

**1980**

Global 2000 Report to the President Published (Gerald O. Barney).

**1981**

First national 21st century study conducted in China and Canada. Thirty-six other national studies were conducted through 1990, leading to the publication of Studies for the 21st Century in December 1991.

**1983**

Millennium Institute (MI) founded to inspire global action on sustainability issues.

**1985**

MI publishes Managing a Nation: The Microcomputer Software Catalog, a review of some of the best modeling software in our library of over three hundred models.

**1991**

Development of the Threshold 21 model began, following adoption of Vensim® from Ventana Systems as the modeling language.

**1993**

The Millennium Initiative commenced with a goal to use Systems Thinking to accelerate the turn toward a sustainable future for Earth. A “Millennium Call” was issued to a wide range of institutions and individuals to use the turn of the millennium for constructive actions that will catalyze the emergence of peace, justice, and sustainability in the 21st Century.

**1993**

Global 2000 Revisited published. The publication was reissued with additional material as Threshold 2000: Critical Issues and Spiritual Values for a New Age.

**1994**

**T21-Bangladesh: Making children’s needs a priority in Bangladesh.** UNICEF sponsors application of Threshold 21 model to analyze important child development issues in Bangladesh.

**1996**

**T21-Tunisia:** In 1996, Dr. Salah Hanachi, Director General of the Tunisian Institute of Strategic Studies (ITES), in the Office of the President, contracted T21 as a tool for

enhanced coordination among Tunisia's several ministries. He envisioned separating out the sectors of T21 and using them as the core model in each ministry.

## 1997

**T21-Malawi: Malawi translates vision to action using T21, and gains capacity for dynamic modeling.** MI develops a T21 model for Malawi and helps its government to translate their Vision 2020 goals into measurable objectives through national stakeholder consultations and analysis of scenarios. The outcome was a new national development strategy, *Reaching the Vision* that sets out the path to attaining the national vision.

## 1998

**T21-Italy:** Under a contract with ANPA, Italy's National Agency for the Protection of the Environment, and with collaboration from ENEA, the Italian Department for New Technology, Energy, and the Environment, MI customized the T21 template model to Italy and began an exploration of how best Italy could achieve its various international environmental commitments. The goal was to find scenarios under which Italy could achieve its commitments without doing serious damage to its economy.

**T21-Benin:** A very simple T21 model, T21-Benin was developed to support an MI mission to the country, where the advantages of using an integrated approach were presented.

**T21-Cambodia:** This model was developed to test an algorithm for modeling war effects within an integrated framework that combines society, economy and environment.

## 1998

**T21-Somaliland:** In October and November 2000, Millennium Institute (MI) and ActionAid co-conducted a two-week modeling and training workshop in Hargeisa, Somaliland. The goals for the Hargeisa workshop were to: (1) build capacity for understanding systems models like T21, (2) develop shared mental models of a herding economy, (3) obtain necessary data, (4) construct a preliminary T21-Somaliland model, (5) develop consensus on an implementation plan, and (6) conduct an evaluation workshop.

## 2001

**T21-Guyana: Cost/benefit of structural reform of the bauxite and sugar industries in Guyana.** MI customizes Threshold 21 model to Guyana, and performs analyses to support preparation of its Poverty Reduction Strategy Credit proposal for the World Bank.

## 2002

**T21-China:** General Motors and World Resources Institute support T21-China for highlighting China's growing energy and food demand.

**T21-Papua: Papua, Indonesia: A new approach to integrating development planning with biodiversity conservation.** Conservation International and MI collaborate on pursuing a more cooperative approach to address the concerns of various interest groups represented in Papua's environmental and economic resources.

**T21-Thailand:** MI developed for UNFPA this model focused on population, reproductive health, and HIV/AIDS, in order to analyze the diffusion of HIV/AIDS in the country and test alternative prevention and treatment policies

**T21-USA:** The first version of the T21-USA model was created.

**T21-Bhutan:** In 2002, the Millennium Institute (MI) and the Government of Bhutan (GoB) collaborated to create a T21 model for Bhutan. The initial version of the T21 Bhutan model was very positively received by the government. In 2004, as part of the Netherlands Climate Change Studies Assistance Program (NCCSAP), the GoB decided to use T21 to investigate impacts of climate change on Bhutan. MI did some additional modifications to the model for that purpose.

## 2003

**T21-Mozambique: Increasing broad participation in national planning in Mozambique.** MI worked with Mozambique's government ministries and civil society groups to build their capacity use T21, and use it as a framework for broad dialogue on policy issues.

**T21-Cape Verde:** MI developed T21 Cape Verde specifically to support the Poverty Reduction Strategy Paper (PRSP) process. Senior Cape Verdean government officials identified the T21 as an excellent tool to assist in undertaking integrated strategic planning, involving diverse stakeholders in the planning process, and monitoring performance against agreed goals. The model was also used by the World Bank for their Development Policy Review.

## 2004

**T21-Ghana: Assessing best options for meeting the Millennium Development Goals in Ghana.** MI's T21 model is used to assess the impact of MDG-related interventions on Ghana's economic and social development, and the synergies (or lack thereof) among them.

**T21-USA:** The second version of the T21-USA model, which focused on the economics and social security dynamics was created and featured on C-SPAN.

**T21-Santa Lucia:** This simplified T21 model was developed to support a training program on integrated development planning conducted in the country in 2004.

## 2005

**T21-Mali: T21 supports development of national poverty reduction strategy in Mali.** Under The Carter Center's Development and Cooperation Initiative (DACI) with the Government of Mali, MI used T21 to support preparation of the Mali's poverty reduction strategy paper for the World Bank.

**T21-AEO, Africa: a glimpse into the future of the environment.** T21 examines possible futures that may result from different environmental policy choices for UNEP's second African Environmental Outlook report (AEO-2).

## 2006

**T21-MEG- The Balkans: Visions of peaceful co-existence and development.** MI has worked with the Swiss Centre for Applied Studies in International Negotiations (CASIN) to support a multi-donor effort to encourage politicians, policymakers, and community leaders in the Western Balkans to think about their future in a regional context.

**T21-Jamaica: Building capacity for comprehensive national development planning in Jamaica.** MI is assisting the Jamaican government with institutionalizing T21 to conduct a more holistic policy analysis that emphasizes all the dimensions of sustainable development.

## 2007

**T21-Ohio (MCM): Analysis of Waste Reuse for Energy Production in Central Ohio** – Millennium Institute (MI), in partnership with the Center for Resilience at Ohio State University (OSU) and the Solid Waste Authority of Central Ohio (SWACO), is developing a T21-Ohio model that will be used to support regional Material Flow Analysis and Economic Input/Output analysis for the Central Ohio area.

**T21-Ecuador (MCM): Analysis of the Stern Review on the Economics of Climate Change** – The Stern Report, an economic analysis of the costs of mitigating global climate change posits that an investment of 1% of GDP annually would be sufficient to stabilize the climate at 550ppm of carbon emission by 2050. T21 was used by Middlebury College in Vermont to run scenarios to understand how investments in demand-side efficiency measures in the power sector could help to move Ecuador away from its increasing dependence on fossil fuel.

**T21-USA** – The third and most recent version of the T21-USA model was created and presented at the New America Foundation. John A. Harris (Changing Horizons Fund) provided support for development of T21-USA model to provide analytical framework for current and future energy use and mobilize action for sustainable USA energy future.

As a follow up of T21-USA, the following projects are being developed:

- *Climate Change Impacts on the Competitiveness of Energy-Intensive Manufacturing Sectors*; in collaboration with High Road Strategy, a project for the National Commission on Energy Policy (NCEP)

- *Analysis of the H.R. 1506 and H.R. 2927 on CAFE Standards, and H.R. 969 on RPS for Congressman Rep. Roscoe Bartlett*
- *Future Prospects of Public Transportation; a 2035 vision by Alan Drake and Ed Tennyson*

Various universities already adopted T21-USA as part of their courses or for research purposes. These include: Ohio State University, Middlebury College, University of North Carolina, and University of Bergen (Norway).

**T21-North America (T21-USA, Canada, Mexico energy models)** – developed in collaboration with ASPO-USA and ESF, it is part of ASPO's Global Energy Modeling project.