusions of the evaluator. Chapter 6 presents the recommendations for SANet management and operation for the second year.

The views expressed in this project progress review are those of the external evaluator, they do not necessarily reflect the Implementing Agency opinion.

## 2. SANet Background

Technology transfer and related knowledge management needs are complex subjects, in which a wide range of international initiatives has been developed, with varying levels of success. The main problems and constraints affecting effective transfer and replication of cleaner technology alternatives in relation to the implementation of Multilateral Environmental Agreements (MEAs) can be summarized as follows:

- Lack of awareness concerning the objectives of the different MEAs, their relationship to technology markets and related business opportunities;
- Lack of motivation and incentives to explore cleaner technology and product alternatives;
- Lack of access to comparable market and finance information, and related expert advice required to identify profitable clean technology choices;
- Limited business and investment planning capacity for assessment of alternatives,
- Insufficient local human resources and infrastructures to absorb cleaner technology, lack of entrepreneurial capacity, including migration of entrepreneurial resources;
- Difficult access to venture capital and finance for cleaner technology;
- Insufficient incentives for financiers to engage in additional due diligence required to establish the bankability of sustainable alternatives;

Successful Technology Transfer requires attention to commercial, competitive and managerial aspects of business development, as well as ensuring the technical capability of new technologies in different locations through long-term maintenance and integration with local needs (hardware and software components of technology). Effective technology transfer also means creating local capacity for educating users about technology; avoiding economic dependency on subsidization and the appropriate selection of technology for local users and customs<sup>2</sup>. The availability of information systems and clearinghouses alone had proven insufficient in reaching target groups in developing countries due to a variety of reasons, as mentioned above. Additional measures were required to achieve effective project replication.

These conditions have proven difficult to achieve, particularly in developing countries where there may be little preexisting political or commercial infrastructure to allow the rapid assimilation of new technology. It was therefore clear at the outset that a global, knowledge focused program like SANet -if at all- could only contribute modestly to improving the transfer of clean technology.

The most important operational challenge was to define a clear operational niche, and to develop a program focus that corresponds with UNEP's comparative advantage as a communicator and provider of tools & information of decision making.

### 3. SANet's Objectives and approach

The overall objectives of SANet have been formulated as follows:

The overall goal is to connect key public and private sector stakeholder groups who influence technology transfer within, between and to recipient country markets with the view to foster increased market uptake of sustainable alternatives that help to protect the global environment.

---

<sup>2</sup> G. MacDonald, "Technology Transfer: The Climate Change Challenge," *Journal of Environment and Development* 1, no. 1 (1992).

The project aims to facilitate identification of environmental synergy and implementation of integrated “win/win” solutions by encouraging thorough assessment of all available options.

**Main project elements:**

Major activities to enable fully informed investment, management, and policy decisions include:

1. SustainableAlternatives.net (SANet): An information management, communication and transaction system to allow structured learning, interactive comparison as well as exchange of technologies, services, best practice, lessons learned, etc. by multiple stakeholders;
2. A “stand-by” Decision Support Facility (DSF), to complement SANet, offering short term support and incentives for advanced market assessments and feasibility studies to encourage in-depth exploration of sustainable alternatives prior to critical decision making,
3. Facilitation of Strategic Dialogues & Alliances (SDA) among key stakeholder groups across traditional sector and administrative boundaries to enable identification of common goals and technology market development coalitions.

The above SANet services will provide an added value to the already available clearinghouses and capacity building activities in UNEP, GEF and other development projects and programs. By systematically providing expert support and capacity building directly related to success-cases that are documented in clearinghouses and in other UNEP and GEF projects and complying with requirements of financing organizations, the success rate of technology transfer activities will be increased. In this way SANet will develop effective project replications.

For the first year, SANet intended to provide the following results.

**Expected project results:**

Expected outcomes after one year:

- a) SANet prototype set-up and testing completed, at least two on-line technology transfer “market places” established and linked to at least three regional support centers;
- b) at least 8 critical investment, management, policy or alliance building decisions influenced and directed towards sustainable alternatives;
- c) at least four strategic dialogues between key industry and government stakeholder supported; and
- d) at least two clean technology market development alliances launched.

This review will compare current SANet results with the above-expected outcomes and will assess the feasibility of the overall SANet objectives.

4. SANet progress and current state of affairs

*4.1 Start-up of SANet*

SANet now, July 2002, has been able to carry out actual project transactions for about eight months, since January 2002. Since the GEF approval of the SANet project in May 2001, administrative requirements, such as project endorsement, internalization, negotiation of execution agreements, and staffing procedures took about five months: GEF-CEO endorsed SANet on 26 August 2001;

Disbursement of funds to UNEP and project internalization was completed in early October 2001;

Start of the project in the second week of October 2001. SANet's staff starts activities at UNEP-DTIE office in Paris.

Arrangements for contract implementation are negotiated with GRID/Arendal (SANet portal development and helpdesks) and UNOPS (administration of the Co-financing Mechanism transactions);

Both agreements are signed by January 2002.

SANet thus has been operational for a 10-month period, which should allow assessing the feasibility of SANet and reviewing current results and progress made, although the main results of a technology transfer approach cannot be achieved within a 2 to 3 year period.

During the start-up period from July until September 2001 three workshops were organized aimed at identifying SANet project opportunities and partners:

- July 2001: Workshop on Ecosystem Management, which resulted in a partnership with The Nature Conservancy (TNC), Friends of the Earth (Brazil) and the Gesellschaft für Technologische Zusammenarbeit (Germany);
- August 2001: Workshop on Energy Opportunities, which lead to the co-operation with Retscreen in Canada and EETIC;
- September 2002: Workshop on Manufacturing and Waste Management, which resulted in co-operation with BAUM (Germany, waste management) and the NCPC in India (textile manufacturing).

The number of participants in the above workshops was rather limited and was mainly determined by the network of UNEP and the team leader. Nevertheless, as the selection was based on good experiences of UNEP and SANet relevant and well-experienced organizations were invited. The workshops therefore resulted in logical partnerships and projects with good success rates. However, more and other organizations and experts with expertise in developing countries could have been invited as well, which could have resulted in other or additional projects and partners. For the start-up phase of the project this does not seem a problem, as it was important to quickly initiate a number of high potential activities.

During further project implementation, however, a systematic priority setting and expert selection procedure should be developed in closer co-ordination with UNEP and GEF partners, which can be considered of primary importance for the second year of SANet. This procedure can be developed in close consultation with the proposed advisory board and the management board (see 6. Recommendations).

#### 4.2 *SANet progress and results*

This review therefore covers a period of ten months of effective functioning, and the prior start up phase. During the ten months of effective operations SANet prepared and implemented MoUs with a number of partners (table 2) and experts were contracted to assist partners in project development and implementation. SANet produced the following outcomes/results related to the overall SANet objectives (table 1):

**Table 1: Current results of SANet:**

SANET OBJECTIVE	Current results/status	Expected results end of 2002
SANet internet-site and	The SANet web-site is	Automated Expert

<p>Local Desk development www.Sustainablealternatives.net</p>	<p>operational with cases, experts and links to relevant organizations in different fields: Ecosystem management, utilities (energy, waste) and manufacturing (textiles). Available resources in these sectors are being identified and information gaps are being filled. Three dedicated clean technology investment planning tools are being developed in partnership with specialized organizations (see table 2); Overview of financing organizations and funding programs not yet available.</p>	<p>Matchmaking Function operational, Active participation of local experts in registering success cases, specialized expertise and planning resources enabled through 2 regional support centers and a growing network of SANet Local Desks within existing expert organizations. Financing overview completed and available through the web-site.</p>
<p>Decision Support Facility Development, co-financing of incremental pre-investment work</p>	<p>Initial criteria and procedures of co-financing of due diligence activities defined and operationalized, three requests for co-financing approved. Each of these efforts may influence specific investment decisions.</p>	<p>Several requests are currently in the Co-financing Mechanism pipeline, out of which about 10 are expected to be approved by the end of the year, provided that sufficient funds are available. In view of the lead times between approval of funds, implementation of necessary studies and actual finance decision making, it may take between 8 and 12 months until decisions actually lead to approval of financing for clean technology solutions.</p>
<p>Stakeholder Dialogues and Market Development Partnerships</p>	<p>Dialogues on best ways to work together in technology transfer were facilitated in the areas of sustainable certified agriculture and certified forestry, geothermal energy and concentrating solar power technologies, as well as manufacturing and finance. This has resulted in the following alliances:</p> <ul style="list-style-type: none"> <li>• Timber Certification &amp; Marketing</li> <li>• Carbon Sequestration</li> <li>• CSP Market Development Partnership potentials have been identified in the following areas:</li> </ul>	<p>Each partnership requires further facilitation and monitoring to enable better-coordinated technology transfer and market development efforts.</p>



	<ul style="list-style-type: none"> <li>• Certified Sustainable Agriculture</li> <li>• Conservation Finance</li> <li>• Geothermal technology use in Africa</li> <li>• PV Technology</li> </ul>	
--	---	--

The bulk of the work is carried out in partnership with specialized organizations that provide matching contributions and implement specific tasks. Therefore the current SANet team appears to be sufficient for following up on current initiatives, monitoring project progress and contribute to developing a limited number of new initiatives. However, fostering effective co-operation and partnerships with relevant UNEP and GEF projects will require additional resources. This co-operation appears to be instrumental to enable exchange of lessons learned and better coordinated between the SANet team, UNEP/DTIE staff, experts and partner organizations and GEF projects with important technology transfer components.

**Table 2: Key stakeholders involved in SANet’s implementation:**

<b>Sector</b>	<b>Stakeholder:</b>	<b>Relationship with SANet and description of input provided:</b>
ECOSYSTEM MANAGEMENT	CATIE/FoE/GTZ	MoU/Partnership: Sustainable Forestry Investments through timber certification: Closure of on-line content gaps, and Local Desk agreement completed
	The Nature Conservancy	MoU/Partnership Sustainable Conservation Finance: Development of dedicated on-line planning tools agreement completed
	Pro Natura International	MoU/Partnership: Integration of Carbon Sequestration Finance into Ecosystem Management: Assessment of available knowledge, decision to launch a separate carbon sequestration center to address content gaps, the center will link to SANet.
	ACOA/GTZ	MoU/Partnership Sustainable Income and Enhancement of Agrobiodiversity through Organically Certified Agriculture in Africa: Closure of on-line content gaps, Set-up of regional Local Desk pending

UTILITIES	BAUM	MoU/Partnership: Identification and Financing of Sustainable Municipal Waste Management in Latin America, Translation of available on-line content, and set-up of pilot decision support system completed
	NRCan/RETScreen	MoU/Partnership: Renewable Energy Decision Support Center: Improvement of available investment planning tools and integration into SANet completed
	EETIC/IEA/CTI	MoU/Partnership: Management of Clean Energy Investment Knowledge: Joint content area, implementation and set-up of initial helpdesks in India and Sri Lanka in year 2
<b>Cross Cutting Finance and Business Planning/Manufacturing</b>	WFEO, FIDIC, UNEP-FI,	TT Knowledge Management Partnership: Joint development of SANet's databases, brokering of expert advice and marketing of decision support services, extension of expert network with national FIDIC and WFEO Associations
	UNIDO –COMFAR	Improvement of available TT planning tools to enable replicability assessments of cleaner technology alternatives in industry, agriculture, and forestry, planning completed implementation subject to resource release for year 2.
	Global Development Gateway	Joint monitoring and review of target group needs and communication patterns, Joint resource area on financing for clean technology under exploration, implementation in year 2

With the above partnerships SANet has initiated a number of successful activities. All partners have more than sufficient experience in developing countries in their respective field of work.

Initial comparison of planned outcomes with what has been delivered so far, or can be realistically achieved by the end of 2002, when the initial year of actual operations will be completed, indicates that project implementation is in general proceeding in accordance with the project brief.

**Table 3: SANet projects and results**

<b>Project and partners:</b>	<b>Objectives:</b>	<b>Results:</b>
------------------------------	--------------------	-----------------

<b>CATIE/FoE/GTZ</b>	Conduct pre-investment study Identify partners and financiers; Create a bilingual web-site portal.	Web-site portal developed and accessible through the SANet site; Pre-investment study presented to SANet; A number of users and producers of certified timber identified and involved in the project.
The Nature Conservancy	Development of an Internet Portal Development of regional technical Assistance desks and related training	Internet portal developed and operational; First Conservation Finance tools developed and available through the portal; TA desks to be implemented.
Pro Natura International	Study on the development of an International center for Carbon Sequestration and Biomass Energy (ICCS)	Study report presented; GEF is expected to co-finance the establishment of regional offices.
ACOA/GTZ	Create an Internet Portal (SANFOOD) and identify and coach regional Decision Support Desks	SANFOOD portal designed and operational; Content prepared and made available through the web portal; Workplan for setting up 3 regional decision Support desks developed.
BAUM	Establish joint Decision Support System; Provide training in using the DSS; Monitor impact of services.	Decision support system on waste management developed and made available through the SANet web-site;
NRCan/RETScreen	Develop a “training focused” web-site; Further develop investment related decision support services;	Web-site developed and made accessible through the SANet web-site; Decision support services/tools further developed and made available through the web-site; Planning of support desks started up.
EETIC/IEA/CTI	Establishment of joint management committee; Development of regional Support Centers and Customer Support Facilities;	Management Committee not yet established; Development of Regional Support Centers to start in September 2002.
WFEO, FIDIC, UNEP-FI,	Enhance participation of experts in SANet	FIDIC will market SANet among its members in August/September 2002.
UNIDO – COMFAR	Development of COMFAR Plus, a feasibility assessment tool for a wide range of investments.	Co-operation with UNIDO established. COMFAR tool available through the SANet web-site.

The current status of SANet can be summarized as follows:

- The SANet web-site [www.sustainablealternative.net](http://www.sustainablealternative.net) is operational together with the main elements as described in the project brief: a register of experts with now about 30 experts in the database; a number of “sustainable alternative” case briefs, links with web-sites of partner organizations and partners having assessment and finance tools available. An overview of financing organizations with their funding programs and opportunities is still lacking;
- Partnerships established in the following areas: sustainable forest and ecosystem management, renewable energy and energy efficiency, waste management, manufacturing (Textile industry), organic agriculture and carbon sequestration;
- Four technology transfer and market alliances are being developed: certified forestry products, concentrated solar thermal power, geothermal energy and PV/Hydro power.

#### 4.3 *Current SANet staff with their main responsibilities:*

SANet currently has four core staff members:

1. A general manager, Frank Frittner, responsible to the overall project development and management of SANet’s operational partnerships,
2. A finance manager, Ard Kant, responsible for the Co-financing Mechanism and cross-cutting finance knowledge management who joined the team in April 2002, and
3. A junior officer, Ryoko Fukuhara, sponsored by the Government of Japan, who is responsible for coordinating knowledge management efforts in the utility and manufacturing areas.
4. A consultant, Guillaume de Rouville, addresses the ecosystem management area.

GRID Arendal, which is executing the knowledge management portal, Local Desks and related outreach, has allocated a part time portal & communications manager in January 2002, Helge Selrod. According to demand GRID is engaging part-time consultants for portal development, design, editorial, and outreach tasks.

Execution of the Co-financing Mechanism transactions is handled by UNOPS. No staff is allocated for this task, which is governed by a fee for service performance agreement.

The SANet team discusses project progress and development on a weekly basis through teleconferencing enabling participation of GRID/Arendal in the meetings/discussions.

SANet’s team co-operates with other UNEP/DTIE staff on a project basis. There is little involvement of UNEP/DTIE in regular SANet management and decision-making. The preparatory workshops have been organized in close co-operation between the SANet team leader and UNEP staff. The consultations with SANet and UNEP staff however showed a number of problems and constraints that need to be resolved on short term:

- Lack of or unclear communication between SANet and UNEP staff, despite the fact that within UNEP/DTIE activities are undertaken with close relationships with SANet’s approach and objectives. The SANet methodology proved to be insufficiently clarified to UNEP staff resulting in problematic co-operation;
- Priority setting e.g. choice of new projects and experts within SANet is not always based on systematic selection on the basis of widely (within UNEP, GEF and SANet) agreed criteria, but seems merely influenced by opportunities presented by accidental contacts;

- Insufficient consistency in the description of SANet's objectives and approach in the different documents and leaflets describing SANet, leading to confusion and misunderstanding among the team and some of SANet's partners.

The above problems seem to be related to the new and innovative character of SANet and did not yet pose real problems in project implementation. This may however become more problematic during the next stages of SANet and thus some changes in SANet management have to be implemented to address the above issues.

#### 4.4 Budgetary situation

The GEF financing for year 1 of SANet's operations was US\$ 1,27 million. As shown in the Budget Status (Annex I) the budget is or will be spent by October 2002. Annex 3 gives the commitments of SANet for each of the project elements including the partner's contributions tot these projects. A summary of SANet's budget and expenditures is presented in Table 4.

**Table 4: SANet's budget and expenditures**

<b>SANet budget line</b>	<b>Total commitments:</b>
UNEP:	
▪ Staff salaries	229,000
▪ Staff travel	55,000
▪ Office costs	41,000
▪ Consultants/assistants	58,000
▪ MoU's	30,000
▪ Other costs	96,000
<b>Subtotal:</b>	<b>509,000</b>
UNOPS:	
▪ Contracts	191,000
▪ Consultant	10,500
<b>Subtotal</b>	<b>201,500</b>
GRID/Arendal:	
▪ GRID staff	325,500
▪ Consultants	56,000
▪ MoU's	202,000
<b>Subtotal</b>	<b>583,500</b>
<b>Total:</b>	<b>1,294,000</b>

As the first budget of SANet was US\$ 1,275,000 the budget will be exceeded by US\$ 19,000, which is approximately 1,5% of total budget. The first year budget has thus fully been used for development of the SANet web-site, staff salaries, office costs and for contracts and MoU's with SANet's partners aimed at achieving the objectives in specific fields and regions.

Costs for the different project items are considered to be very reasonable as well for the development of SANet's web-site, costs for the SANet team as for the projects and MoU's implemented. These activities have provided tangible results, which justify the costs.

This is also the case for the costs for developing and maintaining SANet's web-site. These costs can be estimated at approximately US\$ 300,000, a major share of GRID's costs. Although web-sites can be developed at considerably lower costs, it should be taken into account that in SANet a series of partners developed internet portal linkages with SANet which required continuous work on the SANet site itself as well as support to SANet's

partners to ensure easy accessibility through SANet. SANet's web-site is a Contextualized and interactive site with interconnected databases and functionalities that go beyond standard internet solutions. This justifies the costs as indicated.

## 5 Observations and Findings of the Evaluator

The following preliminary findings and recommendations are based on studying the SANet materials (reference list, Annex 1), the SustainableAlternatives.Net web-site and interviews with SANet and UNEP/DTIE staff and telephone discussions with a number of SANet partners and GEF staff (Annex 2, list of interviewees).

### 5.1 *General observations*

1. SANet is well underway to developing a number of potentially effective technology transfer activities built upon technology and market information, capacity building efforts and subsequent application of a number of tools developed within the framework of SANet.
2. SANet's scope as defined in the original project brief appeared to be too wide for targeted technology transfer contributions. The evaluator is of the opinion that in the process of operationalizing SANet, the team has indeed been able to develop a sufficiently clear focus that builds on the strengths of existing programs, and assures complementarity with other TT knowledge management efforts, in particular those of a number of partner organizations. The number of activities launched however makes it difficult for the team to effectively manage and follow-up on (intermediate) results;
3. Transfer of profitable technologies that offer specific and quantifiable global environmental benefits and replication of related investments is facilitated through improved access to specific information and planning tools that are required to secure financing.
4. Availability of co-financing incentives for incremental feasibility through the Co-financing Mechanism appears to be an important tool, not only to influence individual investment decisions, but also to generate sufficient expert interest in SANet's online services. It is expected that in the near future current SANet efforts will lead to investment decisions.
5. During the preparation of the Co-financing Mechanism operations it became apparent that a number of similar pre-investment support instruments are being offered by UNEP partners, e.g. ADB-PREGA, IFOAM-IGO, WB-PCF+, and GTZ's PPP support program. Significant lessons have also been learned by preceding UNEP projects, such as Cleaner Production Finance and Renewable Energy and Energy Efficiency Advisory Facility, which was sponsored by the GEF. SANet's management team now tries to build upon these experiences.
6. Communication on SANet's objectives and methodology has not always been clear enough to sufficiently explain the different elements of the SANet project. Several interviewees (UNEP, external experts) were convinced of the overall SANet objective and approach but had no clear understanding of how SANet would be implemented. This is also reflected in different SANet documents and leaflets leading to misunderstanding

among the team members and partner organizations. Based on available SANet experiences a clear, commonly understood, SANet approach and methodology should be developed.

### 5.2 *Comparison of SANet results with expected first year outcomes*

7. The evaluator is of the opinion that SANet achieved most of the objectives for the first year as formulated in the project brief:
  - SANet web-site is developed and operational although not all elements are functional. The register of financing opportunities is still missing, the Co-financing Mechanism will be developed further during the next weeks. The web-site however provides the functions as specified in the project brief and thus supports the realization of SANet's objectives;
  - Two technology transfer "market places" established: Market places were established in the fields of Timber certification (Brazil) and in concentrated solar power (CSP) market development.
  - Regional support centers: Energy support centers are being prepared in India and Sri Lanka.
  - Three critical decisions influenced (Janus Foundation, Heat and Power Associates Polska and FondElec C.E.E.)
  - Four strategic dialogues supported: Certified forestry products, concentrated solar-thermal power, geothermal energy and PV/hydro power.

During the next months several other regional support centers can be active if SANet will continue its activities during a second year.

### 5.3 *Achievement of overall objectives*

8. The overall SANet objectives can indeed be realized through the approach and methodology now applied by the SANet team. The co-operations established with a number of strategic partners with practical expertise in specific sectors offer good success rates.
9. SANet achieved better access and exchange of specialized information sources, planning tools and expert advice required to identify, validate, and secure financing for project replication through SANet's web-site: [www.SustainableAlternatives.net](http://www.SustainableAlternatives.net).
10. The new web-site design enables reviewing of GEF's and other TT success cases by project managers and consultants, as well as registration of planning tools and specialized expertise available worldwide.
11. Bankability of five initial clean technology investments is being improved through provision of co-financing for required feasibility and due-diligence. In addition, a network of support providers for such pre-investment assignments is being created to improve access to partner resources, and enable integration of lessons into the management of SANet's Co-financing Mechanism.
12. With the above results a sound basis has been developed for achieving the overall SANet's objectives in a number fields and regions during the next stages of SANet.

#### 5.4 *SANet team and management*

13. SANet team has performed effectively during its first year of operation. A more than sufficient number of projects and partnerships has been prepared and implemented.
14. Co-operation with other UNEP/DTIE programs has been established however without direct results up till now. Co-operation with UNEP/DTIE and GEF could and should have been developed more widely leading to direct follow-up of ongoing UNEP and GEF experiences and activities through SANet. Within the current SANet team however there is not sufficient spare capacity to put sufficient effort in developing and maintaining effective relationships with UNEP and GEF as current SANet activities already consume all resources;

### 6 Recommendations of the Evaluator

#### 6.1 *SANet continuation:*

15. SANet has developed more than sufficiently as foreseen in the project brief and should be continued for at least another two years, preferably three to five years, in order to gain real experience and results from SANet's initiatives. Although SANet has produced good progress a number of improvements can be made to further strengthen SANet's approach.
16. Looking at the wide range of activities initiated, the outcomes and results achieved until August 2002 in relation to the available budget, SANet seems to be sufficiently focused towards achieving its objectives. A number of important and relevant organizations have been mobilized and now contribute to the development and implementation of SANet. The available budget and expenditures seem logical in view of SANet's performance. However, it is recommended to establish a tighter budget control system to avoid the risk of possible budget overruns. As additional funding is required from October 2002 there is a risk of a break in SANet's activities. It is recommended to start procedures to make additional funding available from October 2002 to ensure a smooth and uninterrupted continuation of the SANet project.
17. Communication about SANet's objective, approach and implementation methodology should be improved. SANet's web-site and different leaflets do not clearly express a structured and logical methodology. Different terminology is used for support desks, decision support, partnerships, alliances etc. A uniform and logical SANet approach and methodology should be agreed upon in the team and in the advisory board (see below) and subsequently communicated in a consistent manner.
18. SANet should be based more clearly in the UNEP structure, thus gaining more effectively from UNEP program experience and gaining front office confidence and support.

#### 6.2 *SANet team and management*

19. Relationships with UNEP/DTIE and GEF both should be strengthened in two ways:
  - a. In SANet management, UNEP and GEF should have a much clearer role and position. So far SANet's team leader, together with the team, decided on priorities, financial decisions, communication etc. It is recommended to install a management board in

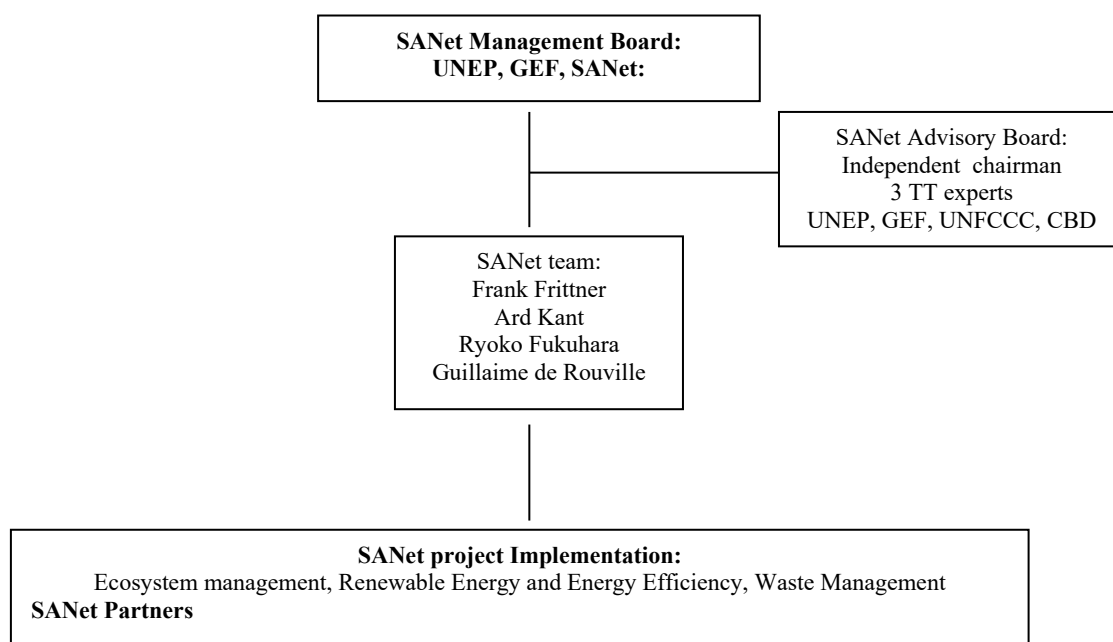


which next to SANet team members also UNEP/DTIE and GEF participate in taking important decisions;

- b. SANet's team should more actively seek collaboration with relevant UNEP and GEF activities. UNEP's Cleaner Production, Ozone, and Energy programs offer opportunities for synergy. GEF already implemented a number of large projects, which include knowledge management and technology transfer activities. SANet could effectively create follow-up on GEF and UNEP programs and projects and thus provide a direct contribution to achieving UNEP and GEF objectives. This also requires a more active involvement and interest in SANet by UNEP and GEF.

20. SANet should install as soon as possible an advisory board, which has a number of renowned external experts in the field of MEA's and technology transfer. UNEP and GEF should also take part in this advisory board to ensure input from their technology transfer activities. The SANet team together with UNEP has already started preparations to install such an advisory board. It is strongly recommended to have this advisory board in place during the very beginning of the second year of SANet in order to guide the team in setting priorities, select further partners, develop regional support desks etc. In its first meeting, which should be held not later than October 2002, SANet's strategy paper should be on the agenda of this committee, which should not take place later than October 2002. A first meeting of SANet's Advisory Board has taken place on 11 and 12 December 2002 in Paris. This meeting resulted in a very fruitful discussion on the objectives and approach of SANet. Results, problems and constraints in knowledge transfer were presented by different experts. The exchange of experiences contributed to finalizing this review and adjustment of a number of recommendations.

21. The above recommendations would lead to the SANet organization as described in the scheme below. Important next steps will be to describe in detail tasks and responsibility of the management board, advisory board and the SANet team itself. This should include criteria for project and partner selection, priority setting and project tracking and monitoring.



22. Looking at the current composition of the SANet team it is recommended to add one SANet staff member who would be responsible for further developing and strengthening relationships with UNEP and GEF. Especially follow up on GEF projects seems urgent and requires manpower resources.
23. During its second year of operation priority should be on strengthening and making effective use of the established relationships with partner organizations and on establishing (regional) support desks for the realization of replication projects. Several initiatives already prepare for regional support desks in different fields of sustainable development and different regions. It is recommended to better co-ordinate these initiatives for regional support in order to bring together several topics in one support desk and/or to make proper use of established regional offices of relevant organizations.
24. In its operations and development of local initiatives e.g. technology transfer and replication projects, SANet should focus on using available networks (like the UNEP Cleaner Production Centers and other UN or international organizations support desks) and strengthening these networks in knowledge and technology transfer management issues. The SANet website would then act as a supportive tool to these networks and centers. Such networks would allow face-to-face communication and thus provide a stronger basis for success. Working through local networks and centers will also reduce dependency on web based services, which are still out of reach (internet access, costs) in many developing regions.
25. SANet should implement sufficient monitoring and feedback opportunities to keep track of problems and success stories in its initiatives, including the use of SANet's website. This will allow faster learning of project failures and thus prevent similar problems in future initiatives and provide indications for improvement of SANet's tools. This means that also project problems and failures should be included in SANet's projects database and website.

### 6.3 *Other recommendations*

26. SANet should keep a much clearer focus on finance-related know-how, financing institutions and funding programs and opportunities. This element of SANet's website should be developed with the utmost priority.
27. SANet should focus on those countries and region that have already shown to have a favorable environment for success. Local UN offices may provide effective advice on countries and regions with best success rates and on local organizations, including development organizations that have implemented successfully technological projects.
28. Taking into account that UNEP and the other GEF partners are supporting a wide range of clean technology activities, these projects should offer a large number of technology transfer lessons, and expertise that is required for replication. SANet should therefore engage all relevant UNEP Divisions, and the GEF Implementing Agencies, in particular their local GEF project managers in its program.

29. GEF projects may gain particular benefits from participating in specific SANet partnership development. Linking these interventions among each other and to other key public and private sector player will help both SANet and GEF.
30. Opportunities for cost-recovery or contributions from commercial and non-commercial donors may contribute to the sustainability of SANet on the medium and long-term. This is an additional reason for SANet to actively involve financing organizations in the development and implementation of partnerships and projects. In addition organizations may be interested to contribute to SANet's development and implementation in kind.
31. SANet could operate more effectively when co-operating with other programs of international (donor) organizations that are similar or overlap with the objectives of SANet in the field of knowledge and technology transfer. This also relates to co-operating with GEF and UNEP but also other UN and international organizations could establish effective links with SANet.

*ANNEX 1: List of References:*

1. SANet project brief, “Global technology Transfer Networks, a UNEP/GEF Strategic Partnership, Nairobi/Paris, 15 March 2001
2. SANet Midterm Review and Planning Workshop: Logframe summary of key outcomes;
3. SANet Project Progress report and Outlook “Towards a cross-Cutting and Sustainable Support System for Technology Transfer” and Annex 1 to SANet Project Progress Report: “Sector specific planning resources”;
4. SANet Draft Progress and Outlook Report “Towards a Cross Cutting and Sustainable Support System for Technology Transfer Experts”, August 2002;
5. SANet financial overview, August 2002;
6. “No Limits to Knowledge, but Limits to Power, Towards a Sustainable Knowledge Society”, Statement of the Club of Rome to the World Summit on Sustainable Development 2002;
7. SustainableAlternatives.Net, SANet internet-site.
8. SANet Strategy Note, prepared by Ard Kant, 28 June 2002
9. MoU between UNEP-DTIE and CEDRL (CANMET Energy Diversification Research laboratory);
10. MoU between UNEP-GEF (SANet) and BAUM Internet Services, 30 January 2002;
11. MoU between the IEA Energy & Environmental Technologies Information Center (EETIC), 31 October 2001;
12. Consulting contract between GRID Arendal (for SANet) and AEA Technology (for EETIC), February 2002;
13. MoU between UNEP-GEF (for SANet) and the Gesellschaft für Technische Zusammenarbeit GmbH (GTZ, Germany) related to SANFOOD;
14. MoU between UNEP-GEF (for SANet) and the Tropical Agricultural Research and Higher Education Center (CATIE);
15. Project Agreement between UNEP-GEF (for SANet) and The Nature Conservancy (TNC),
16. MoU between UNEP-GEF and Friends of the Earth (FoE)-Amazon Program;
17. MoU between UNEP-GEF (for SANet) and Pro-Natura International (PNI);
18. MoU between GRID-Arendal (for SANet) and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ);
19. Network Business Plan for the GEF/UNEP Sustainable Alternatives Network, prepared by ICF Information Technology Inc., assigned by SANet;
20. Managing Technological Change, An explanatory summary of the IPCC Working Group III Special report, UNEP-DTIE, 2001
21. Report of the First Operational Dialogue “Sustainable Manufacturing and Waste Management” 18 July 2001, Results and Recommendations.
22. Report of the Operational Dialogue on Sustainable Energy Alternatives marketplace, UNEP/DTIE, June 2001;
23. International Center for Carbon Sequestration and Biomass Energy, Pro Natura International, July 2002
24. Decision Support System on Waste Management, Summary report, BAUM, August 2002;
25. Update on Conservation Finance Component of SANet, TNC, May 2002;
26. Towards the creation of an Instrument to assist certified timber producers in the Brazilian Amazon, final report, Friends of the Earth-Brazil Amazona

## *ANNEX 2: List of interviewees*

### **SANet Team:**

1. Frank Frittner, team leader
2. Ard Kant, finance manager
3. Ryoko Fukahara, co-ordinating officer manufacturing & utilities
4. Guillaume de Rouville, co-ordinating consultant eco-system management
5. Helge Selrod, GRID/Arendal project co-ordinator

### **UNEP DTIE:**

1. Jacqueline Aloisi de Larderel, Managing Director
2. Per Bakken, deputy director
3. Surya Chandak, Head Cleaner Production Programme
4. Mark Radka, Head Energy Programme
5. Ari Huhtala, Head Cleaner Production Financing Project

### **GEF:**

1. Kenneth King, assistant CEO
2. Yasmine Biro, Program manager
3. Jarle Harstad, GEF Evaluation Coordinator

### **SANet partner organisations and consultants:**

1. Mike Sanio, consultant
2. Gregory Leng, RETscreen and CDERL
3. Stephen Hirsch, consultant
4. Peter Boswell, FIDIC
5. Richard Shock, EETIC and AEA Technology
6. Svein Tveitdahl, GRID/Arendal
7. Stephen Lapointe, GRID/Arendal, website developer
8. Dietmar Stoian, CATIE
9. Werner Bauer, BAUM
10. Louis van Heerden, CSP partnership
11. Janos Pastor, UNFCCC
12. Sheldon Cohen, The Nature Conservancy
13. Roberto Smeraldi, Friends of the Earth-Amazon Program
14. Guy Reinaud, Pro Natura International
15. Timm Tennigkeit, UNIQUE (Email)
16. Marion Buley, GTZ-agriculture (email)
17. Sylvia Baumgartner, Janus Foundation

## Phase I Co-financing (documented)

Based on the 1:1 co-financing principle, all partnership activities of TTN were carried out with at least equal partner contributions, as shown in the table below.

Table1: Phase I Co-financing Status

	GEF	UNEP	Partner	Private sector	Total
<b>MoUs</b>					
The Nature Conservancy	120,000	0	124,000	0	244,000
CATIE & FCP	8,000	0	30,000	0	38,000
CBD	0	0	0	0	0
Natural Resources Canada (RETScreen)	0	100,000	175,000	0	275,000
GTZ & CDG (textiles)	9,000	0	16,000	0	25,000
BAUM	40,000	0	85,350	0	125,350
Friends of the Earth & GTZ	12,500	0	12,500	0	25,000
EETIC	10,000	0	10,000	0	20,000
<i>Sub Total</i>	<i>199,500</i>	<i>100,000</i>	<i>452,850</i>	<i>0</i>	<i>752,350</i>
<b>Co-financing (excluding leverage finance)</b>					
Janus Foundation	4,850	0	4,850	0	9,700
Heat and Power Associates Polska	25,000	0	0	25,000	50,000
FondElec C.E.E.	50,000	0	0	50,000	100,000
<i>Sub Total</i>	<i>79,850</i>	<i>0</i>	<i>4,850</i>	<i>79,850</i>	<i>159,700</i>
<b>Networking</b>					
Links to NCPCs	0	50,000	0	0	50,000
RE market facilitation (IEA)	24,300	0	30,000	0	54,300
CSP market facilitation (KfW/BMU)	32,000	0	50,000	0	82,000
WSSD side event (FIDIC/WFEO)	36,100	0	9,600	0	45,700
COMFAR upgrade (UNIDO)	0	0	11,500	0	11,500
UNIQUE	5,000	0	5,000	0	10,000
<i>Sub Total</i>	<i>97,400</i>	<i>50,000</i>	<i>106,100</i>	<i>0</i>	<i>253,500</i>
<b>Co-ordination</b>					
UNEP-DTIE	0	233,850*	0	0	233,850
GRID-Arendal/ UNEP-DEWA	0	180,300*	0	0	180,300
<i>Sub Total</i>	<i>0</i>	<i>414,150</i>	<i>0</i>	<i>0</i>	<i>414,150</i>
<b>Grand Total</b>	<b>376,750</b>	<b>564,150</b>	<b>563,800</b>	<b>75,000</b>	<b>1,579,700</b>

\*In-kind contributions