A GENERAL INTRODUCTION TO
THRESHOLD 21
INTEGRATED DEVELOPMENT MODEL

What is T21?

Threshold 21 (T21) is a dynamic simulation tool designed to support comprehensive, integrated long-term development planning. T21 integrates economic, social, and environmental factors in its analysis, thereby providing insight into the potential impact of development policies across a wide range of sectors, and revealing how different strategies interact to achieve desired goals and objectives.

T21 is the result of more than 20 years of extensive research and application carried out in consultation with the World Bank, UN agencies, developing country governments, and non-governmental organizations.

Features of T21

T21 includes the critical features that support an inclusive, comprehensive, and integrated development planning process: it is transparent, collaborative, robust, and customizable.

Transparent: T21 can trace its modeling process. This feature means policy makers and planners can see the variables that influenced an outcome, and can change and tailor their policies accordingly until the scenarios show adequate progress toward goals.

Collaborative: T21 facilitates participation and consensus-building by encouraging open consultations with diverse stakeholders and external development partners under a common framework and an easy-to-understand interface.

Robust: T21 has been validated through a variety of tests, including effective simulation of historical periods.

Customizable: T21 is flexible and can be customized to address the unique needs of any country. Its modular design allows for the modification of any sector, and the addition of new ones.

What Can T21 Do?

The most important application of T21 is contributing to the national planning process. T21 is also a valuable tool for conducting stakeholder consultations, producing strategy documents that address sectoral or industrial interests, producing data and analyses for loan negotiations, and monitoring and evaluating national plans. For these reasons, T21 is an especially useful tool for preparing Poverty Reduction Strategies (PRSs) which emphasize the Millennium Development Goals (MDGs) and for monitoring progress towards the MDGs or other national goals.

T21 Applications

T21 can be applied to most countries or regions. To date, more than 15 unique, customized T21 models have been developed.

AFRICA
Benin
Cape Verde
Egypt
Ghana
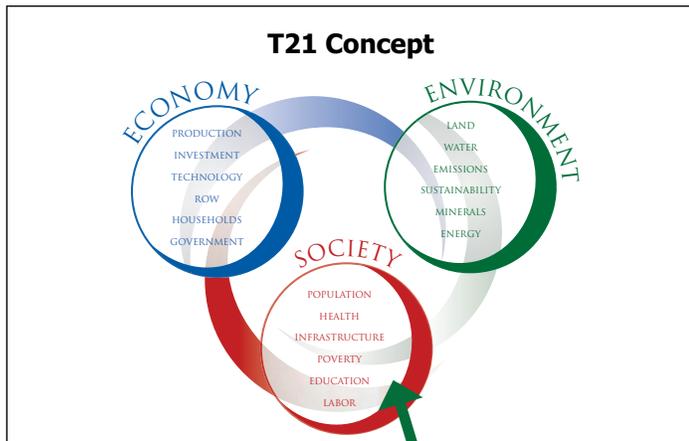Malawi
Mali
Mozambique
Somalia (Somaliland)
Tunisia

AMERICAS
Guyana
St. Lucia
United States

EUROPE
Italy
Latvia

ASIA
Bangladesh
Bhutan
Cambodia
China
Indonesia (Papua)
Taiwan

T21 Concept

ECONOMY
- PRODUCTION
- INVESTMENT
- TECHNOLOGY
- ROW
- HOUSEHOLDS
- GOVERNMENT

ENVIRONMENT
- LAND
- WATER
- EMISSIONS
- SUSTAINABILITY
- MINERALS
- ENERGY

SOCIETY
- POPULATION
- HEALTH
- INFRASTRUCTURE
- POVERTY
- EDUCATION
- LABOR

Baseline Simulation and Historical Data

Social	Economic	Environment & Resources
Total Population	Agriculture Production	Coal Production
Total Fertility Rate	Industry Production	Hydro Power Generation
Life Expectancy	Service Production	Oil Imports
Infant Mortality	Real GDP	**HIV and Poverty**
Adult Literacy Rate	Grain Yield	HIV Adult Prevalence
Age Cohorts 1990	Household Consumption	Annual HIV Infection
Age Cohorts 1998	Public Investment	AIDS Orphans
	Total Real Investment	Prop. under Poverty
	Public Foreign Debt	Pop. under Poverty

T21 integrates economic, social, and environmental factors in its analysis. Each sphere is divided into sectors, and each sector is further divided into modules

T21 has been validated through a variety of tests, including effective simulation of historical data

T21 Main Menu

- Acknowledgements
- Model Structure
- About T21 Data
- Baseline Simulatiton and Historical Data
- "What If...?" Simulations
- View Result of Existing Scenarios
- Exit the Model

T21 provides insight into the potential impact of development policies across sectors, and reveals how different strategies interact with one another, enabling planners to create effective approaches to achieving their goals and objectives

T21 is especially useful for preparing poverty reduction strategies that emphasizes the MDGs, and for monitoring progress towards the goals

Policy Intervention Simulation Results

- Domestic Revenues
- Foreign Grants and Loans
- Government
- Government Deficit
- HIV Reduction
- Micro Credits
- Agriculture Extensions
- Leverage Points

X-axis: 2002 2004 2006 2008 2010 2012 2014 2018 2020

Real Per Capita Income — MK94/(Year*Person)
Total Population — Person
NonRenewable Resources Remaining — Percent

Millennium Development Goals

Target: Achieve universal primary education

Young adult literacy rate

Y-axis: 1, 0.85, 0.7, 0.55, 0.4
X-axis: 1990 1994 1998 2002 2006 2010 2014 2018 2020

young adult literacy rate [FEMALE] : history\MDGGoal — Dmnl
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young adult literacy rate [MALE] : history\MDGGoal — Dmnl
young adult literacy rate [MALE] : history\base — Dmnl